

# Global Citizenship Resource Pack

## Advanced Global Citizenship Resource Pack

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The aim of the Advanced Welsh Baccalaureate is to enable learners to develop and demonstrate an understanding of and proficiency in essential and employability skills. This resource acts as an organisational starting point in conveying knowledge and skills improvement and application in preparation for the Global Citizenship Challenge.

**Section A** focuses on the development of **Skills Knowledge**. This relates to the three skills from the Essential Skills Suite that will be assessed in the Global Citizenship Challenge: Critical Thinking and Problem Solving, Creativity and Innovation, and Literacy.

**Section B** focuses on **Skills Application** using the six themes of Global Issues that are available for assessment at Advanced level. This helps prepare learners to produce a personal standpoint on a global issue using a variety of information.

**Section C** focuses on **Skills Reflection**.

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## UNIT 1

### 1.1: What is critical thinking?

Critical thinking refers to being able to analyse, evaluate and construct arguments.

These skills can be used in any subject and in your daily life. Critical Thinking is, therefore, a **technique** that you will be learning about. There are special terms used in Critical Thinking that you will learn as well as specific theory. Once you have the Critical Thinking toolkit you will be able to not only succeed in the Welsh Baccalaureate Challenges but also make informed decisions in your everyday life.

### 1.2: What is credibility of evidence?

An argument in critical thinking is the presentation of one or more reasons to support a conclusion. To strengthen arguments, evidence can be used to provide additional support to reasons and conclusions.



**Evidence** is used to **persuade** people to believe that reasons and conclusions are correct. This means evidence is often biased and may not necessarily be true.

Therefore all evidence must be judged in terms of its credibility.



**Credibility** means how believable the evidence is. In determining how believable evidence is, **credibility criteria** can be applied.

#### Credibility criteria

*Is it neutral?*  
*Is there vested interest?*  
*Is it biased?*  
*Is expertise involved?*  
*What is the reputation?*  
*Were there eye witness accounts?*  
*Is there corroboration?*  
*How selective and representative is it?*  
*What is the context?*

Where possible, at least two or more criteria should be used together.

### 1.3 What is meant by 'weight of evidence'?

Sometimes, the evidence presented is so overwhelming that there is absolutely no doubt that the claim is true.



This is referred to as **conclusive** proof.

However, often conclusive proof is not available. Sometimes the evidence for a conclusion has to be weighed against the evidence against it. Or there may not be any evidence available.



### Case study 1

Weigh up the evidence in the following scenario:

A 16 year old boy is walking out of a supermarket carrying a rucksack. He has not paid for any items. In the rucksack is a large chocolate bar and a packet of sandwiches. Just after leaving he is caught up by a store detective and a policeman. The store detective states that she was standing behind the boy and saw him clearly and quickly, place something into his rucksack without paying for it. The policeman opens the rucksack and finds a packet of sandwiches and a large chocolate bar, which the store detective claims is stolen. The boy denies the charge, saying he bought the chocolate bar and sandwiches in a different shop that morning and these items have been in his bag ever since.



What evidence is there in this account for concluding that the boy is a thief or not?

## 1.4 Circumstantial evidence

The only evidence in the above example is the fact that the boy did not pay for any items and there is a packet of sandwiches and a large chocolate bar in his rucksack. Therefore, it is one person's word against another's. In this case the store detective is the witness and accuser.



### Circumstantial evidence

consists of facts and in this example the facts are:

- the boy did not pay for any items
- there is a packet of sandwiches and a large chocolate bar in his rucksack

On its own, the circumstantial evidence is weak. Circumstantial evidence would have been much stronger if there was surveillance footage of the boy stealing or not stealing, or if the boy had a receipt for his purchases.

### 1.5 Credibility



#### Reflection point 1

Is the boy more credible than the store detective?

In making such a judgment, credibility comes down to:

- How plausible is each account?
- How reliable or likely to be telling the truth is the boy?
- How reliable or likely to be telling the truth is the store detective?
- How well it fits in to the circumstances?
- How well it fits with other witnesses' statements?



#### Is the boy's defence believable?

Yes, there is nothing unusual about having a packet of sandwiches and large bar of chocolate in a rucksack, having bought it in a different shop.



#### Is the store detective's accusation believable?

Yes, it is a fact of life that some people steal. The detective would not have such a job if no-one ever stole from the store.



#### Is the store detective reliable?

You would expect the store detective to be reliable. Why would she make something up as there doesn't seem to be anything to gain? If the store detective had falsified evidence this would reflect badly if she was found out.



#### Is the boy reliable?

The boy does have a motive to lie if he did in fact steal the chocolate. However, there is currently no reason to suppose that the boy did steal the chocolate.



#### How well does it fit into the circumstances – could one of them be mistaken?

It is unlikely that the boy was mistaken. The act of unzipping his rucksack and placing the items into the rucksack must have been a conscious action. However, the store detective may have been mistaken. She said that she was standing behind the boy so she may not have had a good view, particularly as the store may have been crowded. In addition, the store detective stated that the boy clearly and quickly placed something in his rucksack.

This is probably the most important part of the case. If correct, the 'quick' act suggests



the boy was doing something suspicious; however the fact that the store detective had a limited view and only saw ‘something’ makes the account quite unreliable.

Therefore, because of the lack of hard evidence, the case against the boy would be unlikely to convince a court that he was guilty beyond **reasonable doubt**.



### Reflection point 2

If the boy’s case was that someone must have placed the chocolate in his bag whilst in the store without him realising, would this make the account more or less plausible and therefore credible?

## 1.6 Corroboration



**Corroboration** means agreement. Cases can be strengthened by having 2 pieces of evidence that both point to the same conclusions. For example, if 2 or more witnesses tell the same account, it is more likely that that account is true.

It is important that any witnesses are neutral and that they have come up with the account themselves.



### Discussion point 1

Which of the corroborative evidence below would you consider to be most credible?

1. Boy’s friend – He didn’t pinch the chocolate, I was with him earlier when he bought it.
2. Boy’s mum – It wouldn’t surprise me; he can be a naughty boy.
3. Shopper who overhears the conversation between the boy, policeman and store detective – I saw him put something in his bag too.

4. Store detective's brother who works on a till in the store – my brother is definitely telling the truth.
5. Shopper who goes to customer services to say they have seen someone putting items in their rucksack.



**If you had one of these corroborations, what would the weight of evidence suggest?**



### Summary

- Evidence is used to persuade people to believe that reasons and conclusions are correct.
- Credibility means how believable the evidence is.
- Credibility criteria include:
  - Is it neutral?
  - Is there vested interest?
  - Is it biased?
  - Is expertise involved?
  - What is the reputation?
  - Were there eye witness accounts?
  - Is there corroboration?
  - How selective and representative is it?
  - What is the context?
- Conclusive proof refers to where there is absolutely no doubt that the claim is true.
- Corroboration means agreement.



## UNIT 2

### 2.1: What is neutrality?



A **neutral source** is one that does not take sides – it is impartial.

It does not have a motive to distort the truth or actively persuade. Therefore neutral sources are normally regarded as a form of credible evidence.



Médecins Sans Frontière/Doctors Without Borders (MSF) helps people worldwide where the need is greatest, delivering emergency medical aid to people affected by conflict, epidemics, disasters or exclusion from healthcare.

They state that they are **impartial**, **independent** and **neutral**.

*'In a conflict situation, we don't take sides, but go where people's medical needs are greatest. In the ward of one MSF field hospital, you might find wounded civilians alongside injured soldiers from opposing sides. Hostilities and weapons have to be left at the gate.*

*Our financial independence also means the aid we provide cannot be used to further any government's political or military goals'.*



**BritishRedCross**

The Red Cross Movement is not a political or religious organisation. This neutrality means that they can reach and offer unconditional help to people in need whoever and wherever they are. Often they work in countries where other organisations cannot or will not work.

They cross frontlines in times of war to help conflict victims and visit prisoners of war on both sides. They argue they can only do this life-saving work if they are understood to be a completely neutral, independent organisation.

Put simply, they believe their neutrality saves lives. As an organisation, the Red Cross cannot be seen to be religious or political because to do so might jeopardise the access they have to people in need.



#### Discussion point

What other institutions consider themselves to be neutral? Are they?

The BBC is often quoted as a neutral organisation. Carefully consider the following argument:

### **WE ARE BIASED; ADMIT THE STARS OF BBC NEWS.**

**By SIMON WALTERS, Mail on Sunday**

(21:11 21 October 2006)

It was the day that a host of BBC executives and star presenters admitted what critics have been telling them for years: the BBC is dominated by trendy, Left-leaning liberals who are biased against Christianity and in favour of multiculturalism.

A leaked account of an 'impartiality summit' called by BBC chairman Michael Grade, is certain to lead to a new row about the BBC and its reporting on key issues, especially concerning Muslims and the war on terror.

It reveals that executives would let the Bible be thrown into a dustbin on a TV comedy show, but not the Koran, and that they would broadcast an interview with Osama Bin Laden if given the opportunity. Further, it discloses that the BBC's 'diversity tsar', wants Muslim women newsreaders to be allowed to wear veils when on air.

At the secret meeting in London last month, which was hosted by veteran broadcaster Sue Lawley, BBC executives admitted the corporation is dominated by homosexuals and people from ethnic minorities, that it

deliberately promotes multiculturalism, is anti-American, anti-countryside and more sensitive to the feelings of Muslims than Christians.

One veteran BBC executive said: 'There was widespread acknowledgement that we may have gone too far in the direction of political correctness. Unfortunately, much of it is so deeply embedded in the BBC's culture, that it is very hard to change it.'

In one of a series of discussions, executives were asked to rule on how they would react if the controversial comedian Sacha Baron Cohen, known for his offensive characters Ali G and Borat - was a guest on the programme Room 101.

On the show, celebrities are invited to throw their pet hates into a dustbin and it was imagined that Baron Cohen chose some kosher food, the Archbishop of Canterbury, a Bible and the Koran.

Nearly everyone at the summit, including the show's actual producer and the BBC's head of drama, Alan Yentob, agreed they could all be thrown into the bin, except the Koran for fear of offending Muslims.

In a debate on whether the BBC should interview Osama Bin Laden if he approached them, it was decided the Al Qaeda leader would be given a platform to explain his views.

And the BBC's 'diversity tsar', Mary Fitzpatrick, said women newsreaders

should be able to wear whatever they wanted while on TV, including veils.

Ms Fitzpatrick spoke out after criticism was raised at the summit of TV newsreader Fiona Bruce, who recently wore on air a necklace with a cross.

The full account of the meeting shows how senior BBC figures queued up to lambast their employer.

Political pundit Andrew Marr said: 'The BBC is not impartial or neutral. It's a publicly funded, urban organisation with an abnormally large number of young people, ethnic minorities and gay people. It has a liberal bias not so much a party-political bias. It is better expressed as a cultural liberal bias.'

Washington correspondent Justin Webb said that the BBC is so biased against America that deputy director general Mark Byford had secretly agreed to help him to 'correct', it in his reports. Webb added that the BBC treated America with scorn and derision and gave it 'no moral weight'.

Former BBC business editor Jeff Randall said he complained to a 'very senior news executive', about the BBC's pro-multicultural stance but was given the reply: 'The BBC is not neutral in multiculturalism: it believes in it and it promotes it.'

Randall also told how he once wore Union Jack cufflinks to work but was rebuked with: 'You can't do that, that's like the National Front!'

Quoting a George Orwell observation, Randall said that the BBC was full of intellectuals who 'would rather steal from a poor box than stand to attention during God Save the King'.

There was another heated debate when the summit discussed whether the BBC was too sensitive about criticising black families for failing to take responsibility for their children.

Head of news Helen Boaden disclosed that a Radio 4 programme which blamed black youths at a young offenders' institution for bullying white inmates faced the axe until she stepped in.

But Ms Fitzpatrick, who has said that the BBC should not use white reporters in non-white countries, argued it had a duty to 'contextualise' why black youngsters behaved in such a way.

Andrew Marr told The Mail on Sunday last night: 'The BBC must always try to reflect Britain, which is mostly a provincial, middle-of-the-road country. Britain is not a mirror image of the BBC or the people who work for it.'



### Discussion point 2

Does this mean that the BBC can be trusted as a source of information? Explain your answer.

## 2.2 What is vested interest?



**Vested interest** is when a person or an organisation has something to gain from promoting or defending that interest. This could involve:

- Making money
- Creating a good reputation
- Career advancement
- Staying in a position of power

Vested interest is not always obvious; an organisation, for example, may present one sided arguments, select and publicise certain evidence whilst hiding other evidence or even lie.

The credibility of the person or organisation with the vested interest must be considered.



### Individual activity 1

Consider the following examples:

1. Who has the vested interest?
2. Why do they have vested interest?
3. Are they credible?

### Example 1



### Example 2

E-cigarette advertising is back in the news. Three adverts have been banned by the Advertising Standards Authority that were advertising e-cigarettes. This is the first time that action is to be taken against these alternative products to cigarettes.

Action is to be taken against a radio and television advert for E-Lites and another television advert for Sky Cigs. Advertising Standards Authority said that the adverts did not make it clear that the products contained nicotine, and therefore were to be banned for breaching advertising regulations.

The television advert for the E-Lites cigarettes, showed a family admiring a baby. The father leaves the room to have a cigarette, just before the baby takes his first steps and starts dancing. The man returns and asks:

“What have I missed?” E-Lites is one of the leading e-cigarette companies in the UK.

Advertising Standards Authority has received 65 complaints about the advert. They have also received complaints about an accompanying campaign, which included a radio advert and posters on buses. The Standards Authority said that the television advert could amuse children and breached their rules which restrict adverts that might interest children in smoking.

<http://www.independent.co.uk/news/media/advertising/ecigarette-adverts-banned-by-watchdog-8837484.html#>

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### Summary


- A neutral source is one that does not take sides – it is impartial.
- Vested interest is when a person or an organisation has something to gain from promoting or defending that interest.
- Very few people or organisations are truly neutral – most have a vested interest, although this may not be obvious.


### Example 3


**HAVE YOU BEEN MIS-SOLD PPI?**

Taken out a loan, credit card or mortgage in the last 15 years?  
You could have a claim for mis-sold PPI.

 Think about any loans, credit cards or mortgages you've had – PPI could have been added without you knowing.

 Don't know if you've got PPI? We can find out for you.  
We don't even need any forms or previous loan agreements; all we need is the name of your bank and Credit Card Company.


 Don't put it off – you could be owed up to £7000

 Pick up the phone and call our experienced PPI team on **0800 454 222** or fill out our claims form today.

**MIS-SOLD PPI?      DON'T MISS OUT!**

**Testimonial**

*I would have never been able to claim mis-sold PPI by myself – they helped me from start to finish. My settlement came to over £75,000 – I couldn't believe it. I would urge anyone in the same situation to get in touch and claim back the thousands that you could be owed.*





## UNIT 3

### 3.1: What is bias?



Bias is an inclination of temperament or outlook to present or hold a partial perspective, often accompanied by a refusal to consider the possible merits of alternative points of view. Therefore being biased means:

- being one-sided, and rejecting evidence that might contradict this view
- lacking a neutral viewpoint which is strongly held
- and not having an open mind as a result of a prejudgment which could lead to prejudice

In the worst cases, bias can lead to outright lies. Because of this biased sources are often seen as unreliable and lacking in credibility.

However, as people, we all hold opinions whether unconsciously or not, so there is some debate as to whether an unbiased source can actually exist!

### 3.2 Prejudice



Prejudice is a preconceived opinion that is not based on reason or actual experience. It can be very dangerous. An example of prejudice is racism as it involves judging a group of people in a certain way. This can be an emotional

judgement that leads to feelings of hatred being expressed.



#### Small Group Activity 1

Look at each of the following images.

1. What message is being communicated?
2. Which group is being discriminated against?
3. Why is each message being communicated?

Image 1:





Image 2:



at worst, is based on pure deception and lies.



### 3.3 What is propaganda?

Propaganda is a form of communication aimed towards influencing the attitude of a population toward some **cause** or **position**.

Propaganda is information that is not **impartial** and used primarily to influence an audience and further an agenda, often by presenting facts selectively (perhaps lying by omission) or using loaded messages to produce an emotional rather than a rational response to the information presented.

An example of propaganda can be seen below. It is important to be able to identify propaganda as it is one-sided information, and



#### Reflection Point 1

How is the above picture an example of propaganda?

### 3.4 What is ethnocentrism?

Ethnocentrism is when a person sees the group in which they identify with to be superior to other groupings. This is because they judge another culture solely by the values and standards of their own culture.

This could be based on their nation, ethnic group, football team or religious group for example.

An example of an ethnocentric viewpoint can be seen when the USA attempted to overthrow

Castro in the 1960s. Read the case study below:



### Case Study 1

Following the Cuban Revolution of 1959, Fidel Castro had grown increasingly hostile towards the United States and their interests. The Eisenhower and Kennedy administrations authorized the CIA to come up with ways to remove him: attempts were made to poison him, anti-communist groups inside Cuba were actively supported, and a radio station beamed slanted news at the island from Florida. The CIA even contacted the mafia about working together to assassinate Castro. Nothing worked.

Meanwhile, thousands of Cubans were fleeing the island, legally at first, then secretly. These Cubans were mostly upper and middle class who had lost properties and investments when the communist government took over. Most of the exiles settled in Miami, where they seethed with hatred for Castro and his regime.

The CIA decided to make use of these Cubans and give them the chance to overthrow Castro and his communist regime which was not seen as a fit way to run a country.

When word spread in the Cuban exile community of an attempt to re-take the island, hundreds volunteered. The recruits were sent to Guatemala, where they received training and weapons. The force was named the Brigade 2506.

In April, 1961, the 2506 Brigade was ready to go. They were moved to the Caribbean coast of Nicaragua, where they made their final preparations. They received a visit from Luís Somoza, dictator of Nicaragua, who laughingly asked them to bring him some hairs from Castro's beard. They boarded different ships and set sail on April 13.

On April 17, the 2506 Brigade (also called the "Cuban Expeditionary Force") landed on Cuban soil. The brigade consisted of over 1,400 well-organized and armed soldiers. Rebel groups within Cuba had

been notified of the date of the assault and small-scale attacks broke out all over Cuba, although these had little lasting effect.

The landing site which had been selected was the “Bahía de los Cochinos” or “Bay of Pigs” on the southern coast of Cuba, about a third of the way from the westernmost point. It is a part of the island that is sparsely populated and far from major military installations: it was hoped that the attackers would gain a beachhead and set up defences before running into major opposition. It was an unfortunate choice, as the area selected is swampy and difficult to cross: the exiles would eventually become bogged down.

The forces landed with difficulty and quickly did away with the small local militia that resisted them. Castro, in Havana, heard of the attack and ordered units to respond. At first light, the airplanes attacked, sinking one ship and driving off the rest. This was crucial, because although the men had been unloaded, the ships were still full of

supplies including food, weapons and ammunition.

For two days, the Cubans fought the invaders to a standstill. The intruders were dug in and had heavy guns, but had no reinforcements and were running low on supplies. The Cubans were not as well armed or trained, but had the numbers, supplies and the morale that comes from defending their home. Although airstrikes from Central America continued to be effective and killed many Cuban troops on their way to the fray, the invaders were pushed steadily back. The result was inevitable: on April 19, the intruders surrendered. Some had been evacuated from the beach, but most (over 1,100) were taken prisoner.

Adapted from  
[[http://latinamericanhistory.about.com/od/historyofthearibbean/a/09bayofpigs\\_2.htm](http://latinamericanhistory.about.com/od/historyofthearibbean/a/09bayofpigs_2.htm)]



### Reflection Point 1

In what way was the USA ethnocentric?

How did the USA use propaganda?



### Individual Activity 1

Research the propaganda that the USA used against Cuba in the 1960s. What impact did it have?



### Summary

- Bias is an inclination of temperament or outlook to present or hold a partial perspective, often accompanied by a refusal to consider the possible merits of alternative points of view
- Prejudice is a preconceived opinion that is not based on reason or actual experience.
- Propaganda is a form of communication aimed towards influencing the attitude of a population toward some cause or position.
- Ethnocentrism is when a person sees the group in which they identify with to be superior to other groupings. This is because they judge another culture solely by the values and

standards of their own culture.

- Bias, prejudice, propaganda and ethnocentrism can be dangerous and ultimately lead to the death of individual and organisations.

## UNIT 4

### 4.1: What is expertise?

When assessing the strength of an argument, there must be some consideration concerning whether the claims are true.

Sometimes, this can be done using personal knowledge and expertise. However, sometimes this cannot be done if it is beyond our remit. Equally, sometimes arguments are based on the knowledge and expertise of others. These people are known as ‘authorities’ on a particular subject.



#### Discussion point 1

Doctor Michael Thomas has been a doctor for 20 years. He was asked to comment on a debate concerning fast food and its impact on obesity. He has written a number of articles for journals which have also been well regarded.

#### How credible is Doctor Michael Thomas’s contribution to this debate?

On the surface it would seem that Doctor Michael Thomas is a credible expert. However, being a doctor does not automatically imply that you are a doctor of medicine, you could have

achieved a PhD in other areas from education to engineering. Doctor Michael Thomas actually has a PhD in Computer Engineering.



#### Discussion point 2

How credible is Doctor Michael Thomas’s contribution to this debate now?

People who are not experts in a particular field can read about specialised subjects and pass on that information, so sometimes non-experts do not have to be disbelieved. However, experts do tend to know more about their specialist subjects than the general public and people in responsible jobs do tend to be more reliable than criminals even if the only reason is that they value their reputation.

Nevertheless, too much weight cannot be placed on the credibility of experts. People in all positions are capable of making mistakes or lying if they have reason to and people in lesser positions can have high standards of morality and honesty.



### Case study 1

The Guardian Newspaper - Sunday  
18 March 2007

#### **Sally Clark was 'let down' by authorities**

Friends of Sally Clark, who died on Friday, yesterday attacked the authorities for failing to support her after she was freed from prison.

Clark was wrongly jailed for the murder of her two sons and was later cleared. Angela Cannings, who was also falsely convicted for the murder of her two sons and was close to Clark, launched an angry broadside against health and social service teams for leaving the former solicitor to cope without professional help.

Police say suicide has not been ruled out as a possible cause of death, but friends said Clark had 'turned a corner' and they thought it was unlikely she would have taken her life. A Home Office pathologist is due to carry out a post-mortem examination tomorrow.

'I'm angry,' Cannings said. 'When you come out of the Appeal Court, you think somebody is going to help you. But we had nothing. I thought there would be phone calls and the like from social services and health professionals

but not one organisation came to us.'

Cannings called for an urgent overhaul in the way the authorities deal with people who have been victims of miscarriages of justice. 'Isn't it about time that somebody in government looked at the help that is offered to people like Sally when they come out? We need some sort of organisation that specifically caters for the needs of people who have suffered this kind of trauma.'

Cannings's husband, Terry, now suffers from clinical depression, while their daughter, who has not been to school for three years, suffers from 'separation anxiety'. 'I don't know how we cope,' said Cannings, who has been attempting to get more help for her daughter from local social services, but without success so far. 'We just go from day to day.'

'The government has a duty to look after innocent people when they come out of prison,' said John McManus of the Miscarriages of Justice Organisation. 'The fact they get no offer of help, no counselling, is a great shame on the government.'

Penny Mellor, a friend of the Clark family, said that Mrs Clark's time in prison had left a stain on the rest of her life. She was assaulted by other prisoners and lived in fear



that they would try to poison her food. 'If you've been convicted as a child killer you become a focal point for all the hatred in prison,' Mellor said.

Mrs Clark, 42, was found guilty of murdering her sons, Christopher and Harry, but was cleared by the Court of Appeal in 2003 in a landmark ruling that highlighted serious flaws in the use of evidence provided by expert witnesses. She was found to have been wrongly convicted of the two murders after medical evidence emerged which had not been presented at her trial.

Professor Sir Roy Meadow gave evidence during her trial, claiming that the probability of two natural unexplained cot deaths in the family was 73 million to one. That figure was disputed by the Royal Statistical Society and other medical experts, who said the odds of a second cot death in a family were around 200-1. Meadow was found guilty of serious professional misconduct and struck off the medical register. However, both of these decisions were overturned on appeal at the High Court.

Mrs Clark's husband, Stephen, and their surviving son used to live in Wilmslow, Cheshire, but moved south to Chelmsford to be closer to her when she was in prison in Essex.

A statement released by the Clark family solicitor yesterday said: 'Sally was released in 2003 having been wrongfully imprisoned for more than three years, falsely accused of the murder of her two sons. Sadly, she never fully recovered from the effects of this appalling miscarriage of justice.'



### Discussion point 3

What evidence led to Sally Clark being convicted? Was this credible evidence?

## 4.2: How to determine credibility of expert accounts.

1. Is there disagreement between different experts?  
Such disagreement can lead to credibility questions
2. Are incorrect judgments being made?

### 4.3: Expertise can also change.

<http://www.bbc.co.uk/news/health-28442415>

Therefore, when relying on expert accounts, credibility must be considered. Experts do not necessarily speak the truth.



#### Summary

- When assessing the strength of an argument, there must be some consideration concerning whether the claims are true. Sometimes, this can be done using personal knowledge and expertise.
- Nevertheless, too much weight cannot be placed on the credibility of experts. People in all positions are capable of making mistakes or lying if they have reason to and people in lesser positions can have high standards of morality and honesty.

### UNIT 5

#### 5.1: Why is reputation important?



**Reputation** refers to the respect that a person, organisation or something else is held in. If a source has a high reputation, then this may add to its credibility. If a source is seen as having a poor reputation, it will probably not strengthen a claim or be suitable as evidence.

#### 5.2 The reputation of people



##### Individual Activity 1

Identify the following people. You may need to carry out some research to do this. **Decide if they are considered as having a high or low reputation and the reasons for this.**

Person 1:



Person 2:



Person 3:



Person 4:



If a person is seen as being a success in a particular field, for example; a world class athlete, business person or scientist they are often regarded as having a good reputation in their field.

Likewise, if a person is known for devoting their life for what is perceived as a worthy cause, this also adds credence to their reputation. This is because such people are unlikely to be motivated by self- interest or greed, as they have devoted their lives to others.

### 5.3 The reputation of organisations and other sources

Organisations can also be seen as having a high or low reputation in terms of whether they can be trusted in providing accurate information, limited propaganda or purposeful omission of facts.

Other sources such as academic journals will have a higher reputation than popular magazines whose main purpose is to sell and make money for the owners. Academic journals have not been written primarily to make money; rather to develop knowledge and understanding. Therefore, they are considered as being more credible.

### 5.4 Kentucky Fried Chicken

Reputations may be deserved or underserved. In 2009, KFC was awarded 'The Health Wyze Worst Restaurant of the Year Award'.

<http://healthwyze.org/index.php/component/content/article/134-the-worst-restaurant-of-the-year-award-goes-to-kentucky-fried-chicken-kfc.html>



The award was based on the following judgements:

1. Kentucky Fried Chicken is perhaps the only restaurant chain that will keep an employee who urinates in the food, as in the case of worker Casey Diedrich of Omaha, Nebraska. A police officer and his family fell victim to the food they ate in October 2005, which was

- contaminated with urine and spit by an employee. His two children became drastically ill and his 4 year old son had to even be admitted in a local hospital, where he was treated for gastroenteritis and severe dehydration.
2. KFC releases their ingredients list online for all to see. However, the only completely non-toxic ingredients are the onion powder, sodium bicarbonate, and the garlic powder. These are only 3 ingredients out of 29, which means KFC ingredients are only 10% natural and about 90% chemically "enhanced". This does not take into consideration the chicken itself, which is full of antibiotics, steroids, and growth hormones, in the very least.
  3. The ingredients list also included reference to Canola oil. Canola is a genetically engineered offspring of the poisonous rapeseed plant. Canola oil is an industrial oil used to lubricate heavy machinery, and to add a glossy finish to the pages of high-quality magazines. Canola oil use at KFC may eventually result in
  - high incidences of lung cancer amongst workers, due to the toxic fumes emitted by heated canola oil.
  4. According to Kentucky Fried Cruelty, a consumer awareness group, one billion chickens are killed each year for the company. All are crammed into "excrement-filled sheds" where they never see daylight. Many suffer from broken legs and wings due to being too top-heavy, and videos have also shown the routine abuse of animals in which the workers will stomp on chickens, or place them into boiling water to remove the feathers whilst they are still conscious. When KFC realised that PETA demonstrations (12,000 since 2003) had become a serious public relations problem, they created the Animal Welfare Advisory Council, in order to pretend that they were acting upon the complaints. Many of those who have been in the council have resigned their positions in disgust.

5.



However, is this reputation deserved?

KFC claim:

- All our chickens are reared in large barns that are typically bedded with wood shavings or chopped straw. They are free to roam within these barns and the stocking density (number of chickens per barn) is defined by the Red Tractor standard so they have more space and better conditions than the legal minimum.
- All of our chicken is Grade A and Red Tractor certified. Red Tractor is the largest food assurance scheme in the UK and ensures that our

chicken is produced to some of the most comprehensive and respected standards in the world. All of our Original Recipe Chicken comes from British farms and is delivered to our restaurants fresh, not frozen, within 48 hours.

- We have a system of regular surprise inspections to ensure all our restaurants meet KFC standards of excellence.
- We call these 'CHAMPS' Excellence Reviews (CER). Our inspectors can turn up unannounced at any time and every restaurant must achieve the pass mark of 80/100. CHAMPS stands for the five things KFC inspectors look for in every restaurant - Cleanliness, Hospitality, Accuracy, Maintenance, Product Quality and Speed with Service. It's tough to pass, but that's because we're tough on standards. Only the best will do!

Adapted from:

<http://www.kfc.co.uk/about-us/faqs/>





### Discussion point 1

In view of these two perspectives, what is your judgement of KFC's reputation and credibility?

Would you still choose to eat at KFC or is there propaganda or bias from Health Wyze which is a media company claiming to expose unhealthy food and food related practices?



### Summary

- Reputations can add or decrease credibility
- The perception of how good or bad a reputation is may not necessarily be impartial or based on pure objective truth.

## UNIT 6

### 6.1: How to assess observation and eyewitness accounts?



#### Discussion point 1:

You are in a jury and evidence has been presented. How likely are you to accept it?

*Eyewitness account:*

*I was walking past my next door neighbour's house and I saw the accused run out of the front door holding a pillow case that seemed to be full of items. The police asked me to identify the person in an identity parade and the person in the dock is who I saw.*

The question is asking how reliable eye witness accounts are. When you see something, often quite briefly, how accurate is your recall?



#### Reflection point 1:

When was the last time you saw a member of your family? Jot down exactly what they were wearing (including the colour of the items of clothing).

How easy did you find this?

Many people regard eyewitness accounts as being reliable and credible as such accounts are sources of first-hand information and not information that has been passed on from someone else.

Nevertheless, quite a lot of evidence suggests that eyewitness accounts are not very reliable. According to the American Association for the Advancement of Science (2014), some 75% of the wrongful convictions for rape and murder, including a number that led to people being scheduled for execution, were based on eyewitness testimony.

In 1984 Kirk Bloodsworth was convicted of the rape and murder of a nine-year-old girl and sentenced to the gas chamber - an outcome that rested largely on the testimony of five eyewitnesses. After Bloodsworth served nine years in prison, DNA testing proved him to be innocent. Such devastating mistakes by eyewitnesses are not rare, according to a report by the Innocence Project, an organisation affiliated with the Benjamin N. Cardozo School of Law at Yeshiva University that uses DNA testing to exonerate those wrongfully convicted of crimes.

Since the 1990s, when DNA testing was first introduced, Innocence Project researchers

have reported that 73 percent of the 239 convictions overturned through DNA testing were based on eyewitness testimony. One third of these overturned cases rested on the testimony of two or more mistaken eyewitnesses. How could so many eyewitnesses be wrong?

### 6.2: What factors affect observation accuracy?

#### The senses

Impairment of the senses can affect observation. Individuals generally have 5 senses – sight, hearing, touch, taste and smell. The credibility of an eyewitness is lessened if any of these senses are impaired.

For example, if a person is colour-blind, they may perceive that someone has different hair colour or clothes colour to what they actually have.

#### Context

An observation is made in a particular place and context. Weather conditions can affect what is seen, as can the time of day and any obstructions. Also the position of the observer to what is being witnessed can make a huge difference.



Following the assassination of President John F Kennedy, 200 eyewitnesses who were observing the events were unable to agree on 'where were the shots fired from' and 'how many shots'.

Perception, expectation and memory

Memory is not simply recalling what was seen, it actually reconstructs it. A well-regarded psychologist called Elizabeth Loftus demonstrated how we unconsciously alter what we see. An ingenious series of experiments revealed that memory can be radically altered by the way an eyewitness is questioned after the fact. New memories can also be implanted and old ones unconsciously altered under interrogation.

150 student participants viewed a short (one minute) film which contained a 4 second scene of a multiple car accident, and were then questioned about it.

50 of the participants were asked 'How fast were the cars going when they hit each other?'

50 of the participants were asked 'How fast were the cars going when they smashed into each other?'

50 of the participants were not interrogated about the speed of the vehicles.

One week later, the participants returned and, without viewing the film again, they answered a series of questions about the accident. The critical question was 'Did you see any broken glass?' The critical question was part of a longer series of questions and was placed in a random position on each participant's question paper. There was in fact no broken glass in the film.

The results showed that the verb (smashed) in the question had a significant effect on the misperception of glass in the film.

Those participants that heard the word 'smashed' were more than twice as likely to recall seeing broken glass.



### Individual Activity 1

Let's return to the earlier witness account:

*Eyewitness account:*

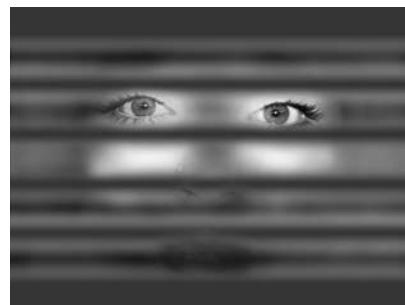
*I was walking past my next door neighbour's house and I saw the accused run out of front door holding a pillow case that seemed to be full of items. The police asked me to take part in identifying the person in an identity parade and the person in the dock is who I saw.*

**Draw up a list of questions that you would like to ask the witness in order to determine if their account can be deemed reliable and credible.**



### Summary

- Eye witness and observation accounts can be unreliable.
- There are lots of factors that can affect the credibility of an account.
- These include the senses, context, perceptions, expectations and memory.



# Skills Knowledge

## Chapter 1 – Critical Thinking: credibility of evidence.



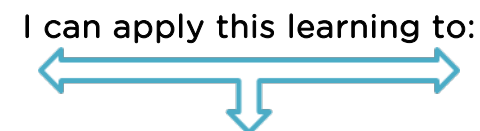
### Progress Checklist 1

Key terms:

Term	Definition	How confident do I feel in understanding and using this term?		
		Very confident	Somewhat confident	Not very confident
Evidence				
Credibility				
Corroboration				
Neutral interest				

I have learnt how to:	How confident do I feel in doing this?		
	Very confident	Somewhat confident	Not very confident
Use credibility criteria			
Weigh up circumstantial evidence			
Investigate vested interest			
Identify sources of bias, prejudice, bias and propaganda			
Determine credibility of expertise			
Evaluate reputation			

Skills and Knowledge application:



## UNIT 7

### 7.1: What is an argument?



In critical thinking, the term **argument** has a special meaning. An argument is only an argument if it has a conclusion; that it is something that you wish to end with, and has a reason which gives sense to your conclusion. Therefore in critical thinking an argument consists of at least one reason to support a conclusion. For example:

**Argument:** Burning fossil fuels causes climate change; therefore you should stop burning fossil fuels.

**Conclusion:** The conclusion in this argument is 'You should stop burning fossil fuels'.

**Reason:** The reason is 'Burning fossil fuels causes climate change'.



#### Reflection point 1

What is the difference between an argument you may have with a friend and an argument in critical thinking?

### 7.2 What is a claim?



Reasons and conclusions are also called **claims**. This is because reasons and conclusions may not be accurate or truthful. The very nature of an argument is often to exchange diverging or opposite

views to someone else, therefore reasons and conclusions are referred to as claims as they may not be true.

However, sometimes an argument can be formed that results in little or no disagreement. This is still defined as an argument as it consists of reasons and conclusions.

For example:

**Argument:** Children are forced to drink polluted water in India; therefore safe water sources should be provided.

**Conclusion:** The conclusion in this argument is 'Safe water sources should be provided'.

**Reason:** The reason is 'Children are forced to drink polluted water in India'.



#### Individual Activity 1

Can you think of another argument that is unlikely to have much disagreement? Remember, it should contain a reason and a conclusion.



### 7.3 What is a non-argument?

Consider the following example:

**Dai:** *'Everyone should be made to swap their petrol cars for electric cars'.*

**Rochelle:** *'No they shouldn't'.*

**Dai:** *'Don't be ridiculous – you clearly don't know what you are talking about!'*

**Rochelle:** *'Well, that is what I think'.*



#### Individual Activity 2

Can you find a conclusion and a reason in the above example?

This is an example of a non-argument. Dai is making the claim that everyone should be made to swap petrol cars for electric cars. This is his conclusion, but he does not give a reason for this. Likewise, Rochelle says 'they shouldn't' but again, provides no reason for her claim.



Therefore a non-argument is a statement that does not contain the necessary components to make an argument; that is a conclusion and at least one reason.



#### Test yourself 1

Look at each statement below. Decide which ones are arguments and which are non-arguments:

1. BBC news reports about the level of unemployment in Wales are usually reliable.
2. American news reports about the level of unemployment in America are usually unreliable.
3. BBC news reports about the level of unemployment in Wales are usually reliable because the BBC obtains its information from reliable sources.
4. American news reports are unreliable because they do not use reliable sources.
5. Unemployment levels in Wales are in decline because the Welsh Government has introduced effective policies.
6. Unemployment policies are not effective said someone who does not want to be named.
7. I don't think unemployment policies are working whether they are new or not.
8. Welsh employment policy is similar to the UK's employment policy.

### 7.4 How to present arguments symbolically

Sometimes arguments can be very complex. They can be a useful way of both constructing an argument and analysing the arguments of others. Arguments can be represented symbolically.

R stands for reason.

C stands for conclusion.

Where an argument has one reason, it can be presented as:

$R \rightarrow C$

The direction of the arrow shows the direction of thinking. In this case, a reason has led to a conclusion.

However, lots of arguments have more than one reason. The example below is an argument with two reasons:

**Argument:** Deforestation results in global warming and an increase in flash flooding. Therefore people should stop cutting down trees.

To present an argument with two reasons, each reason is given a number:

$R1 \ R2$   
 $\downarrow$   
 $C$

Again, the arrow shows the direction of thinking; that reason 1 and reason 2 have led to a conclusion.

Arguments can have lots of reasons, and the same method of presentation can be used:

$R1 \ R2 \ R3 \ R4$   
 $\downarrow$   
 $C$

This argument has 4 reasons.



#### Individual Activity 2

Present the following argument symbolically:

**Argument:** Deforestation results in global warming, an increase in flash flooding and destroys animal habitats. Therefore people should stop cutting down trees.



### Summary

In Unit 1, the following has been introduced:

- An argument in critical thinking has a special meaning. It refers to the presentation of one or more reasons to support a conclusion.
- Conclusions and reasons are also called claims, as they may not necessarily be true.
- Non-arguments do not have reasons that support conclusions.
- Arguments can be presented symbolically. This helps either to construct a logical argument or to deconstruct someone else's argument.



*Remember, in critical thinking an argument only takes place once a reason is provided to support a conclusion!*

## UNIT 8

### 8.1: What are reason indicators?

Reasons support conclusions in arguments. They help justify why a conclusion is being made. Sometimes a special word comes before a reason. This means that you can sometimes spot a reason in an argument if a special word has been used directly before it. These special words are also known as reason indicators.

The table below shows reason indicators:

#### Reason indicators may include:

Because  
For  
Since  
If  
Then  
Owing to  
Seeing that  
As indicated by  
Given that

Take the following argument:

**Argument:** People should use low energy lightbulbs. Low energy light bulbs use less than 20% of the energy of a conventional light bulb, and can last up to 15 times longer.

This argument can be presented as one sentence by replacing the full stop after 'lightbulbs' with most of the words in the box above. For example:

**Argument:** People should use low energy lightbulbs **because** low energy light bulbs use less than 20% of the energy of a conventional light bulb, and can last up to 15 times longer.

**Usually a reason indicator will precede a reason as shown above.**

However, sometimes arguments do not contain reason indicators. To confirm that you have correctly identified a reason, arguments can be rewritten using a reason indicator. This helps break down the components of arguments when you are in the process of argument construction and deconstruction.



#### Activity 1

Re-write each argument below using different reason indicators.

1. Drinking too much alcohol can damage your liver.  
Government campaigns need to make people more aware of the damage they are doing.
2. The number of smokers is declining. The introduction of E cigarettes has been successful as they are proving very popular.

3. People are making healthier food choices. Supermarkets have improved their food labelling to show a traffic light system concerning levels of fat, salt and calories.
4. Drinking too much water can be bad for you. A news report stated a woman had died from water intoxication after consuming four litres in two hours.
5. Drinking too much water can cause you to become an insomniac. Drinking too much water is bad for you.



### Activity 2

Look at the following arguments. For each one, identify the reason indicator and the reason.

1. Because cars emit pollution, there should be good public transport options available.
2. As indicated by reports on global warming, people should become more environmentally friendly.
3. More people are giving up smoking since cigarette vaporisers have been introduced.
4. Children are eating healthier food in school canteens owing to Jamie Oliver's campaign to improve school dinners.
5. Given that population levels are creating detrimental impacts on the environment, a

one child policy should be introduced in more countries.

## 8.2 What is evidence?

Some arguments present conclusions and evidence to support reasons. Evidence by itself is not necessarily a reason.

**Argument:** People should use low energy lightbulbs since low energy light bulbs use less than 20% of the energy of a conventional light bulb. This will result in an additional saving of £9 per year and low energy bulbs can last up to 15 times longer.



### Discussion Point 1

What is the purpose of evidence in an argument?

## 8.3 What is the difference between deductive and inductive arguments?



In critical thinking, evidence presented may or may not be true. It may or may not support reasons effectively. In addition, reasons and conclusions may not be true.

However, in **deductive arguments**, if the reasons are true, the conclusion must also be true.

A deductive argument can be seen below:

- R1 All domestic cats are mammals
- R2 A British Shorthair is a breed of domestic cat
- 
- C A British Shorthair is a mammal

In deductive arguments, the conclusion is guaranteed to follow from the reasons.



### Discussion Point 2

Consider the argument below. Is it an example of a deductive argument?

- R1 All dogs are mammals
- R2 A British Shorthair is a mammal
- 
- C A British shorthair is a dog

In some arguments, the reasons may be true, but this does not necessarily mean the conclusion must also be true. Most arguments are **inductive**.



An **inductive** argument is an argument whose reasons are true and therefore the conclusion is probably true.

When analysing arguments, you will need to carefully look at the information provided and decide

what are reasons, conclusions, evidence or background information.

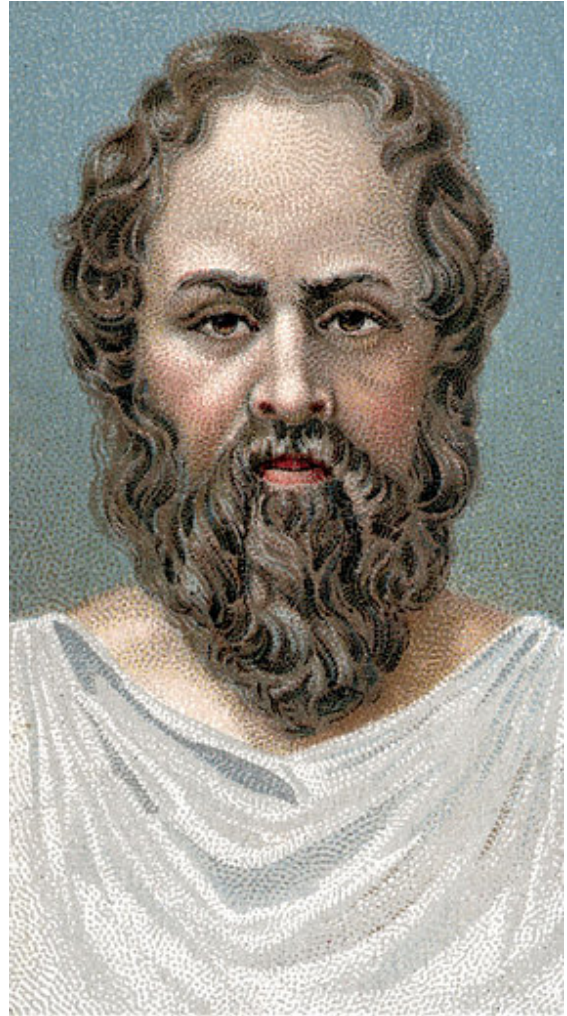
You will also need to decide whether the argument is inductive or deductive as this will give an indication to how true the reasons and conclusions are, and therefore the strength of the argument.





### Summary

- Sometimes the presentation of a reason is preceded by a reason indicator.
- Reason indicators include words such as Because, For, Since, If Then, Owing to, Seeing that, As indicated by, and Given that.
- Evidence is not a reason, but can support a reason and give strength to an argument.
- Deductive arguments are when a conclusion is guaranteed to follow from reasons. If the reasons are true, the conclusion will also be true.
- Inductive arguments are more common than deductive ones. If the reasons are true, the conclusion may be true, but this is not guaranteed.



Alamy AJ80TD

Ancient Greek philosopher Aristotle (born circa 384 B.C.) wrote a famous deductive argument about Socrates (above):

R1        All men are mortal

R2        Socrates is a man

C Socrates is mortal

## UNIT 9

### 9.1: What are conclusion indicators?

Conclusions are supported by reasons in arguments. They help a reason make sense by giving it a logical end. Sometimes a special word comes before a conclusion. This means that you can sometimes spot a conclusion in an argument if a special word has been used directly before it. These special words are also known as conclusion indicators.

The table below shows conclusion indicators:

#### Conclusion indicators may include:

Therefore

Must

Cannot

Should

Thus

So

Consequently

It follows

As a result

Proving

Hence



#### Activity 1

Re-write each of the arguments below using appropriate conclusion indicators.

1. Drinking too much alcohol can damage your liver.  
Government campaigns need to make people more aware of the damage they are doing.
2. The number of smokers is declining. The introduction of E- cigarettes has been successful as they are proving very popular.
3. People are making healthier food choices. Supermarkets have improved their food labelling to show a traffic light system concerning levels of fat, salt and calories.
4. Drinking too much water can be bad for you. A news report stated a woman had died from water intoxication after consuming four litres in two hours.
5. Drinking too much water can cause you to become an insomniac. Drinking too much water is bad for you

## 9.2 What are intermediate conclusions?



Some arguments have more than one conclusion. Also some arguments draw a conclusion that then contributes to an overall conclusion. This is called an **intermediate conclusion** that is followed by a **main conclusion**.

Take the following argument:

**Argument:** Some parents would prefer to have sons than daughters. Consequently, if people can choose the sex of their child, this may eventually lead to more males than females in the world. This may cause serious social problems. Therefore we should discourage techniques that allow people to choose the sex of their child.

This is quite a difficult argument to de-construct. The **main conclusion** is signalled by the word 'Therefore':

**Main conclusion:** Therefore we should discourage techniques that allow people to choose the sex of their child.

There are two reasons:

**Reason 1:** If people can choose the sex of their child, this may eventually lead to more males than females in the world.

**Reason 2:** This may cause serious social problems.

**However,** reason 1 also contains an intermediate conclusion:

**Intermediate conclusion:** this may eventually lead to more males than females in the world.

Which supports the overall conclusion:

**Main conclusion:** Therefore we should discourage techniques that allow people to choose the sex of their child.

## 9.3 How to present arguments using standard form?

Presenting arguments in standard form is a useful way to construct and deconstruct arguments in order to clarify meaning and evaluate the strength of the argument. Reasons are given a number and written in the order they are presented in the argument. Underneath the reasons, a line is drawn which is called an **inference bar**.



An **inference bar** is a horizontal line that means 'therefore' when writing an argument in standard form.

Take the following argument:

**Argument:** Governments should invest more in tram networks because they emit no fumes that may pollute the environment and once set up are the cheapest public transport system to run.

This argument can be reconstructed using standard form:

R1     Tram networks emit no fumes that may pollute the environment.

R2     Once set up they are the cheapest public transport system to run.

---

C     Governments should invest more in tram networks.

Once arguments have been written in standard form, they have presented symbolically:



### 9.4 What are the different patterns of reasoning?

There are different ways of presenting arguments:

- Simple reasoning
- Side by side reasoning
- Joint reasoning
- Chain reasoning

Each method will be explained in turn.

### 9.5 What is simple reasoning?

This is the simplest type of argument where one conclusion is supported by one reason.

Take the following argument:

**Argument:** China is overpopulated. Therefore, its one child policy is an effective way to reduce the birth rate and the overall population growth.

This argument written in standard form would look like:

R     China is overpopulated.

---

C     Its one child policy is an effective way to reduce the birth rate and the overall population growth.

Symbolically it can be presented as:



### 9.6 What is side by side reasoning?

Side by side reasons are independent- i.e. they are not connected or depend on each other. Any reason presented side by side can support the conclusion.

Take the following argument:

**Argument:** Green tea has great health benefits. It contains various bioactive compounds that can improve health. Compounds in green tea can improve brain function. Green tea increases fat burning and improves physical performance. Antioxidants in green tea may lower your risk of various types of cancer.

The argument in standard form would look like:

- |           |  |
|-----------|--|
| <b>R1</b> | It contains various bioactive compounds that can improve health.         |
| <b>R2</b> | Compounds in green tea can improve brain function                        |
| <b>R3</b> | Green tea increases fat burning and improves physical performance        |
| <b>R4</b> | Antioxidants in green tea may lower your risk of various types of cancer |
- 
- |          |                                      |
|----------|--------------------------------------|
| <b>C</b> | Green tea has great health benefits. |
|----------|--------------------------------------|

The argument presented symbolically would look like:

R1 R2 R3 R4



C

## 9.7 What is joint reasoning?

Side by side reasoning involved independent reasons, whereas joint reasoning involves reasons that depend on each other. If one reason was looked at in isolation to the others, it would not support the conclusion.

Take the following argument:

**Argument:** Green tea has various health benefits. Lemonade does not have many health benefits. In providing refreshments to the elderly in care homes, it may be better to offer them green tea as opposed to lemonade.

The argument in standard form would look like:

- |           |  |
|-----------|--|
| <b>R1</b> | Green tea has various health benefits.       |
| <b>R2</b> | Lemonade does not have many health benefits. |
- 
- |          |  |
|----------|--|
| <b>C</b> | In providing refreshments to the elderly in care homes, it may be better to offer them green tea as opposed to lemonade. |
|----------|--|

The argument presented symbolically would look like:

R1 + R2



C

### 9.8 What is chain reasoning?

Some arguments have intermediate conclusions. The following argument contains a reason, intermediate conclusion and a main conclusion.



#### Reflection Point 1

What indicator words are you looking for to spot conclusions?

**Argument:** people are saving more money. As a result less money is moving around the economy. Therefore we can expect a decrease in employment.

The argument in standard form would look like:

R	people are saving more money.
IC	As a result less money is moving around the economy.
C	Therefore we can expect a decrease in employment.

The argument presented symbolically would look like:



#### Test Yourself 1

Look at the following arguments and decide if they are examples of simple reasoning, side by side reasoning, joint reasoning or chain reasoning. Then present each argument in both standard form **and** symbolically.

**Argument 1:** Wales has relatively high rainfall. Poole in Dorset has relatively low rainfall. In deciding where to go on a beach holiday, Poole will probably be the best choice.

**Argument 2:** Exercise is very good for you. It keeps you fit, it makes you feel good, it increases bone density which limits osteoporosis and it keeps you flexible.

**Argument 3:** Breast feeding provides babies with a nutritious diet. As a result, mothers should be able to feed babies in any location. Therefore breast feeding in public places should be encouraged.

**Argument 4:** The population is getting older. People need to be taxed more in order to support an aging population.

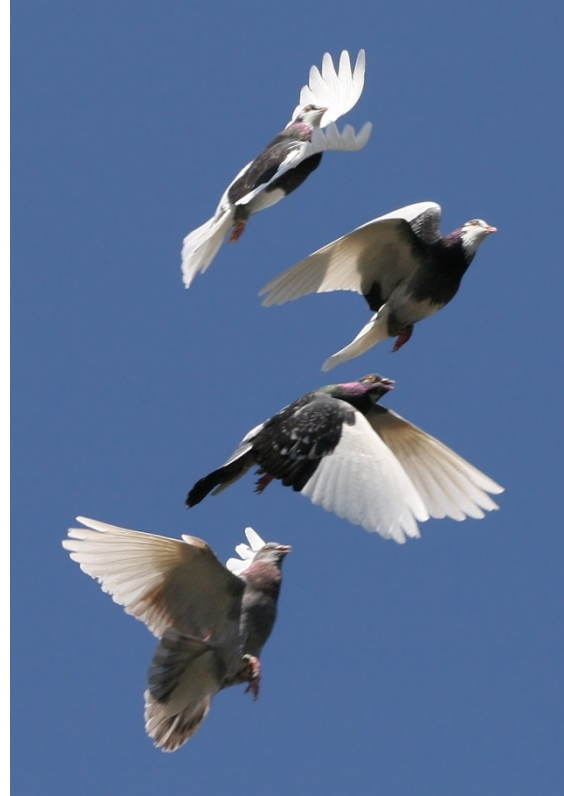




### Summary

- Sometimes the presentation of a conclusion is preceded by a conclusion indicator.
- Possible conclusion indicators include Therefore, Must, Cannot, Should, Thus, So, Consequently, It follows, As a result, Proving and Hence.
- Arguments can be presented as simple reasoning where there is a reason presented to support a conclusion.
- Arguments can be presented as side by side reasoning, where each reason is independent and each reason can support the conclusion in isolation.
- Joint reasoning arguments are where reasons are presented that depend on each other. The conclusion only makes sense by considering all of the reasons together.
- Chain reasoning involves reasons that build on each other. They may also include intermediate conclusions.

All arguments in critical thinking follow an ordered sequence.



### UNIT 10

#### 10.1: What are assumptions in arguments?



An **assumption** has a special meaning in critical thinking. It refers to an **unstated reason**. If you remember what you covered in Units 7-9, a reason helps support a conclusion. However, sometimes some reasons are not mentioned in an argument, even though they would help make sense of an argument.

However, many arguments contain assumptions as some things are considered as so obvious, it does not seem worth mentioning them.

Take the following argument:

**Argument:** Do not drink dirty water from ponds or rivers. Such water has not been chlorinated.

In standard form, R2 is missing from the above argument but is an assumption:

R1    Such water has not been chlorinated.

R2    **Unchlorinated water is dangerous**

---

C    Do not drink dirty water from ponds or rivers

Sometimes arguments purposely contain unstated reasons. This is because it means an argument can be

presented succinctly so it has greater impact.

However, sometimes an assumption is required to strengthen an argument. An assumption can be either:

- In support of a reason
- A reason in its own right
- An intermediate conclusion



#### Individual Activity 1

Identify the assumptions in the arguments below:

1. Wherever possible we should travel by train than car. This will reduce greenhouse gases and global warming
2. All rubbish should be recycled. Putting it in land fill harms the environment
3. Greenpeace should be supported. Dolphins and Whales are hunted and killed by poachers.

#### 10.2: What are principles in arguments?



A **principle** is a statement about how something should be. It is not necessarily accurate or representative of something truthful.

Often principles result from legal rules, moral guidelines or medical ethics, for example.

The word ‘**should**’ is often used in principles and they make a claim about how something should be.

Examples of principles include:

- People should not be used as slaves
- People should not be hurt
- Animals should not be tested on
- Obese patients should not be treated by the NHS

Principles can be used in arguments as reason, intermediate conclusions and main conclusions.

They are often very powerful in arguments; however they are regarded as inflexible. This means they cannot be bent to suit particular situations.

For example, take the following argument:

**Argument:** Killing is wrong. It is wrong to kill people in prison who may have been rehabilitated, it is wrong to kill innocent animals as part of experimentation and it is wrong to kill innocent people in suicide bombings.

However, a wasp buzzes over and you swat it. In this case, your principle does not stand. A principle cannot be contradicted.

### 10.3: What are counter arguments?



A **counter argument** is an argument that opposes another argument by either challenging the reasons in the other argument, using different reasons to oppose another argument or finding flaws in the reasoning of the other argument.

### 10.4 How to challenge reasons in another argument?

Take the following argument:

**Argument:** Exams are a fairer way of assessing students. Everyone has the same amount of time and the same questions so they are all being treated the same so it is more accurate. Everyone is also clear that it is students’ own work that is presented and so shows their understanding at that particular time.

A counter argument would involve coming up with rejections to each of the statements above.



#### Individual activity 2

Come up with counter arguments as to why exams may not be fairer, more accurate and not demonstrate students’ understanding.

### 10.5 How to use different reasons to oppose another argument?

Take the following argument:

**Argument:** The Government is right to continue to class cannabis as an illegal substance. People can become addicted and turn to crime to support their habit.

A counter argument using different reasons would involve taking the reverse of the conclusion and using different reasons to support the new conclusion.

e.g. **Argument:** The Government is wrong to continue to class cannabis as an illegal substance. Cannabis has positive health benefits.



#### Case study 1

Look at the following case study. Identify any assumptions and principles as well as providing relevant counter arguments.

#### Colorado is enjoying benefits from legalising marijuana

It's been a year since Colorado became the first state in the US to legalise marijuana, and its impact on health, crime, employment and other factors can now be measured.

So, did it bring about an apocalypse leaving the streets strewn with out-of-work addicts as some Republicans feared?

"We found there hasn't been much of a change of anything," a Denver police officer told CBC this week.

Not only has the legalization of cannabis not come with a rise in crime, it has also created thousands of jobs, as tourists flock to the city's 60+ marijuana outlets.

A local newspaper even appointed its first cannabis critic in April.

"So the sky isn't falling?" a CBC reporter asked the officer. "The sky isn't falling," he replied. Marijuana use should not be seen as a negative.

The rates of impaired driving, property crime and violent crime were all dropping in Denver prior to legalisation, and the trend has only continued. Even drug use among young people is down, the report claims.

The state has collected \$60 million in tax revenue from sales of the drug meanwhile, \$4 million of which has been plugged back into the city through new programmes brought in by its mayor.

Cannabis remains a Class B drug in the UK, carrying a prison sentence of up to five years for possession.



### Summary

- An assumption has a special meaning in critical thinking. It refers to an unstated reason.
- A principle is a statement about how something should be. It is not necessarily accurate or representative of something truthful.
- A counter argument is an argument that opposes another argument by either challenging the reasons in the other argument, using different reasons to oppose another argument or finding flaws in the reasoning of the other argument.

## UNIT 11

### 11.1: What are flaws in arguments?



A **flaw** is an error in an argument. This will normally arise when a conclusion does not logically follow the reasons in an argument.

When constructing or analysing the strength of arguments, it is important to be aware of potential flaws.

### 11.2 Flaw 1

#### – Post hoc fallacy

The Latin phrase *post hoc ergo propter hoc* translated means ‘after this, therefore because of this’. Or put another way, just because something happens (action A) after something else (action B), this does not mean that action A caused action B. It could simply be coincidence.

An example of a post hoc fallacy can be seen below:

**Argument:** Eating 5 a day makes you sick. I recently started on a healthy 5 a day eating campaign. Now I have a bad cold.



#### Reflection point 1

How is the above argument flawed?

### 11.3 Flaw 2

#### – Ad hominem fallacy

The Latin phrase *ad hominem* means ‘against the man’. Therefore, instead of attacking an argument, someone attacks the person making the argument. This is usually to discredit their credibility and reputation.

Recognising an ad hominem argument involves:

- A negative description of the person presenting the argument
- Then dismissing the argument based on this negative description.

**Argument:** That man should not be reinstated as Mayor as he doesn’t know what he is doing. He is sexist as he recently joked that women only go to university to find themselves husbands.



#### Reflection point 2

How is the above argument flawed?



### 11.4 Flaw 3 – Straw man fallacy

A straw man was traditionally used as target practice for archers as it was easy to knock down.

Similarly, when an argument has been exaggerated or simplified, it is easier to knock it down.

Recognising a straw man fallacy involves identifying:

- Arguments that either seem too simple or exaggerated so their message is distorted.

**Argument:** Our local MP says that the defence budget should be cut by 2%. We won't have any army left to defend our country.



#### Reflection point 3

How is the above argument flawed?

### 11.5 Flaw 4 – Tu quoque fallacy

The Latin phrase *To quoque* means 'You too'. This is when an argument is dismissed due to it being seen as inconsistent with previous actions or claims. Just because an argument seems contradictory to previous actions or responses, this doesn't mean that the argument should be rejected.

**Argument:** My mum tells me that I should look after myself more and stop smoking. Yet she eats too much saturated fat and does virtually no exercise.



#### Reflection point 4

How is the above argument flawed?

### 11.6 Flaw 5 – Slippery Slope

A slippery slope argument is one that is often used to scaremonger. It attempts to persuade people that something that might initially seem acceptable could lead to unacceptable consequences.

The flaw within a slippery slope argument is the suggestion that the slippery slope progression will occur with little or no evidence!

**Argument:** Some countries support the death penalty. But where will this lead? Our prisons are overcrowded so more people may get sentenced to death as opposed to life imprisonment. And the more deaths there are the more people will accept it. It may lead to groups of people being put to death at the same time which reverts back to Nazi occupation days.



### Reflection point 5

How is the above argument flawed?

is better facilities. These measures will lead to better results.

## 11.7 Flaw 7 – Circular

A circular argument occurs when the reason and the conclusion are the same.

**Argument:** I am the best at playing monopoly because I always win.



### Reflection point 7

How is the above argument flawed?



### Discussion point 2

What other choices are there?



### Reflection point 6

How is the above argument flawed?



### Discussion point 1

What would be a better reason to support the conclusion?

## 11.9 Flaw 9 – Inconsistency

Arguments can also be inconsistent. This is when reasons/conclusions/claims contradict each other.

**Argument:** Euthanasia is wrong. People should die naturally. Therefore, more places that support euthanasia should be invested in.

## 11.8 Flaw 8

### – False dilemma

Arguments can also be flawed when the options available are limited or restricted. Often such arguments ask for people to decide between two or more possibly unwanted options.

This is called false dilemma because a dilemma involves having to make a difficult choice. Restricting choices results in a false dilemma.

**Argument:** There are two ways of improving education standards. The first is better teachers and the second



### Reflection point 8

How is the above argument flawed?



### Discussion point 3

What would be a more suitable conclusion?

### 11.10 Flaw 10 - Appeals

There are many different types of appeals. Appeals are usually irrelevant to arguments presented. Appeals could involve appealing **novelty** – (anything new is better), **pity** – (feel sorry for me), **popularity** – (I must be right as most people agree with me), **fear** – (persuasion as a result of being afraid of something) and **authority** (using an authority figure who may be irrelevant) to add kudos. Celebrities are often used to promote places and products. They may not have anything to do with the product or place, but their presence acts as an appeal.



#### Individual activity 1

Come up with an argument that illustrates each flaw (Flaws 1-10). Remember an argument contains at least one reason to support a conclusion.



#### Summary

- The Latin phrase *post hoc ergo propter hoc* translated means 'after this, therefore because of this'. Or put another way, just because something happens (action A) after something else (action B), this does not mean that action A caused action B. It could simply be coincidence.
- The Latin phrase *ad hominem* means 'against the man'. Therefore, instead of attacking

an argument, someone attacks the person making the argument. This is usually to discredit their credibility and reputation.

- Recognising a straw man fallacy involves identifying arguments that either seem too simple or exaggerated so their message is distorted.
- *To quoque* means 'You too'. This is when an argument is dismissed due to it being seen as inconsistent with previous actions or claims.
- A slippery slope argument is one that is often used to scaremonger. It attempts to persuade people that something that might initially seem acceptable could lead to unacceptable consequences.
- A circular argument occurs when the reason and the conclusion are the same.
- Arguments can also be flawed when the options available are limited or restricted. Often such arguments ask for people to decide between two or more possibly unwanted options which are an example of a false dilemma.
- Arguments can also be inconsistent. This is when reasons/conclusions/claims contradict each other.
- Appeals are irrelevant if they do not have evidence to support them.

# Skills Knowledge

## Chapter 2 – Critical Thinking: argument construction

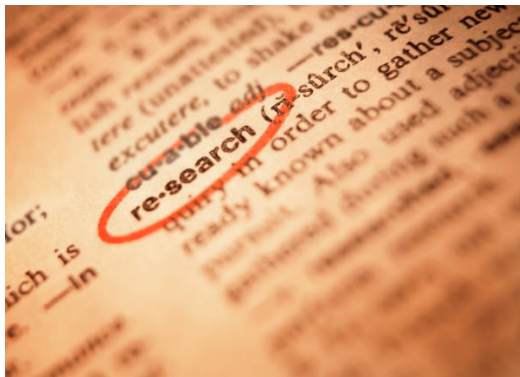
Straw man flaw – is the argument too simple or exaggerated so its message is distorted?



## UNIT 12

### 12.1: How to get started in constructing an effective argument:

- Research around the topic you have chosen. Find out as much as you can. This information should represent all views and then you can make up your mind on your viewpoint once you have completed your research.



- Next go through all of your research once you have decided on your focus. Disregard all irrelevant research
- Decide how reliable the relevant research you have is. You may disregard unreliable evidence or make a note concerning why it is unreliable which you may decide to use in your argument.
- Sort the remaining evidence into two piles. One that appears to be neutral and one that supports opposing views.
- Group together any research that appears to be related.

- Come to an overall conclusion.



- Decide on reasons and evidence to support your reasons within your conclusion. In order to construct an effective argument it is important to be able to plan it so it can be presented in **standard form**. You may wish to amend, add to or change the sequencing but your argument should be robust enough to be presented in **standard form** and presented **symbolically**.
- Do not ignore research that is against your conclusion. Consider counter arguments for them.
- Critically scrutinise your argument. Are there any flaws?



### 12.2: Other important factors to consider

***a) What type of reasoning are you using?***

You need to ensure your reasoning is also secure. Consider whether you are using side by side reasoning, joint reasoning or chain reasoning. How many reasons are you stating? Are your reasons relevant?

***b) Do you require any intermediate conclusions?***

Does your argument need to be strengthened by intermediate conclusions?

***c) Do you have any assumptions?***

Are you making any assumptions that you need to turn into explicit reasons in order to strengthen your argument?

***d) Are you relying on any principles in your argument?***

If so, does it apply to all situations? Principles are powerful but inflexible.

***e) Do you have any counter arguments?***

Will your argument become stronger if you challenge reasons in the opposing argument?

***f) Do you have any evidence to strengthen your reasons?***

Is this evidence credible?

***g) Is your argument logical?***

Is your conclusion plausible? Do your reasons support your conclusion?

***h) Does your argument contain enough, but not too much information?***

You want to be persuasive and knowledgeable; however you do not want to waffle.



#### Individual Activity

Select one of the questions below and construct an effective argument using all of the advice above:

- Should there be a law to stop parents from smacking their children?
- Should airline flights become more expensive?
- Should euthanasia be introduced in Wales?
- Should the use of drugs be legalised?
- Should morbidly obese people be refused surgery?
- Should the age of legal alcohol consumption be raised to 21?
- Should everyone have the right to be a parent?
- Should capital punishment be reintroduced in Wales?



#### Group work

Listen to the arguments of others. Critically evaluate the strength of each argument.



# Skills Knowledge

## Chapter 2 – Critical Thinking: argument construction



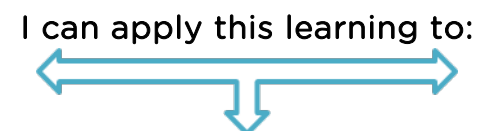
### Progress Checklist 2

Key terms:

Term	Definition	How confident do I feel in understanding and using this term?		
		Very confident	Somewhat confident	Not very confident
Argument				
Conclusion				
Reason				
Assumption				

I have learnt how to:	How confident do I feel in doing this?		
	Very confident	Somewhat confident	Not very confident
Present arguments symbolically			
Use different patterns of reasoning (simple, side by side, joint and chain)			
Understand how to challenge arguments			
Identify reason indicators			
Identify conclusion indicators			
Identify flaws in arguments			

Skills and Knowledge application:



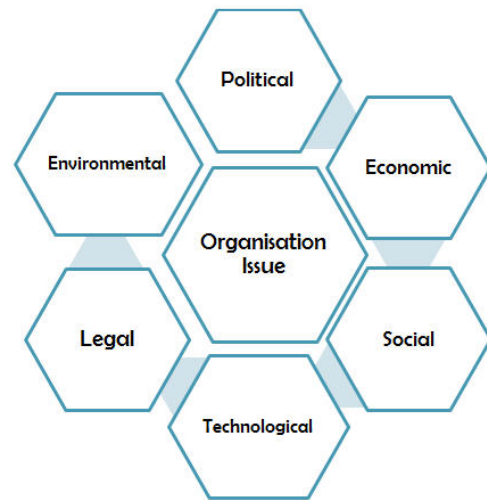
## UNIT 13

### 13.1: What is PESTLE analysis?

The environment is constantly changing. One way to analyse the external environment is to apply PESTLE analysis. PESTLE stands for:

- **Political** influences
- **Economic** influences
- **Social and Cultural** influences
- **Technological** influences
- **Legal** influences
- **Environmental** influences

Therefore any organisation or issue works in an external environment and PESTLE can help explain the influences and the effects.



### 13.2 What are Political influences?

Governments at local, national and international levels provide rules, regulations, conventions and constraints.

Influences that may affect an environment include:

- Changes in tax. For example; if a government reduces taxation, this may mean consumers have more disposable income and are able to buy more goods and services from businesses.
- Privatisation or nationalisation. For example; if a transportation organisation is privatised it may be working in a competitive environment

and offer reduced fares in order to attract customers.

- Trade unions. For example; if a transportation organisation changes terms and conditions for its employees, a trade union may call a strike. This could result in the transport not being available for the consumers to use on the days of the strike.
- Changes in the availability of raw materials. For example, if the price of a raw material such as cocoa increases due to a crop failure, consumers may end up paying more for the end product.
- Duties and levies. If increased duties are placed on undesirable products such as tobacco, this may deter consumers from buying it.



### Individual Activity

Find out the current Welsh situation regarding each of the influences above. Select one and present your understanding to an audience.

As an extension, you could compare and contrast with another country.



Therefore, **political influences** are decisions made by governments. Political decisions can be influenced by lobbying, for example, but are generally out of the control of organisations.



### Case study 1- Transport

Transport services are at the heart of the UK economy - moving people to work, home and school, and goods to households and businesses. In the 1980s, the government started to privatise some transport services in the UK. It believed that allowing private firms to compete to run some transport services would keep prices low and ensure companies would try harder to give customers what they wanted.



### Discussion 1

Are consumers in Wales generally happy with transport services?

Britain's railways were nationalised by Labour in 1948 and returned to private hands by John Major's Conservative government in 1993.

Labour was initially committed to renationalisation but the policy was dropped when Tony Blair came to power in 1997. Track, signalling and stations were taken out of private hands and put into a not-for-profit company, Network Rail, after the collapse of Railtrack in 2002.

### **The case for nationalisation by Ian Taylor.**

*Ian Taylor, co-founder of Transport for Quality of Life think tank.*

*Formerly manager of environmental consultancy services for the Centre for Alternative Technology.*

In 1993, Britain's railway was broken into pieces and handed, mostly as local monopolies, to profit-taking companies.

The cost of the railway to the taxpayer has subsequently more than doubled in real terms, a rise out of all proportion to the 33% increase in train services over the same period.

The cost rises stem from wastage as shareholder dividend pay-outs, other inefficient private sector

financing and inefficiencies created by fragmentation of the railway.

The wastage amounts to over £1bn per year, enough to cut fares by 20% if the railway were reunified as a public company.

Unbeknown to most passengers, one portion of our railway, the East Coast mainline, is still run by a publicly-owned company, Directly Operated Railways, which picked up the pieces after its two private sector predecessors walked off the job.

Recent calculations by the Office of Rail Regulation revealed how the public money that helps maintain the rail tracks or directly supports rail services splits between the train companies and showed that DOR receives less subsidy than any other rail franchise operator. DOR's success is a glaring embarrassment for the Government, who now intend to privatise it post-haste, even though that will increase costs to the taxpayer.

### **The case against nationalisation by Ben Southwell.**

*Ben Southwood is a researcher at the Adam Smith Institute*

*Previously economics  
correspondent for City AM  
newspaper*

The UK's railway network was built privately and competitively and by some way its most successful years were the private eras between 1830 and 1922 and 1994 to the present.

Returning it to centralised state control would be a step backwards and a mistake.

Instead we should end the practice of franchising, which creates private monopolies, and allow real competition and diversity.

Our system began with the first steam train in 1825, and despite costly government licenses, investors built the bulk of today's network (about 6,000 of approximately 11,000 miles) in just three or so years, between 1844 and 1846.

Journeys rose to from about 500 million a year in the 1870s to 1.5 billion just before the First World War. After the war, David Lloyd George judged that rail firms' profits were too low due to too much competition, and decided to merge nearly all the UK's railway firms into just four firms, practically monopolies.

Between 1923 and 1947 the so-called Big Four government-supported firms ran the roost and journeys fell to about 1.2 billion by the onset of the Second World War.

After the war, these and others were consolidated further into British Rail. Under British Rail, there were steadily fewer and fewer journeys per year—from around 1 billion in 1948 to only 750 million by 1995, just before the onset of the franchising system.

Now there are deep flaws with franchising, and undoubtedly it has been lucky, coinciding with higher congestion, fuel prices, and a renewed rise in London as the UK's economic centre. But the sharpness of the change since 1995 is undeniable.

Since then journeys have spiked dramatically, rising every year to close on the 1.5 billion not seen for almost a century.

The solution to our current problems is not more state bungling; it is a return to diversity, competition and open markets.

[<http://businesscasestudies.co.uk/first-group/managing-external-influences/political-and-economic-factors.html#ixzz3TDibE3HI>]



### Group activity

Divide into 2 groups – ‘For’ and ‘Against’ transport nationalisation. Produce persuasive documentation and hold a debate in order to argue your case.



### Summary

- **Taxation** is a means by which governments finance their expenditure by imposing charges on citizens and corporate entities. Governments use taxation to encourage or discourage certain economic decisions. For example, reduction in taxable personal (or household) income by the amount paid as interest on home mortgage loans results in greater construction activity, and generates more jobs. See also taxation principles
- **Privatisation** is the sale or return of publicly owned enterprises to private ownership and control. It is the opposite of nationalization.
- **Nationalisation** refers to the takeover of privately owned corporations, industries, and resources by a government with or without compensation. Common reasons for nationalization include (1) prevention of unfair exploitation and large-scale labour layoffs, (2) fair distribution of income from national resources, and (3) to keep means of generating wealth in public control.
- **Trade unions** are organisations whose membership consists of workers and union leaders, united to protect and promote their common interests. The principal purposes of a labour union are to (1) negotiate wages and working condition terms, (2) regulate relations between workers (its members) and the employer, (3) take collective action to enforce the terms of collective bargaining, (4) raise new demands on behalf of its members, and (5) help settle their grievances.



## UNIT 14

### 14.1: What are Economic Influences?



**Economic influences** affect an economy's performance that directly impacts organisations and individuals. These influences can also have long term effects.

Economic influences can include the following:

- Inflation rate
- Interest rates
- Foreign exchange rates,
- Economic growth patterns
- FDI (foreign direct investment)
- Unemployment rates
- Disposable income
- Trade tariffs
- General taxation issues
- Taxation changes specific to product/services
- Local economic situation and trends



Some factors will be explained in turn to show how it may affect an organisation or individual.

### 14.2: What is an inflation rate?



**Inflation** is defined as a sustained increase in the general level of prices for goods and services. It is measured as an annual percentage increase. As inflation rises, every pound you own buys a smaller percentage of a good or service. This affects an individual's standard of living because if inflation rises, you get less for your money.

In simple terms:

- **Inflation** is a rise in the price of goods and services we buy.
- The annual rate of inflation shows how much higher or lower prices are compared with the same month a year earlier. It indicates changes to our cost of living.
- So if the inflation rate is 3% in January, for example, prices are 3% higher than they were 12 months earlier. Or, to look at it another way, we need to spend 3% more to buy the same things.

- We compare this to the annual change recorded in the previous month to get an idea of whether price rises are getting bigger or smaller.
- If the annual rate has risen from 3% to 4% from one month to the next, prices are rising at a faster rate.
- If the rate has fallen - say from 3% to 2% - prices of the things we buy are still higher, but have not increased by as much.
- If the percentage rate is negative - for example, -1% - then prices are 1% cheaper than a year ago.
- The figures are compiled by the Office for National Statistics. The inflation rate is calculated every month by looking at the changes in prices of 700 goods and services in 150 different areas across the UK.
- This is known as the basket of goods and is regularly updated to reflect changes in the things we buy. Hence the recent inclusion of tablet computers and Twilight books and the exclusion of casserole dishes and photo printing services.
- There are two main measures: the Consumer Prices Index

(CPI) and the Retail Prices Index (RPI). These are, in effect, two baskets comprising different goods and services, and different methods are used to calculate them. There are many differences, but the biggest is that RPI includes housing costs such as mortgage interest payments and council tax, whereas CPI does not.



### Individual activity 1

What is the current rate of inflation in Wales?

Has this increased or decreased in comparison to last year?

Are Welsh citizens therefore, better or worse off?

## 14.3: What is an interest rate?



**Interest rates** indicate the price at which you can borrow money or the return on how much money you save.

If you borrow money and the interest rate is 5% a year, it will cost you 5% of the amount borrowed to do so. This will need to be repaid along with the

original money you borrowed. Interest rates are usually quoted annually and are calculated as a compound interest rate.

Generally, governments set high interest rates to encourage people to save and lower rates to encourage people to stop saving and to spend instead.



### Case study 1

People borrow money in the form of a mortgage to buy property. It is usually the biggest debt a person will take on and usually lasts between 15-30 years.

Major high street banks are currently offering rates in the region of 3%.

However the average cost of a property in Wales is £171,000. If you took out a mortgage at 3% over 25 years to cover this amount, you would pay back roughly £362,000!

straight into your bank account, often within 24 hours of your application being approved. The payday loan repayment, plus interest, is then taken directly from your bank account on the due date.

However, whereas a usual interest rate that a high street bank would charge for a personal loan would be around 5%, pay day loan companies tend to lend to people who have poor credit ratings. As such they consider the risk involved as being much higher and therefore, the rate of interest being charged is much higher. Look at the following adverts to find the interest rates:

LEND & SPEND	
New Customers can get up to	<b>£2000</b>
Recommendation Review	<b>97% = Satisfaction</b>
Loan Duration	<b>12 months = More time</b>
Repay by instalments?	<b>YES = Flexible</b>
Fees for fast transfer?	<b>NO = FREE - No fee</b>
Open to existing customers?	<b>YES - Up to £3000</b>

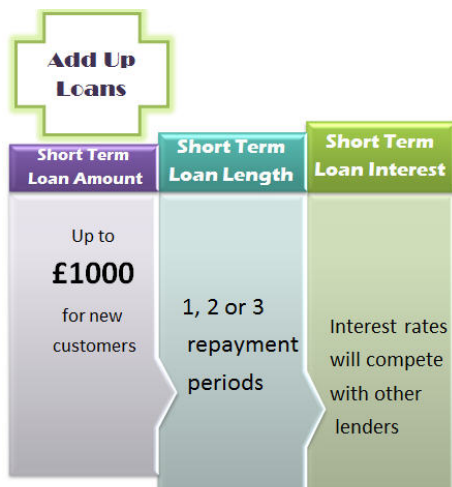
**Representative 1275.0% APR**



### Case study 2

Pay day loan companies are growing quickly in the UK.

A pay day loan is a short-term advance designed to tide you over financially until payday. The payday loan is usually paid



Warning: Late repayments can cause money problems.

Representative: Amount of credit: £200 for 35 days. One total repayment of £256. Interest: £56 Interest Rate 292%pa (fixed) 1212%APR



### Reflection Point 1

Should pay day loan companies be legal? Justify your answer?

## 14.4 What is taxation?



**Taxation** is a means by which governments finance their spending by imposing charges on citizens and corporate entities (e.g. businesses).

Governments also use taxation to encourage or discourage certain economic decisions. For example, increasing taxes on alcohol and tobacco to make the items more expensive to reduce the number of items sold, and ultimately protect an individual's health.

Once you start work, you will have your income reduced due to the

tax you will have to pay. The current rates are as follows:

- **Basic-rate tax**

Most people who pay the basic rate of tax (roughly those who earn between £10,600 and £41,785 in 2015/16) pay 20% of their savings income in tax, the same level as on employment income.

- **Higher-rate tax**

Those who pay the higher rate of tax (roughly those who earn between £41,786 and £150,000 in 2015/16) pay 40% on both.

- **'Additional' rate tax**

In the 2015/16 tax year anyone whose salary tops £150,000 will pay additional tax at a 45% rate.

- **Non-taxpayers**

Those who don't pay any income tax (roughly those whose income is under £10,600 in 2015/16) don't pay any tax on savings. This usually includes students and children, who are taxed like anyone else, but rarely earn over the threshold.



### Reflection Point 2

Is the principle of tax fair?

Are these tax bands fair? Explain your answer



### Individual activity 1

Research other countries' taxation systems including that of Monaco. How do they differ?

Which is more desirable?

## 14.5 What is disposable income?

Economic influences **affect** the amount of disposable income households have.



**Disposable income** is the amount of money that households have available for spending and saving after income taxes have been accounted for. This is a very important measure to determine not only an individual's overall economic health but the health of society as a whole. **It is one of the primary measures of personal wealth but it is not the only measure that can be used.**



### Summary

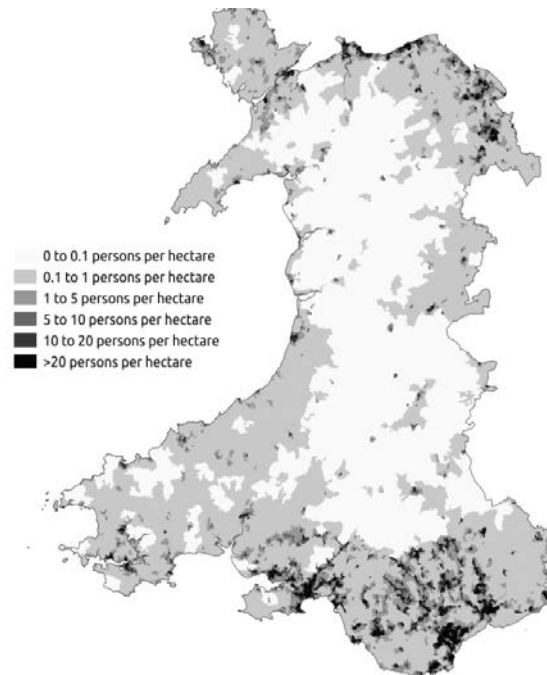
- Inflation is defined as a sustained increase in the general level of prices for goods and services.
- Interest rates indicate the price at which you can borrow money or the return on how much money you save.
- Taxation is a means by which governments finance their spending by imposing charges on citizens and corporate entities.
- Economic influences affect an economy's performance that directly impacts organisations and individuals.

## UNIT 15

### 15.1: What are Social Influences?



The term **social environment** describes the characteristics of society, the people who live in that society and their values and beliefs. Social factors refer to the cultural and demographic aspects of the environment.



### 15.2 What are demographics?

Demographics of society provide information about size, gender, ethnic groups, income levels, educational attainment, occupations and family structure.

Demographics are important because they give general information about a population at a given moment in time which impacts on that particular society.

### 15.3 What are Wales's current demographics?

- 3.1 million people (mid 2011).
- The main urban areas are Cardiff (346,100), Swansea (239,000) and Newport (145,700).

- About 1 in 20 of the UK population lives in Wales.
- 1.3 million households (2011).
- The total land surface of Wales comprises nearly 2.1 million hectares, of which some 80 per cent is devoted to agriculture.
- Life expectancy from birth in Wales is 78.2 years for males and 82.2 years for females (2010-12).
- Gross Value Added (GVA) estimates the economic activity of an area. Workplace GVA in Wales was £47.3 billion in 2012. Per head of population this is just under three quarters of



the UK (less extra-region)  
average (72.3 per cent).

- There were 1.76 million licensed road vehicles in Wales in 2012.
- Just over 52 per cent of local authority municipal waste was prepared for reuse, recycling or composting in 2012-13.
- In January 2013 there were 1,656 maintained schools, and approx. 465,000 pupils. More than 500 schools teach through the medium of Welsh.
- There were nearly 129,000 enrolments at higher education institutions in Wales in 2012/13.
- In 2013 there were 9.5 million sheep and lambs- about one quarter of the UK total.
- There were around 35,200 babies born in 2012.
- Overall greenhouse gas emissions have fallen by 21 per cent between the base year 1990 and 2011.
- Around one fifth of the population of Wales say they can speak Welsh.
- There were 9.6 million domestic UK tourist trips to Wales in 2012.



### Individual Activity 1

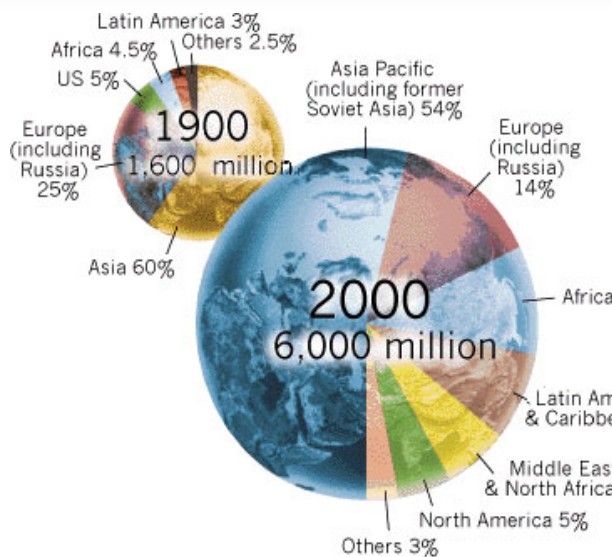
Select 10 of the demographics above. For each one, predict whether the statistics show a rise or fall from the previous year. Also come up with possible reasons for each change.

## 15.4 What are the World's key demographics?

According to The State of the World's Children 1998, UNICEF.

### 15.4.1 Population

The world will have almost four times as many inhabitants at the end of the century as it did at the beginning. Asia has contributed the lion's share of human population throughout the century; Europe's proportion has steadily declined.



World population by region, 1900 and 2000

### 15.4.2 Environment

Humans had a far more destructive effect on the global environment in the twentieth century than in all the millennia that preceded it.

- About half the world's tropical forests were destroyed after 1950. About 75 per cent of the clearance provided land for agriculture. In West Africa three-quarters of all forests had been destroyed by the end of the century.
- The release of chlorofluorocarbons (CFCs) into the atmosphere from the 1930s onwards caused holes in the ozone layer which protects the earth from the sun's ultraviolet

radiation. Use of CFCs rose from 100 tons in 1931 to 650,000 tons by the mid-1980s. CFCs have now been phased out but the ozone layer will not return to its former state until the middle of the twenty-first century.

- About two-thirds of the effect of global warming comes from the emission of carbon dioxide derived from the burning of fossil fuels. Over half the total increase in carbon dioxide levels between 1750 and 1990 occurred after 1950. These levels are still rising, doubling every 16 years, yet no serious attempt has been made to deal with the problem.

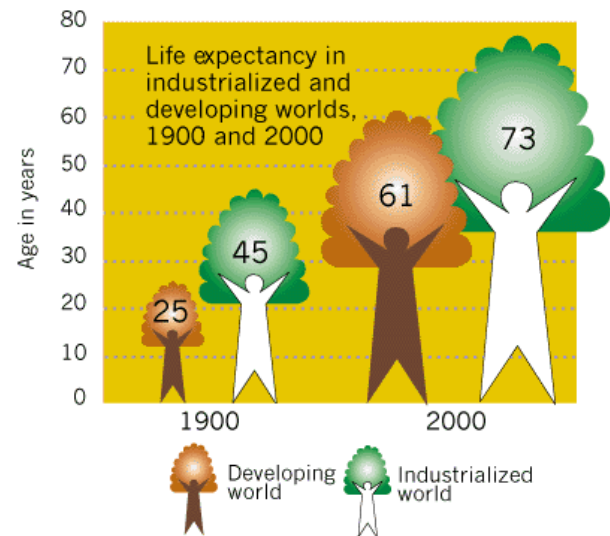
### 15.4.3 Colonialism

In 1900 Europe and North America controlled 84 per cent of the land surface<sup>4</sup>. The colonial system meant that there were only around 35 independent countries, almost half of which were in the Americas. At the end of the century there are 193 independent states.



### 15.4.4 Health

For all but the wealthier inhabitants of industrialized countries in 1900 life expectancy was appallingly low. The improvements in life expectancy in the entire world's regions have been dramatic, largely due to the conquest of certain key diseases and reductions in infant mortality rates. But the gap between the industrialised and developing worlds at the end of the century remains uncomfortably wide.

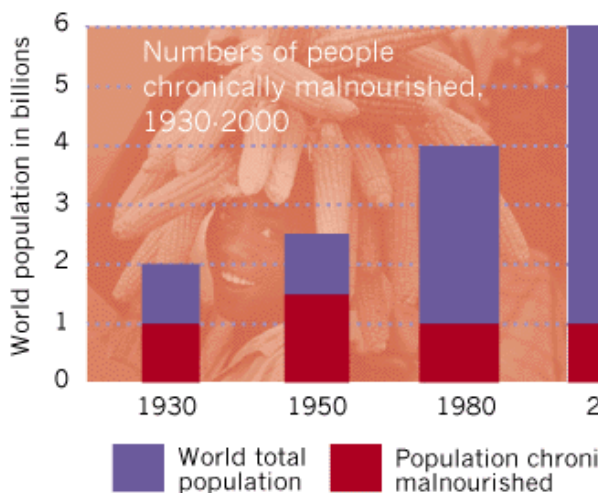


In the rich world over-consumption has produced its own health problems in the diseases of affluence, notably cancer and heart disease:

- Heart disease was almost unknown in 1900 beyond pampered elite but now kills 40 per cent of men and 20 per cent of women in industrialised countries.
- Around 1 in 3 Americans currently contracts cancer compared with 1 in 27 in 1900.
- Lung-cancer rates in the industrialized world rose by 80 per cent in the 20 years after 1960, largely as a result of smoking; rates are now rising in the Majority World as the tobacco-smoking habit is exported there by Western transnationals.

### 15.4.5 Hunger

The proportion of people suffering from chronic malnutrition has declined through the century as global population has increased. But the absolute numbers who are chronically malnourished has remained at or over one billion from when records began in the 1930s to the present day. And in Africa, the proportion of people suffering from chronic malnutrition is again on the rise.



### 15.4.6 Wealth

World consumption rose from \$1.5 trillion in 1900 to \$4 trillion in 1950, and then mushroomed to \$12 trillion in 1975 and \$24 trillion in 1998. But the benefits have not been fairly distributed: poor countries have a much smaller share of the global cake than they did in 1950.



*Gross national product per capita of low-income countries as percentage of that in high-income countries, 1950, 1976 and 1997*



#### Group Work 1

In teams select one of the topics above and create an awareness raising campaign to highlight the current predicaments and what can be done to alleviate situations countries find themselves in.

### 15.5 What are other social factors?

The term **social environment** describes the characteristics of society, the people who live in that society and their values and beliefs. Social factors refer to the cultural and demographic aspects of the environment.

Other social factors include:

- Education
- Religion
- Family
- Transportation
- Food
- Energy
- IT
- Energy



#### Individual Activity 1

Select one the factors above and briefly consider how it affects our lifestyle choices. Draw a spider diagram to illustrate.



#### Summary

Demographics of society provide information about size, gender, ethnic groups, income levels, educational attainment, occupations and family structure.

## UNIT 16

### 16.1: What are Technological Influences?



**Technological influences** describe innovations in technology that may affect the operations of individuals, the industry and the market favourably or unfavourably. Such influences can include automation, research and development and the amount of technological awareness that is possessed by society.

### 16.2 Impact of technology - Medicine

While the Ancient Romans, Greeks and Egyptians had pushed forward medical knowledge; after the demise of these civilisations, the momentum started by these people tended to stagnate.

By the 14th Century, universities had developed in Western Europe that could be classed as medical schools where students could study under a master physician. The University of Montpellier was one such university. Dissections of human bodies were carried out in these universities so anyone wanting to study medicine in the

Middle Ages was not totally ignorant of facts about the human body.

However physicians still believed that an imbalance of humours played a major part in illnesses. When this happened:

"Several kinds of medicine may be good such as diet, drink, hot bath (whence sweat is growing), with purging, vomiting and letting blood".

### 16.3 Bloodletting in the Middle Ages

Indeed, bloodletting was a popular treatment for many diseases. Many diseases were thought to be caused by an excess of blood in the body and bloodletting was seen as the obvious cure. When a large quantity of blood was required, the appropriate vein was cut. If only a small amount was needed, a leech would be used.





Diagnosis was also influenced by astrology. Medical charts informed physicians what **not to do** for people born under a certain star sign.

- **Aries**  
Avoid incisions in the head and face and cut no vein in the head.
- **Taurus**  
Avoid incisions in the neck and throat and cut no veins there.
- **Gemini**  
Avoid incisions in the shoulders, arms or hands and cut no vein.
- **Cancer**  
Avoid incisions in the breasts, sides, stomach and lungs and cut no vein that goes to the spleen.
- **Leo**  
Avoid incisions of the nerves, lesions of the sides and bones, and do not cut the back either by opening and bleeding.
- **Virgo**  
Avoid opening a wound in the belly and in the internal parts.
- **Libra**  
Avoid opening wounds in the umbellicus and parts of the belly and do not open a vein in the back or do cupping.
- **Scorpio**  
Avoid cutting the testicles and anus.
- **Sagittarius**  
Avoid incisions in the thighs and fingers and do not cut blemishes and growths.
- **Capricorn**  
Avoid cutting the knees or the veins and sinews in these places.
- **Aquarius**  
Avoid cutting the knees or the veins and veins in these places.
- **Pisces**  
Avoid cutting the feet.



### Individual Activity 1

1. Look at your star sign above. Have you had any treatments or injuries that have targeted the areas you are supposed to avoid?



### Reflection Point 1

Why do you think physicians in the Middle Ages called upon astrology to help treat people?

## 16.4 Technological advancement in medicine

Treatment moved on and in the 1900s, more technologically advanced equipment was used.

### 1. Radium Water

Before radioactivity was fully understood, naturally occurring radium was lauded for its seemingly otherworldly benefits. Water was kept in radium-laced buckets, and people would drink the tainted liquid to cure everything from arthritis to impotence. Of course, this was an awful idea, and when people started to drop dead from this miracle water, the connection was made. Now, non-radioactive prescription drugs are used to combat arthritis and impotence.

### 2. Ecraseur

This obsolete tool had a chain loop that the doctor would tighten around a cyst or haemorrhoid. This constriction would rob the area of blood flow, which would cause the offending lump to fall off. In modern medical offices, creams are used to ease haemorrhoids away, while more delicate surgery is most often used to remove cysts.

### 3. Peg Legs

Before the advent of advanced prosthetics, wooden pegs had to be jammed into the hollowed-out cavities of an amputee's leg or strapped to the patient's waist.

The device would be shaped and carved to the correct height, and occasionally the fit was perfect. Some recipients of the procedure were able to walk for miles without noticing discomfort. Still, they were no match for modern prostheses.

#### 4. Gasoline to Cure Lice

In the early 20th century, a patient with a bad case of head lice would douse his or her dome with gasoline or kerosene in an effort to rid their scalp of the unwanted guests. While this treatment may have been somewhat effective, it was also incredibly dangerous to anyone who walked near an open flame. Modern medicine can solve the infestation much more safely with medicated shampoo.

### 16.5 Technological advancement in medicine today

Clearly, the advancement in medical treatment has been astonishing. The average life span for someone in the Middle Ages (eliminating individuals who died before adulthood), was 43.6 years, with a median of 42/43; for men, it was a mean of 48.7 and a median of 48/49. Today's expectancy rate is 79 for men and 83 for women.

### 16.6 Specific examples of technological advancement in medicine

[<http://www.sherweb.com/blog/7-really-cool-medical-tech-advancements-underway/>]

#### 16.6.1 Smartphone Ultrasound



Computer engineers at Washington University in St. Louis received a \$100,000 grant from Microsoft and used it to merge a USB-based ultrasound probe with new Smartphone technology. The result is a hand-sized ultrasound machine that allows doctors in remote locations to image a person's kidneys, liver, bladder, eyes, veins and arteries in order to detect any problems. This could be a significant breakthrough for developing nations, where over 70 percent of people have no access



to needed medical equipment such as MRI scans or CT scanners.

### 16.6.2 Nanocomposite Contact Lenses for treating diabetes



Replacing the need for diabetics to draw blood in order to test their blood/sugar levels, this technology developed by Chemical and Biochemical Engineering professor at the University of Western Ontario, Jin Zhang, embeds nanoparticles into hydrogel lenses, which react with glucose molecules found in tears and cause a chemical reaction that change one's eye colour. These specially made contact lenses for diabetics would continuously alert them to variations in their glucose levels simply by looking in a mirror.

### 16.6.3 Robotic Surgeons



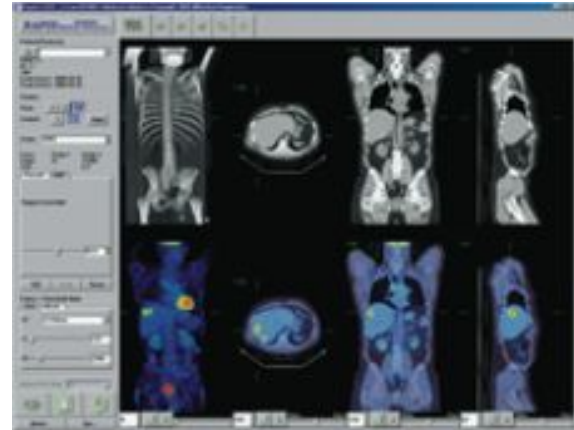
Though they have been around since the late eighties, medical robots are increasingly being used to assist in surgeries, reducing the danger of human error and giving way to more precise processes for performing intricate tasks. The robotic model behaves similar to a person's arm, enabling repetitive, controlled actions, appointed by the surgeon from a computer. Medical robots have been utilized in cardiothoracic surgery, cardiology and electrophysiology, gastrointestinal surgery, gynaecology, neurosurgery, orthopaedics, paediatrics, radiosurgery to treat tumours, and urology to remove cancerous prostate glands, repair obstructed kidneys, repair bladder abnormalities and remove diseased kidneys.



### 16.6.4 Neuroprosthetic Chips to prevent seizures and control artificial limbs with the mind

Researchers at the University of Florida are developing devices which can interpret signals in the brain and stimulate neurons to perform correctly. The initial aim of this technology was to correct conditions such as paralysis and epilepsy. The chip would be implanted directly into brain tissue, where it could gather data from signals, decode them, and stimulate the brain to function properly. One of the eventual goals of these advances is to one day make it possible for a paralysed person to control a prosthetic limb just by thinking about it.

### 16.6.5 Multimodality Hybrid Imaging Technology to detect prostate cancer



Developed at Lawson Health Research Institute new hybrid imaging technology could detect prostate cancer in the most effective way yet. Whereas previous technologies had limited capacities for measuring prostate-specific-antigen (PSA), new hybrid imaging technology could measure the exact amount of PSA found in the blood stream. Researchers hope to use advanced imaging to form a GPS-like system of the prostate that will allow doctors to better target the cancer prior to treatment.

### 16.6.6 Artificial Wombs



The artificial uterus (or womb), is a mechanism that is used to grow an embryo outside of the body of a female organism. Amniotic tanks are filled with amniotic fluid which is maintained at body temperature. The embryonic umbilical cords are attached to external pumps which regulate nutrient intake and waste outflow.

### 16.6.7 Medical check-ups from home



The monitoring and supervising of people's state of health, particularly for the elderly or disabled, is a growing necessity. Consequently, the Instrumentation, Sensors and Interfaces Group of the UPC's Department of Electronic Engineering in Castelldefels, Barcelona, is working on a system that will enable patients' vital signs to be monitored in domestic environments. The Group has designed a system that simultaneously detects heart and respiratory rates that function with force sensors, equivalent to the ones used to measure weight in conventional electronic weight scales. Ultimately, they are trying to develop sensors that will not require contact with the person being supervised in order to have the least possible impact on their daily lives and activities.



Advancements are already underway to implement a home medical check-up system through household items such as chairs. The check-up system would only take action when strictly necessary.



### Discussion 1

Is technological advancement always beneficial?

### UNIT 17

#### 17.1: What are Legal Influences?

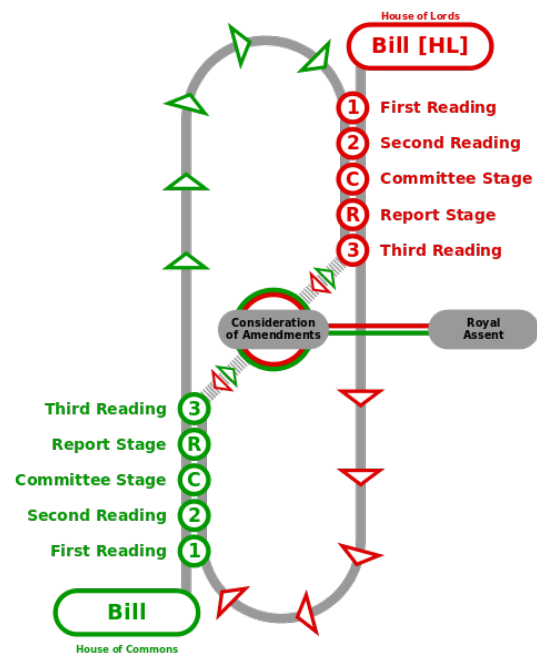


The **law** describes rules that are enforced through social institutions to govern behaviour. **Legal** issues are those that relate to the law.

#### 17.2 The changing nature of the legal environment

The legal environment is constantly changing as the government introduces new laws through Parliament.

#### 17.3 How do laws get passed?



The procedure of passing a Public Bill can start in either the House of Commons or the House of Lords. However, Bills involving the introduction of new taxation must be introduced by a government minister into the House of Commons. Bills of controversial political nature are also introduced in the Commons.

##### First reading

The legislative procedure starts with the *first reading* which is just a formality in both Houses.

##### Second reading

Then the Bill must have its *second reading* (in the case of government Bills, within a fortnight). In the House of Commons the Bill is presented by

a government minister. Then the views of the Opposition and other parties are heard. Although the Opposition in the Commons usually votes against it, a Bill progresses almost always to the Committee stage. There is a convention that Government Bills are not opposed by the House of Lords at the second reading. However, amendments can be voted on.

### Committee stage

When Bills have passed the second reading in the House of Commons, they are referred to a *standing committee* for examination. A standing committee consists of from 16 to 20 MPs. Standing committees are chaired by a member of the Chairmen's Panel. The Chairman votes only in the event of a tie and according to precedence. New standing committee members are appointed for each new bill.

However, certain Bills may be referred to the Committee of the whole House, if they fall into one of the following categories:

- Bills of major constitutional importance, such as those ratifying the European Union Treaties
- Bills that must be passed very quickly

- Bills which are uncontroversial and their committee stage is expected to be very short.
- Private Members' Bills which are not expected to be opposed at any stage.

### Report stage

After the committee stage, the committee that has examined the Bill must report its decisions to the whole House of Commons within two weeks, so that all members have the opportunity to propose amendments or to add clauses. The report stage can be quite lengthy. Bills that were examined by the Committee of the whole House are not normally debated at the report stage.

Also in the House of Lords the report stage follows a fortnight after the committee stage.

### Third reading

At this stage the final draft of the Bill is reviewed. In the House of Commons, the Bill cannot be amended substantially at the third reading. However, Bills which have their third reading in the House of Lords can still be amended at this stage.

Having passed through the previous stages, the Bill must be sent to the other House where the

whole procedure is repeated. Bills can still be amended at this stage, and both Houses must agree on the amendments. If the Houses cannot reach a compromise on the final drafts, the procedure can be extremely lengthy. Due to time limits, some Bills are lost.

Generally, the role of the Lords is complementary and their legislative power limited by the Parliament Acts of 1911 and 1949. The House of Commons can present a Bill for Royal Assent event without the assent of the Lords, after one year and in a new session. Also, the assent of the Lords is not essential, under certain conditions, in the case of financial Bills.

### The Royal Assent

The last stage of the legislative procedure in the UK is the Royal Assent. The Royal Assent is given by the Queen to the Bill that has completed all the parliamentary stages, and it is declared to both Houses. It is also listed in the Parliament's record of official proceedings. The Royal Assent is a formality and has not been refused since 1707.



### Discussion Point 1

Why is it considered necessary to have such a long process in passing a law?

## 17.4 Examples of recent laws that have introduced in the UK

- The Drug Driving (Specified Limits) (England and Wales) Regulations 2014
- The Harrogate Stray Act 1985 (Tour de France) Order 2014
- The Consular Marriages and Marriages under Foreign Law Order 2014
- The Paternity, Adoption and Shared Parental Leave (Parental Order Cases) Regulations 2014

### Pending Laws:

- The Single Use Carrier Bags Charges (England) Order 2015
- The Nicotine Inhaling Products (Age of Sale and Proxy Purchasing) Regulations 2015



### Individual Activity 1

Select one the laws listed above and explain what the law actually means.



### Individual Activity 2

Look at the following laws and decide if they are True or false?

1. If you're pregnant (and a woman) in the UK then you are allowed by law to relieve yourself anywhere you want.
2. Welshmen are prohibited from entering Chester before the sun rises – and have to leave again before the sun goes down, according to an old bylaw.
3. Given the above, perhaps it explains the fact that it is still technically OK to shoot a Welshman on a Sunday inside the city walls – as long as it's after midnight and with a crossbow.
4. If a whale is found on the British coast the King can claim the head and the Queen has a legal right to the tail – just in case she needs some new bones for her corset.
5. Alligators in Arkansas may not be kept in bathtubs.

6. In Arizona donkeys are forbidden from having a soak in the tub.

7. It is illegal to die in the Houses of Parliament – apparently because otherwise they would be eligible for a state funeral and that is a bit costly for the authorities

## 17.5 Examples of laws that have been introduced in other parts of the world

In France, it's illegal to name a pig Napoleon.

In San Salvador, drunk drivers can be sentenced to death by firing squad.

In Afghanistan the Taliban banned women from wearing white socks, for fear men might find them attractive.

In 1837, Egypt banned male belly dancing as it caused mass rioting.

In Wetaskiwin, Alberta, Canada, in 1917, tying a male horse next to a female horse was illegal.

In Singapore chewing gum is illegal.

In Paraguay you can legally duel, as long as both participating players are blood donors.

In Milan, Italy, unless going to a hospital or funeral, you have to smile or face a fine.

In Switzerland you legally have to live within 200m of a nuclear bomb shelter.

In Burma it is against the law to access the Internet. Anyone doing so faces prison.

In Bangladesh you face prison time for cheating at school.

Until 1984 in Belgium, you had to choose your child's name off a list of 1500.

It was once illegal to own a pet dog in Iceland.

In Seville, Spain, in 1983, a German Sheppard was arrested for stealing a woman's handbag.

In Turkey, it was illegal to drink coffee during the 16th and 17th century. It was punishable by death.

In Denmark it is not against the law to escape from prison.

4. Do too few people hold too much power?



### Discussion Point 2

Discuss the above statements



### Reflection Point 1

1. Why is it important to vote at elections?
2. Should certain types of governments be banned?
3. Can human rights be upheld WHERE EVER in the world?



### UNIT 18

#### 18.1: What are Environmental Influences?



The term **environmental influences** describes something we are very familiar with. It's everything that makes up our surroundings and affects our ability to live on the earth - the air we breathe, the water that covers most of the earth's surface, the plants and animals around us, and much more.

#### 18.2 Why are environmental influences being seen as more important?

In recent years, scientists have been carefully examining the ways that people affect the environment. They have found that we are causing air pollution, deforestation, acid rain, and other problems that are dangerous both to the earth and to ourselves. These days, when you hear people talk about “the environment”, they are often referring to the overall condition of our planet, or how healthy it is.

#### 18.3: Seven ways humans are damaging the planet

According to the Mother Earth Network, humans are seriously damaging the planet.

[<http://www.mnn.com/earth-matters/wilderness-resources/photos/7-ways-humans-are-damaging-the-planet/changing-our-world>]

##### 18.3.1 Mass erosion



China's Yellow River along the Gulf of Bohai is known to be the most sediment-filled river on Earth. Also called Huang He, the Yellow River, it flows 5,475 kilometres (3,395 miles) from eastern Tibet to the Bohai Sea. During its journey, it crosses a wide plateau filled with fine soil, which deposits into the eco-sensitive delta at the mouth of this river. This has historically allowed the river to reshape the coast.

However, in 1996 Chinese engineers blocked and redirected

the river northward. This has caused a level of erosion that has extensively reshaped the delta.

Above we see the delta imaged by NASA's Landsat satellites in 1989 and 2009. The 2009 image reveals that the shoreline has been reshaped to protect a series of coastal oil and gas wells. As odd as it seems, this "may be the outcome that the engineers were anxious to achieve."

### 18.3.2 Epic deforestation



In the past 40 years, as much as 20 percent of the Amazon rain forest has been cut down. The rain forest produces half of its own precipitation. As the forest is destroyed and burned for industrial purposes, the remaining trees dry out and die. This activity has made Brazil one of the largest greenhouse gas emitters on the planet.

Pictured above is the state of Rondônia in western Brazil as imaged by NASA's Terra satellite. These 51.4 million acres of forest was once roughly the size of

Kansas, according to NASA, but now it is on track to becoming the most deforested part of the Amazon.

How bad is it? NASA reports that 4,200 square kilometres of land had been cleared by 1978; 30,000 by 1988; and 53,300 by 1998. By 2003, an estimated 67,764 square kilometres of rain forest, an area larger than the state of West Virginia, had been cleared. In the images, we see the area in 2000 (left) and 2010.

### 18.3.3 Mountaintop removal mining in West Virginia

As the name implies, mountaintop removal mining involves the highly profitable removal of a mountaintop via explosives by coal mining companies. Companies then mine coal seams previously trapped beneath the rock.

While coal companies attempt to rebuild the mountaintop in an approximation of its original appearance, excess rock and dirt containing toxic mining products are dumped into area valleys and streams. As NASA reports, the environmental and health effects of this kind of mining on area soil and water are called "pervasive and irreversible" by experts.

Pictured below is the Hobet surface mine in Boone County, West Virginia, as imaged by NASA. We see the area in 1984 (below) and 2010. In 1984, the mine was still relatively small. By 2010, it had completely filled the Connelly Branch to the Mud River.



### 18.3.4 Las Vegas: Growth in the desert

Lake Mead is a huge reservoir of the Colorado River and responsible for providing water to Nevada, Arizona, California and northern Mexico. A recent severe 11-year drought caused the lake to drop to levels not seen since 1956. Then there's the taxing draw of Las Vegas, its closet city.

Pictured (right) is Las Vegas in 1984 as imaged by NASA's Landsat-5 satellite. On the right is the city in 2007. These photos depict the growing urban sprawl of Las Vegas. Nearby is the shrinking Lake Mead, which is located on the border of Nevada and Arizona.

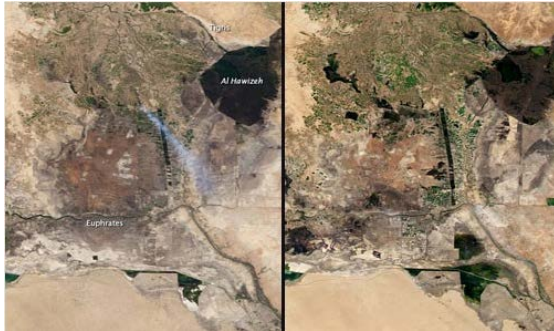
The drain on Lake Mead is due to the rapid growth in Las Vegas, as well as below-average rainfall. Lake Mead provides as much as 90 percent of southern Nevada's water. Fortunately, a wet winter allowed the lake to recover a bit in 2011.



### 18.3.5 The marshes of Iraq

The marshes of Iraq have a rich environmental and cultural history. For thousands of years, these Mesopotamian wetlands have supported a unique balance of people living in harmony with their environment. Marsh Arabs have fished the area for centuries while living in huts woven from reeds. But in the 1990s, Saddam Hussein drained the marshes to prevent supposed guerrilla fighters from using these resources. After his fall in 2003, Iraqis have worked to restore the once-lush wetlands by demolishing the dams, dikes and canals set up by Hussein. Their work is being hampered by another menace — drought.





Here we see the marshes as imaged by NASA's Terra satellite. Above is an image from 2000. Instead of lush greenery, "the area was reduced to a few small green patches and bare soil, varying in shades from purplish brown to pale beige," according to NASA. Any green areas are likely irrigated crops. On the right is the area in 2010 — from which it is clear the area has not recovered, and crippling drought in 2009 did not help. As Sheik Ali Hool told the Los Angeles Times, "What was once described as the Garden of Eden, the cradle of civilization, has been changed to desert and to a cradle of disease, poverty and suffering." But there's hope: by 2010, the irrigated green areas in the centre of the image appeared to be on the path towards restoration.

### 18.3.6 City expansion in Kampala

Kampala is the capital of Uganda and also its largest city. Originally made up of hills and wetlands, it was considered an ideal place for

hunting. Since the 1960s, the population has grown at an average rate of 5.6 percent a year. As a result, much of the surrounding forests have been lost to the need for charcoal, and area water quality has decreased significantly.

Here, you can see the city in 1974 (below) and 2008. Today, as many as 2.5 million people live in the city — and only 10 percent of those people are thought to have access to the city's sewer lines.



### 18.3.7 Dubai's growth



Part of the United Arab Emirates, the resort town of Dubai entered a period of dramatic urbanization at the beginning of the twenty-first century. Lacking oil, Dubai built its growth on finance, real estate, and

tourism. With no surface water, few aquifers, and little rainfall, the city used desalination plants to convert ocean water to freshwater, ornamenting the city with golf courses, gardens, and palm trees. Gigantic palm trees also sprouted along the coast - artificial islands made from sea-floor sand protected by rock breakwaters.

The Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) on NASA's Terra satellite captured this false-colour image of part of Dubai, including the resort island of Palm Jumeirah, on February 8, 2010. Bare ground appears brown, vegetation appears red, water appears dark blue, and buildings and paved surfaces appear light blue or grey. This image is part of the Earth Observatory's World of Change feature on the Urbanization of Dubai.



### Individual Activity 1

Produce a presentation to an audience on one of these concerns. Your presentation should cover:

What the concern is?

What impact it is having on the environment?

What impact it is having on individuals?

Should the world be concerned?

# Skills Knowledge

## Chapter 3 – Critical Thinking: PESTLE Analysis



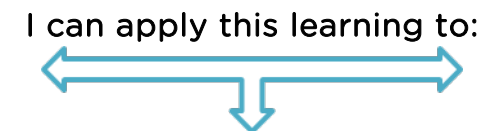
### Progress Checklist 3

Key terms:

Term	Definition	How confident do I feel in understanding and using this term?		
		Very confident	Somewhat confident	Not very confident
Demographics				
Taxation				
Disposable income				
External environment				

I have learnt how to:	How confident do I feel in doing this?		
	Very confident	Somewhat confident	Not very confident
Understand, identify and evaluate political factors			
Understand, identify and evaluate economic factors			
Understand, identify and evaluate social factors			
Understand, identify and evaluate technological factors			
Understand, identify and evaluate legal factors			
Understand, identify and evaluate environmental factors			

Skills and Knowledge application:





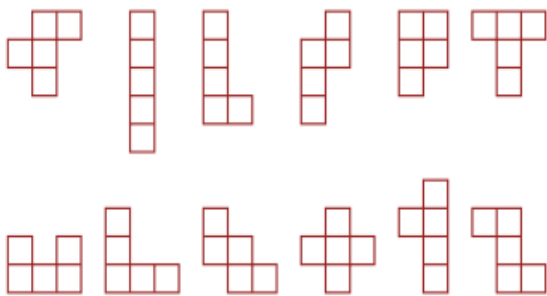
### UNIT 19

#### 19.1: What is a problem?



##### Individual Activity 1

Look at the following boxes. Can you fit them into a rectangle without any overlaps?



##### Group Discussion 1

How did you solve the problem?

There are many different types of problem and lots of methods to solve them. In the above activity, you probably used trial and error.



**Trial and error** refers to a method of discovery to solve a problem using practical experiment. This means trying various methods until the correct method or desired result is achieved.

There may be other problems that require a systematic approach. For example, following

instructions to activate a SIM card for a mobile phone. Here trial and error would probably not be an effective method. A systematic method is one that requires working through a series of steps that need to be done in a certain order.



##### Group Discussion 2

Doing a crossword and deciding on what career you wish to pursue can both be considered as problems. What makes something a problem?



A **problem** can be defined as a gap between where you currently are (an existing state) and a desired state (where you want to be). Often problems can involve questions that need to be answered. Many problems have several solutions. Sometimes difficulties arise when solutions are not obvious or are not immediately available.

### 19.2: What are the 3 processes that can be used when solving problems?

The following processes can be used to solve problems:

1. Identifying what information is needed to solve a problem and what is irrelevant.
2. Combining information to produce new information.
3. Relating new problems and information to ones we have already solved through experience.

These three processes are the fundamental building blocks of problem solving. They all involve thinking skills.

You know more information than you realise. However, you probably don't use your thinking skills as much as you can. The more you work on using your thinking skills, the more your problem solving skills will improve.



#### Individual Activity 2

Imagine that in your bedroom you have a drawer that contains socks. You are getting ready; it is still dark outside and

your light has broken so you can't see the colour of the socks. You have 8 dark brown socks and 8 dark grey socks in your drawer.



1. What is the smallest number of socks that you will have to take out to ensure you have a matching pair?
2. What is the largest number you can take out and still not have a matching pair?
3. What is the smallest number you can take out to be sure you have one of each colour?
4. What is the largest number you can take out and still have all of one colour?
5. What is the smallest number you can take out to be sure you have a grey pair?

How difficult did you find that?

Other thinking challenges:



### Individual Activity 3

			8				9	
	5		9			3	7	
	9				5	8		1
						9	1	4
			6			5		
8	1	7						
4		1	5				3	
	8	5			1		2	
	7				8			



### Individual Activity 4

1. I travel all over the world, but always stay in my corner. What am I?
2. What has 13 hearts, but no other organs?
3. What kind of coat is always wet when you put it on?
4. What do you break before you use it?
5. Why is the letter A the most like a flower?
6. What starts with a P, ends with an E, and has thousands of letters



### Individual Activity 5

The following people live in Ryder Street. Can you sort out their names, house numbers and their cats' names?

#### Cats' names

Smudge, Tippytoes, Dave

#### Peoples' first names

Stewart, Mohamed, Rhys

#### Peoples' surnames

Smith, Jones, Morgan

#### House numbers

21, 22, 23

Complete the following grid based on the clues below:

#### Clue 1

Mohamed lives at a higher number than Mr Morgan; neither of these own Smudge.

#### Clue 2

Dave lives at No.21.

#### Clue 3

Stewart Smith does not live at No.23.

Name	Surname	House No.	Cat



### Summary

- There are many different types of problems and lots of methods to solve them.
- Trial and error refers to a method of discovery to solve a problem using practical experiment. This means trying various methods until the correct method or desired result is achieved.
- A systematic method is one that requires working through a series of steps that need to be done in a certain order.
- A problem can be defined as a gap between where you currently are (an existing state) and a desired state (where you want to be).
- 3 processes can be used to solve problems:
  - Identifying what information is needed to solve a problem and what is irrelevant.
  - Combining information to produce new information.
  - Relating new problems and information to ones we have already solved through experience.

## UNIT 20

### 20.1: How do we solve a problem?

Whatever issue you are faced with, some steps are fundamental: The word **IDEAL** is an acronym for a problem solving model:

Identify the problem

Define the problem

Examine the options

Act on a plan

Look at the  
consequences

### 20.2: What are the steps in solving a problem?

Using the IDEAL model, each step has a number of elements:

#### Step 1) Identifying the problem

In tackling this step, there are a number of issues you should consider:

- a) Simplifying and understanding the nature of a problem
- b) Asking questions
- c) Gathering information systematically

- d) Collating and organising data
- e) Condensing and summarising information

#### Step 2) Defining the problem

Once you have identified the problem, you can start to think about what solution you are hoping to achieve (i.e. your desired state).

**Remember what the definition of a problem is?**



**A problem** can be defined as a gap between where you currently are (an existing state) and a desired state (where you want to be). Often problems can involve questions that need to be answered. Many problems have several solutions. Sometimes difficulties arise when solutions are not obvious or are not immediately available.

In tackling this step, there are a number of issues you should consider:

- a) Using the information gathered effectively
- b) Breaking down a problem into smaller, more manageable, parts
- c) Using techniques such as brainstorming and lateral thinking to consider options

- d) Analysing these options in greater depth
- e) Identifying steps that can be taken to achieve the objective

The next stage is to examine your options:

### Step 3) Examining the options

- a) Deciding between the possible options for what action to take
- b) Deciding on further information to be gathered before taking action
- c) Deciding on resources (time, funding, staff etc.) to be allocated to this problem

The next stage is to implement and act on your plan:

### Step 4) Acting on plan

Whilst acting on your plan, you may need to:

- a) Provide information to other stakeholders
- b) Delegate tasks
- c) Regularly review progress made

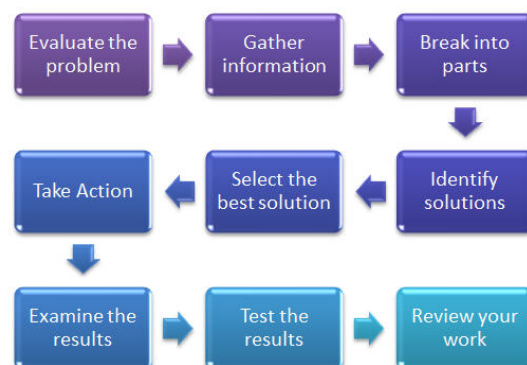
The final stage is to look at the consequences.

### Step 5) Looking at the consequences

You can do this by:

- a) Examining the results – did you achieve what you set out to?
- b) Monitoring the outcome of the action taken
- c) Reviewing the problem and problem-solving process to avoid similar situations in future

At any stage of this process, it may be necessary to return to an earlier stage – for example, if further problems arise or if a solution does not appear to be working as desired.







### Individual Activity 1

On International Youth Day 2014, young people were asked which issues they would like to see given more attention.

The most common response was jobs, which reflect an increasing global youth unemployment rate of 13.1%, up from 12.9% in 2012. The largest increase occurred in the Middle East, which has the highest youth unemployment rates in the world, according to an International Labour Organisation report.

Securing a job is probably going to be your most important problem to address in the short term.

**Produce an information sheet in relation to this issue that provides information related to achieving steps 1-4 of the IDEAL model.**

## UNIT 21

### 21.1: What are possible formats of information?

Information can come in many types of format. It is important that you understand how to interpret each method:

- a) **Tables.** For example, summaries of market research and train timetables.



#### Individual Activity 1

MON to SAT		SX				
Sheffield Interchange	0759	1027	1244	1457	1722	
Sheffield Uni. Western Bank	0809	1037	1254	1507	1732	
Crosspool Church	0816	1044	1301	1514	1744	
Rivelin Dams Norfolk Arms	0821	1049	1306	1519	1750	
Ladybower Inn	0828	1056	1313	1526	1757	
Fearfall Wood	-----	1059	-----	-----	-----	
Derwent Fairholmes	-----	1104	-----	-----	-----	
Fearfall Wood	-----	1109	-----	-----	-----	
Yorkshire Bridge Hotel	0830	1114	1315	1528	1759	
Bamford Derwent Hotel	0833	1117	1317	1530	1801	
Bamford Bus Turnaround	0836	1119	1319	1532	1803	
Hope Post Office	0845	-----	-----	1537	1808	
Castleton Bus Station	0852	-----	-----	1547	1813	

MON to SAT		SX				
Castleton Bus Station	0709	0909	-----	-----	1552	1815
Hope Post Office	0713	0913	-----	-----	1556	1819
Bamford Bus Turnaround	0718	0918	1118	1318	1601	1824
Bamford Derwent Hotel	0720	0920	1120	1320	1603	1826
Yorkshire Bridge Hotel	0722	0922	1122	1322	1605	1828
Fearfall Wood	-----	-----	-----	-----	1608	-----
Derwent Fairholmes	-----	-----	-----	-----	1613	-----
Fearfall Wood	-----	-----	-----	-----	1618	-----
Ladybower Inn	0724	0924	1124	1325	1621	1830
Rivelin Dams Norfolk Arms	0731	0931	1131	1331	1627	1837
Crosspool Church	0737	0937	1137	1337	1633	1843
Sheffield Uni. Western Bank	0744	0944	1144	1344	1640	1849
Sheffield Interchange	0754	0954	1154	1354	1650	1858

You have a job interview in Sheffield. Your train arrives in Sheffield station at 08.00 on Monday morning. You are in walking distance from Derwent Fairholmes and Yorkshire Bridge

Hotel. Both will take you 10 minutes to get to. Your interview is in a building next to Castleton Bus Station at 10.30.

- What stop do you walk to?
- What time bus do you get?
- How long are you on the bus for?
- What time bus do you get back to Sheffield station?



#### Individual Activity 2

Shoppers were asked what entertainment provider they subscribed to. The results can be seen in the table below:

Age	Type			Total
	Sky	Free View	NetFlix	
18-25	45	57	21	123
26-40	119	83	34	245
41-60	54	50	28	132
Total	218	190	92	500

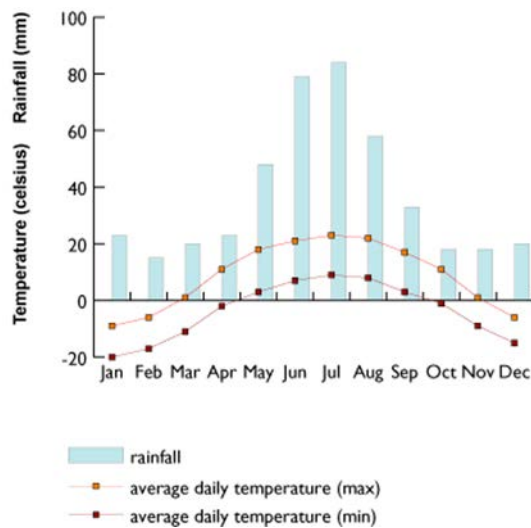
One of the figures in the table has been typed incorrectly. Which one?

- b) **Graphs.** These are used to provide information that can be easily understood.



## Individual Activity 3

You are planning a trip to Canada. You wish to visit when the likely rainfall is going to be at its lowest; however you want a minimum daily temperature of at least 0 Celsius. Using the graph below, what months could you visit?



- c) **Words.** Numerical, spatial, logical and many other types of information can be communicated in words.



## Individual Activity 4

Sometimes, finding information in words is difficult. Look at the text below and find out how long in total had Team Football Fanatics played for when they were knocked out?

In a 5 aside football knock out competition, 32 teams started off. Teams were drawn in lots to play each other, and the winner of each

goes through to the next round. This is repeated until there are only two teams left who play each other in the final. Each match has two halves which last 20 minutes per half. Although, if each team has the same score, two extra 10 minutes are played. If there is still a draw, each team must take part in penalty shoots outs.

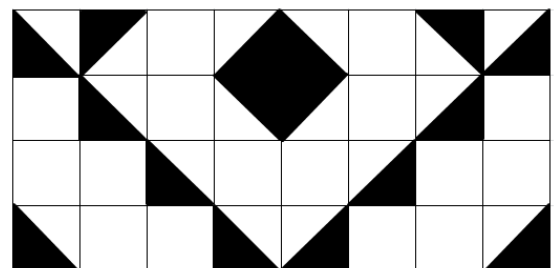
Team Football Fanatics were knocked out in the semi-final. In one of the earlier rounds they had to play the two extra periods before they won.

- d) **Pictorial.** Sometimes pictures can be used to show information about size and position.



## Individual Activity 5

Jackie, a local builder, has been asked to lay a new patio in a school playground. The patio's design can be seen below.



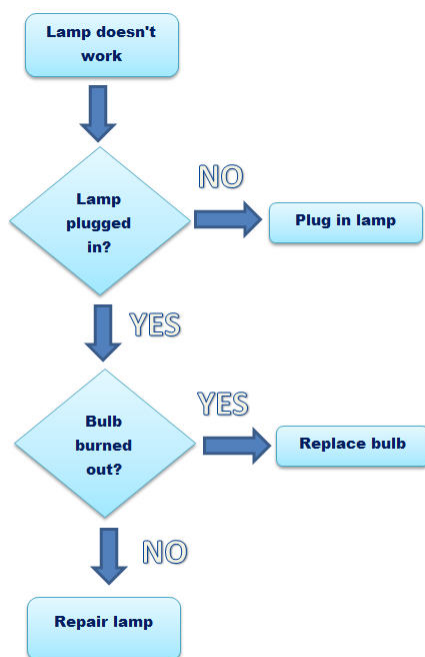
How many different patterns of paving slab are needed to make up the pattern?

- e) **Diagrammatic.** Diagrams often summarise numerical and spatial information.



## Individual Activity 6

According to the flow chart below, what should you do if the bulb has burned out on your lamp?



## 21.2: How do we access reliable and credible information using the internet?

1. Use **keywords relevant** to the topic you are researching. To find credible and relevant information about your topic on the Internet,

you must use a combination of keywords related to your research.

2. Use **specific keyword** phrases to locate the most relevant information.

For example, if you are looking for information on how to perform an oil change on a 2006 Honda Accord, enter specific keywords such as "oil change instructions 2006 Honda Accord" instead of a basic phrase such as "perform an oil change," which may bring back thousands of results for websites that feature oil changes on motorcycles, buses, boats, and all other automobiles.

Use **alternate words** or keyword phrases to locate additional research sources. For example, if you are performing research on foreign movies, use the words "films" or "shows" in place of movies to find additional sources that may provide you with more information on your research topic.

3. **Review several pages** of search results for valid information. In most cases, search engines such as Google, Bing, and Yahoo will rank search results based on specific algorithms, such as website popularity.

4. Look beyond the first page of search results to find information for your research. In some cases,

you may be able to find websites with helpful information beyond the first five pages of search results.

**4. Determine that the website is a credible and reliable source.** If you are gathering facts for your research, you will want to verify that the information is being provided by professionals or certified experts in that particular field or subject.

Read the "About Us" section of a website to learn more about the authors or organization publishing the information.

Review the extension of the website in the address bar to determine the source. If the website ends in ".edu," ".gov," or ".org," the information on the website is overseen by a school, government entity, or non-profit organization, respectively, and in most cases, is accurate.

**5. Use current information for your Internet research.** Some information is time-sensitive, and the sources you may find and use may be outdated or inaccurate. For example, if you are performing research on popular computer software, use information from an article published within the last few weeks or months, instead of an article published from several years ago.

**6. Review each website for grammatical errors and broken links.** If the website is credible and reliable, grammar and spelling should be accurate and all links should take you to the appropriate landing page. Websites with numerous grammatical errors and broken links may be copying their information from another source or may not be legitimate.

**7. Cite or list all the Internet sources used in your research.** This process is helpful if you need to revisit a website to include more information in your research, or if you need to provide your audience or employer with a list of sources used to compile your information.

**Copy or document the exact website link you used to access and provide information for your Internet research.**

**8.** When you find a website that has provided you with useful information for your research, add the website to your favourites or bookmarks profile within your Internet browser to access at a later date for your next research project.

[<http://www.wikihow.com/Do-Internet-Research>]



### Individual Activity 7

Sometimes, you need to look at data and process the order for it to make sense.

Process the following information and put in in the correct order by numbering each paragraph so it makes sense:

- To make the buttercream, put the ingredients in a large bowl and mash together with a fork or spatula (this prevents the icing sugar from going everywhere).
- In a bowl, mix the flour, bicarbonate of soda, ground ginger, cinnamon and 1/2 tsp salt.
- Melt the butter, sugar, treacle and syrup in a small saucepan, whisking until smooth. Set aside to cool for 10 mins. Heat oven to 160C/140C fan/gas 3. Grease and line a 2lb loaf tin with baking parchment (our tin was 22 x 7 x 7cm).
- Use the palette knife to create vertical lines along the edges (see tip, left).
- Pour in the warm syrup mixture and the milk, followed by the egg yolks. Whisk until you have a smooth batter.
- Transfer half to a piping bag fitted with a large round nozzle and set aside.
- Serve straight away or chill for up to 2 days, removing from the fridge 30 mins before serving.
- Pour into the tin and bake for 1 hr or until a skewer comes out clean. Cool in the tin for 30 mins, then slice off the top to give you a smooth surface.
- Flip onto a wire rack and remove the baking parchment.
- When roughly combined, blend with an electric hand whisk until smooth.
- Now make the marshmallow icing. Put the egg whites, sugar, 1 tbsp water and a good pinch of salt into a heatproof bowl. Place over a pan of simmering water, making sure the bowl doesn't touch the hot water, and whisk.
- Now use the piping bag to pipe spikes of meringue over the top of the cake.
- When ready to assemble, slice the cake lengthways into 3 even layers.
- On a cake stand or plate, reassemble the cake, with the largest slice on the bottom, layering with the buttercream.



- Using a small offset palette knife or small butter knife, cover the cake with the marshmallow icing left in the bowl.
- Leave to cool.
- Use a cook's blowtorch to toast the meringue to a golden brown – a few charred patches will add to the effect.  
[<http://www.bbcgoodfood.com/recipes/toasted-marshmallow-ginger-cake>]

## UNIT 22

### 22.1 How to check a problem has been solved?

This may seem like a silly question. However, to systematically check if a problem has been solved, you need to work through a number of steps.

#### Step 1

Look back at what your intended outcome was at the start of your problem solving journey.

#### Step 2

Identify methods for checking the problem has been solved, such as testing, measuring, observing or asking someone.

#### Step 3

Apply these methods systematically to check if the problem has been solved.

#### Step 4

Make an assessment of the quality of the work you have done using problem-solving skills by making connections between criteria/feedback comments and your own judgement of your performance based on using the methods above.

#### Step 5

Describe fully the results and draw conclusions on how successful you were.

#### Step 6

Identify progress so far and areas you want to work on in the future.

**By following this process, you will improve your problem solving skills.**

### 22.2 Why are problem solving skills important?

#### **Problem solving: the mark of an independent employee**

Line managers don't like hiring graduates who will come running every time they're out of their depth. If you can step up with a solution, you'll stand a better chance.



[<https://targetjobs.co.uk/careers-advice/skills-and-competencies/300766-problem-solving-the-mark-of-an-independent-employee>]

According to Target Jobs, even when it isn't specified in the job description, many employers will look at your problem solving skills at various different stages of the application process. This could be anything from psychometric tests to group activities or one-to-one interviews.

Problem solving is all about using logic, as well as imagination, to make sense of your situation and come up with an intelligent solution. It is connected to a number of other skills:

- Level headedness and resilience are important for assessing a situation, and reassessing it if you fail the first time.
- You will need analytical skills, creativity and logical thinking to reach a solution.
- If you're in a group you will also need good teamwork skills.



**Problem solving is a vital skill in daily life, which is why graduate employers are so keen on it.**

### 22.3 How do I phrase it on a job application?

**Do say:** 'I had to find a solution to complex obstacle X. By carefully allocating resources Y and using innovative ideas Z I was able to overcome it.' Use actual examples. Explain the problem; say what your resources were and what ideas you came up with. Consider using the STAR model. Think about the Situation you faced and the Task you had to complete, the Actions you took, and the Results you achieved.

**Don't say:** 'I was forced to deal with a tricky situation. Thankfully, because I am a total legend when it comes to problem solving, it wasn't too difficult for me.' – If you don't explain how you solved the problem, then the skill cannot be assessed. Discussing the nature of the problem, as well as the aptitude of the solution, is important in demonstrating problem solving abilities.

### 22.4 Understanding how transferrable problem solving skills are in life

Problem solving is a vital skill in daily life, which is why graduate employers are so keen on it. Dealing with any of the following situations will help you gain problem solving skills without even realising it and you may be able to use this in your graduate job applications or interviews:

- Sorting out a problem with your computer
- Resolving a dispute with a tricky landlord in order to get your deposit back
- Satisfying a difficult customer
- Finding a way round a funding shortfall in order to pay for travel or a gap year
- Turning round the finances of a struggling student society
- Organising a student society's trip overseas, overcoming unforeseen difficulties on the way.
- Puzzles and games such as Sudoku and chess and can also strengthen your ability to think strategically and creatively.



#### Individual Activity 1

Set yourself a problem, use your problem solving skills to address the problem and review the way you tackled it using Steps 1-6 as outlined above.

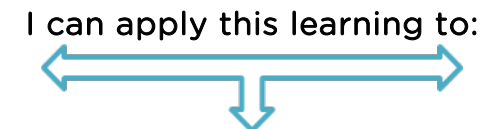
### Progress Checklist 4

Key terms:

Term	Definition	How confident do I feel in understanding and using this term?		
		Very confident	Somewhat confident	Not very confident
Problem				
Systematic methods				
Trial and error				

I have learnt how to:	How confident do I feel in doing this?		
	Very confident	Somewhat confident	Not very confident
Understand and apply the process of problem solving (IDEAL)			
Interpret information presented in different formats			
Access reliable and credible information using the internet			
Be able to check if a problem has been solved			

Skills and Knowledge application:



## UNIT 23

### 23.1: What is creative thinking?



**Creative thinking** refers to a way of looking at problems or situations from a fresh perspective that suggests unorthodox solutions (which may look unsettling at first). Creative thinking can be stimulated both by an unstructured process such as brainstorming, and by a structured process such as lateral thinking.



From a personality-traits perspective, there are a number of traits that are associated with creativity in people. Creative people tend to be more open to new experiences, are more self-confident, are more ambitious, self-accepting, impulsive, driven, dominant, but also hostile,

compared to people with less creativity.

Much of the thinking done in formal education emphasises the skills of analysis where people are taught how to understand claims, follow or create a logical argument, figure out the answer, eliminate the incorrect paths and focus on the correct one.

However, there is another kind of thinking, one that focuses on exploring ideas, generating possibilities, looking for many right answers rather than just one. Both of these kinds of thinking are vital to a successful working life, yet the latter one tends to be ignored until after college. We might differentiate these two kinds of thinking like this:

Critical Thinking	Creative Thinking
analytic	generative
convergent	divergent
vertical	lateral
focused	diffuse
left brain	right brain
verbal	visual
yes but	yes and
answer	an answer
objective	subjective



#### Discussion Point 1

What do all these words mean?  
What is the difference between



critical thinking and creative thinking?

In an activity like problem solving, both kinds of thinking are important to us. First, we must analyse the problem; then we must generate possible solutions; next we must choose and implement the best solution; and finally, we must evaluate the effectiveness of the solution. As you can see, this process reveals an alternation between the two kinds of thinking, critical and creative. In practice, both kinds of thinking operate together much of the time and are not really independent of each other.

## 23.2 So what actually is creativity?

- Ability.

A simple definition is that creativity is the ability to imagine or invent something new. Some creative ideas are astonishing and brilliant, while others are just simple, good, practical ideas that no one seems to have thought of yet.



### Individual Activity 1

Look at the following inventions which all show remarkable creativity. Which ones are brilliant according to your perspective?

[<http://www.washingtonpost.com/blogs/innovations/wp/2015/02/13/7-odd-inventions-that-weve-come-to-love/>]

1. An Ostrich Pillow:



2. The Selfie Stick



### 3. Treadmill Desk



- **An Attitude**

Creativity is also an attitude: the ability to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it. We are socialised into accepting only a small number of permitted or normal things, like chocolate-covered strawberries, for example. The creative person realises that there are other possibilities, like peanut butter and banana sandwiches, or chocolate-covered prunes.

- **A Process**

Creative people work hard and continually to improve ideas and solutions, by making gradual alterations and refinements to their works. Contrary to the mythology surrounding creativity, very, very few works of creative excellence are produced with a single stroke of brilliance or in a

frenzy of rapid activity. Much closer to the real truth are the stories of companies who had to take the invention away from the inventor in order to market it because the inventor would have kept on tweaking it and fiddling with it, always trying to make it a little better.

**The creative person knows that there is always room for improvement.**

## 23.3 Creative Methods

Several methods have been identified for producing creative results. Here are the five classic ones:

1. **Evolution.** This is the method of incremental improvement. New ideas stem from other ideas, new solutions from previous ones, the new ones slightly improved over the old ones. Making something a little better here, a little better there gradually makes it something a lot better - even entirely different from the original.

For example, look at the history of the car. With each new model, improvements are made.

2. **Synthesis.** With this method, two or more existing ideas are combined

into a third, new idea. Combining the ideas of a magazine and an audio tape gives the idea of a magazine you can listen to, one useful for blind people or motorway commuters.

For example, someone noticed that a lot of people on dates went first to dinner and then to the theatre. Why not combine these two events into one? Thus, the dinner theatre, where people go first to eat and then to see a play or other entertainment.

3. **Revolution.** Sometimes the best new idea is a completely different one, a marked change from the previous ones.

For example, the evolutionary technology in fighting insects eating crops has been to develop safer and faster pesticides and gases to kill them. A somewhat revolutionary change has been to abandon gases altogether in favour of liquid nitrogen, which freezes them to death or microwaves, which bake them. A truly revolutionary creative idea would be to ask, "How can we prevent them from eating crops in the first place?"

4. **Reapplication.** Look at something old in a new way. Go beyond labels.

For example, a paperclip can be used as a tiny screwdriver if filed down; paint can be used as a kind of glue to prevent screws from loosening in machinery; dishwashing detergents can be used to remove the DNA from bacteria in a lab; general purpose spray cleaners can be used to kill ants.

5. **Changing Direction.** Many creative breakthroughs occur when attention is shifted from one angle of a problem to another. This is sometimes called creative insight.

When hot dogs were first invented, they were served to customers with gloves to hold them. Unfortunately, the customers kept walking off with the gloves. The solution was not at all complex: serve the hot dog on a roll so that the customer's fingers were still insulated from the heat. The roll could be eaten along with the dog. Instead of asking, "How can I keep the gloves from being taken?" the hot dog server stopped thinking about gloves altogether.



### Individual Activity 2

Homelessness is becoming a growing concern. Hostels are at maximum capacity so more and

more people are being forced to sleep on the streets.

Select some of the creative methods above and use them to come up with a creative solution. This may be in the form of an emergency pack or something that hasn't yet been thought of!



### Summary

- Creative thinking refers to a way of looking at problems or situations from a fresh perspective.

## UNIT 24

### 24.1: What is innovative thinking?



**Innovative thinking** is about invention. It is about being able to come up with something that nobody has come up with before.



#### Discussion Point 1

How is the above image innovative?

### 24.2 How to become more innovative?

[<http://thinksimplenow.com/creativity/7-habits-of-highly-innovative-people/>]

According to Scott Berkun's "The myths of innovation", there are 7 habits of highly innovative people. As you read through them, are there any tips you can pick up and put into practice?

**1. Persistence** – Innovation involves more than just great ideas. It needs faith, hard work and a focus for the end result to keep persisting in the face of obstacles. According to Thomas A. Edison:

"Invention is 1% inspiration, 99% perspiration"

**2. Remove Self-Limiting Inhibitions** – This is what is referred to when people say "think outside the box". Encourage yourselves to be open to new ideas and solutions without setting limiting beliefs. Remember, innovation is more about psychology than intellect.

**3. Take Risks, Make Mistakes** – Expect that some ideas will fail in the process of learning. Build prototypes often, test them out on people, gather feedback, and make incremental changes. Rather than treating the mistakes as failures, think of them as experiments. Thomas A. Edison also said:

"I have not failed. I've just found 10,000 ways that won't work. "

**4. Escape** – The environment can and does affect how we feel. The more relaxed and calm we are internally, the more receptive we are to tap into our flowing creativity. This is why ideas sometimes come to us in the



shower or while we're alone. Experiment and find what works for you.

**5. Writing Things Down** – Many innovators and creative people keep a journal to jot down ideas and thoughts. Some keep a sketch book, scrap book, post-it notes, and loose paper. They all have a method to capture their thoughts, to think on paper, to drop their inhibitions and start the creative process. Leonardo Da Vinci's famous notebook was purchased by Bill Gates for \$30.8 million dollars.

**6. Find Patterns and Create Combinations** – Ideas come from other ideas. Did you know that Edison wasn't the first one who came up with the invention of the light bulb? He was the first to build a workable carbon filament inside a glass bulb, that made light bulbs last longer.

**7. Curiosity** – Many innovators are just curious people who are inquisitive, and like to solve problems.



### Individual Activity 1

Log onto: [www.enterprisecatalyst.co.uk/](http://www.enterprisecatalyst.co.uk/)

This is questionnaire that will produce a report and evaluate how creative and innovative you are.



### Case study 1

#### The story of Coca Cola

[<http://www.inventions-handbook.com/invention-of-coca-cola.html>]



The story of the invention of **Coca Cola** is not well known, considering the huge popularity of the drink.

Not many people will recognise the name of John Pemberton, the inventor of Coca Cola.

John Pemberton lived in Columbus, Georgia in the late nineteenth century. He was a



chemist and a pharmacist by profession.

In April 1865, Pemberton was wounded in the battle of Columbus, Georgia during the American civil war. He was fighting for the confederate states army. The invention of Coca Cola was a direct result of his misfortune during that fight.

At the time, Morphine was a popular medicine used to help alleviate the suffering of wounded soldiers and dull the pain of war wounds.

Like many other veterans of the period, Pemberton got addicted to the drug. Morphine addiction was so prevalent after the American civil war that it was often known as "the army disease."

Faced with his own addiction and that of many of his fellow war veterans, Pemberton used his vocation to try and find a cure for the addiction.

As a chemist and pharmacist he was familiar with the touted benefits of Cocaine which was very popular in the late 19th century as a mental stimulant. The drug was known to increase alertness, create feelings of well-being and perceived euphoria, induce a sense of energy and improve motor activity. Sigmund

Freud recommended the use of Cocaine in 1884 as a cure for treating addiction, such as alcohol or morphine addictions.

In 1865, the year Pemberton was wounded at war, a healing medicinal drink called Vin Mariani, a mixture of wine and cocaine, was introduced to the public and became a popular cure all solution.

The drink was made of Bordeaux wine, treated with coca leaves. It was claimed that drink can restore strength, energy and vitality. Pemberton's experiments to try and find a cure for Morphine addiction have led him to create his own version of coca wine, which he called Pemberton's French Wine Coca.

His version was an alcoholic drink, mixed with coca (the plant from which the chemical cocaine is extracted), a cola nut (the nut of the Cola tree, a tree related to the cocoa family, whose nuts contain caffeine) and Damiana (a shrub native to Texas with known relaxing and libido enhancing effects).

Pemberton's French Wine Coca, is the original alcoholic version of the invention of Coca Cola. It was advertised to have a particular benefit to high strung southern

Ladies and anyone requiring a nerve tonic.

In 1886 with the introduction of temperance legislation in Atlanta and Fulton County, limiting and restricting the sale and consumption of alcoholic beverages, Pemberton was forced to come up with a non-alcoholic version of his French wine Coca, leading the invention of Coca Cola.

With the help of a fellow pharmacist from Atlanta, Willis Venable, he tested and perfected the recipe for the beverage, using several attempts, through a system of trial and error.

The invention of Coca-Cola, was therefore originally sold as a patent medicine, a term we use today to describe medical concoctions whose effectiveness is unknown, that were historically sold under a variety of names and labels.

The original Coca-Cola was sold for 5 cents a glass and could be found at soda fountains, popular in the US for the water's supposed health qualities. They were an attempt to replicate mineral water that bubbled from the earth.

Who could have imagined that the invention of Coca-Cola, a concoction aimed as a medicinal tonic, and formulated with

carbonated water to add to its health promoting qualities, will end up becoming one of the most famous fizzy beverages world-wide.

**Coca-Cola' Net Worth is now \$158.8 billion dollars.**



### Summary

- **Innovative thinking** is about invention. It is about being able to come up with something that nobody has come up with before.

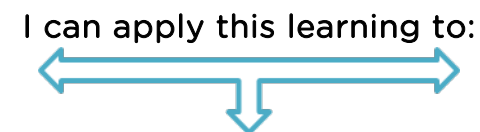
### Progress Checklist 5

Key terms:

Term	Definition	How confident do I feel in understanding and using this term?		
		Very confident	Somewhat confident	Not very confident
Critical thinking				
Creative thinking				
Innovation				

I have learnt how to:	How confident do I feel in doing this?		
	Very confident	Somewhat confident	Not very confident
Understand what creativity is			
How to become more creative			
Understand what being innovative means			
Appreciate how creative and innovative I am using the Enterprise Catalyst			
Apply techniques to become more creative and innovative			

Skills and Knowledge application:



## UNIT 25

### 25.1: What is communication?



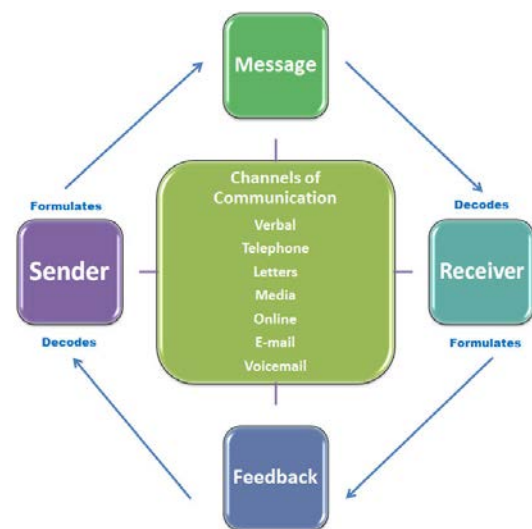
Communication involves a sender and a receiver (or receivers) passing information through a communication channel.



**Communication Channel** is the term given to the way in which we communicate. There are multiple communication channels available to us today e.g. face-to-face conversations, telephone calls, text messages, email, the Internet (including social media such as Facebook and Twitter), radio and TV, written letters, brochures and reports to name just a few.

**Choosing an appropriate communication channel** is vital for effective communication as each communication channel has different strengths and weaknesses e.g. conveying complex and technical information is better done using a written document than through a spoken message since the receiver is able to assimilate the information at their own pace and revisit items that they do not fully understand. Written communication is also useful as a way of recording what has been said, for example taking minutes in a meeting.

Effective communicators consider the audience to whom they are communicating to. This involves an appropriate use of language, passing the information simply and clearly, anticipating and eliminating likely causes of confusion and misunderstanding, and knowing the receivers' experience in decoding other similar communications.



### 25.2: How to effectively communicate information in a written format?

- **Know your goal and state it clearly.** Do you want the reader to do something for you or are you merely passing along information? Do you want a response

from the reader or do you want him to take action?

- **Your purpose needs to be stated in the communication.** Avoid information that is not relevant. Clarity is key.
- **Tone can help your writing be more effective.** Certain forms of communication, like memorandums and proposals need a formal tone. Writing to someone you know well would need a more informal tone. The kind of tone depends on the audience and purpose of the writing.
- **Explain in clear terms what you want the reader to do.** They cannot oblige if they do not understand. Also, they may not even want to try to help if the communication is vague and sloppily written. It is good practice to include why it is beneficial to them to do what you ask or to help you.
- **Language needs to be simple.** Do not overuse clichés, jargon, and expressions or try to impress with big words. Keep sentences and paragraphs short and concise.
- **Less is more when it comes to length.** Leave out

words that do not contribute to the main focus of the communication. This can make the reader work harder to know why you wrote.

- **Good grammar and punctuation are very important.** It is a good idea to have someone else proofread your writing before you send it. If you cannot do that, then try reading it out loud.  
[<http://www.skillsyouneed.com/general/what-is-communication.html>]

### 25.3: What are the different types of written formats?



#### Reflection Point 1

How many writing formats do you currently use?

There are so many different formats for conveying written information. Below lists some of the more common forms that you may use most often:

# Skills Knowledge

## Chapter 6 – Effective presentation of information

Book reviews  
Brochures  
Descriptions  
Diaries  
Essays  
Explanations  
Information-sheets  
Interviews  
Journals  
Letters  
Lists  
Magazine -articles  
News articles

Pamphlets  
Personal -experiences  
Persuasive - letters  
Plays  
Poems  
Presentation slides and  
handouts  
Proposals  
Reports  
Reviews  
Revision  
Speeches Stories



### Individual Activity 1

Look at the following formats and decide whether they are effective or not in conveying their message.

**Example 1: An email to a colleague in work:**

Ellie,

I NEED YOUR REPORT BY 5 P.M. TODAY OR I'LL MISS MY DEADLINE.

Harry



Example 2: A letter from the head teacher of a primary school to parents:

Dear Parent,

In today's world email is one of the most popular forms of communication, especially for communicating with partners. It is really surprising to find that some organisations are yet to realise the significance of this powerful communication tool. Therefore I wonder if I may take the opportunity to write to you and ask if you would be happy to receive all correspondence by email? Your considerations and thoughts on this matter would help me no end.

Forever Yours,

Headmistress

**Example 3: A PowerPoint slide used at a Further Education conference for 16-19 year olds about the importance of the Welsh language:**

**From the 14<sup>th</sup> century onwards the Welsh people spoke Welsh, it was the first language of the country. Many people were monoglot Welsh speakers, today, all Welsh speakers speak at least one other language.**

**Welsh speakers in Wales also speak English and Welsh speakers in the Welsh settlement in Patagonia speak Spanish as their second language.**

**Welsh is the oldest living language in Europe, dating back at least 2500 years. However, it nearly died out in the 19<sup>th</sup> century due to belief that English was superior, and was the only language which should be used throughout the British Empire.**

**In 1847 a report was written by three English barristers who did not speak one word of Welsh between them. The report castigated Welsh culture in general, and Welsh schools in particular.**

### Example 4: A questionnaire to part-time students following a computing course:

1. How many times have you used Adobe Acrobat during the last calendar year?

2. When typing a letter a I typically use:

☐ Word

☐ Adobe Acrobat

☐ Photoshop

☐ A word processor

3. The Mac operating system rarely gets infected by viruses and therefore Department of Education should only purchase Mac computers.

☐ Yes ☐ No

4. Which of the following Federal programs do you feel are the most effective in assisting students to succeed? (choose only one)

☐ NCLB ☐ SES ☐ ME ☐ FSS ☐ EETT

5. How do you feel about the instructor(s) of this course?

## 25.4: What makes an effective PowerPoint (or similar) presentation?

The use of PowerPoint is now commonplace. However, sometimes the use of PowerPoint is not very effective in conveying its message. The following tips should help in producing effective PowerPoint presentation slides.

- **Ensure that the slides look good.** This does not necessarily mean that they look flashy - although suitable pictures or illustrations are very effective - but it does mean using a **consistent** format

and typeface and readable colours plus giving each slide a chronological number.

- The **first slide** should announce the title of your presentation, the event and date, and your name and position. You should try to make the **title catchy**, so that you immediately have the interest of your audience.
- The **second slide** should **grab** the attention of your audience for your presentation. It could be the central message of your presentation or a thought

that you wish to challenge or a relevant or witty quote from a leader in your field. If it is amusing or controversial, so much the better.

- The **third slide** should set out the structure of your presentation. The structure may be of at least three themes that you intend to examine.
- Each theme should be the subject of a small number of slides. Again, a good working assumption is that three slides for each theme is about right. Less than two and it isn't substantial enough to be a separate theme; more than five and it should probably be broken up into two themes.
- **Each slide should have a clear heading.** A question is often a good way of winning attention - but, in that case, make sure you answer the question in the body of the slide.
- Each slide should normally contain **around 25-35 words**, unless it is a quote (when you might use more) or contains an illustration

(when you will probably use less). Too many words and your audience will have trouble reading the material; too few words and you're likely to be flashing through the slides and spending too much time clicking the mouse.

- Each bullet point should consist of an **intelligible phrase**, rather than merely a word or two that is meaningless on its own or conversely a complete sentence that is better delivered orally. **Consider this test: your slides should make sense and be useful to someone who was not present at your presentation.**
- Make appropriate use of **images**. It's a good idea to break up text with illustrations and it is true that a picture is worth a thousand words.
- The **last slide** should set out all appropriate contact details: e-mail address, website, Facebook page and Twitter address or blog if you have one.

[<http://www.rogerdarlington.me.uk/Presentation.html>]

## UNIT 26

### 26.1: What is effective verbal communication?



Effective verbal communication involves a sender and a receiver (or receivers) passing information through a communication channel and for the receiver to receive entirely the intended message.

**Misunderstanding** can occur at any stage of the communication process. Effective communication involves reducing potential misunderstanding and overcoming any **barriers to communication** at each stage in the communication process.

**An effective communicator** understands their audience, chooses an appropriate communication channel, hones their message to this channel and encodes the message to reduce misunderstanding by the receiver(s). They will also seek out **feedback** from the receiver(s) as to how the message is understood and attempt to correct any misunderstanding or confusion as soon as possible. Receivers can use **Clarification** and **Reflection** as effective ways to ensure that the message sent has been understood correctly.

### 26.2 What forms of verbal communication are there?

Verbal communication can take place through media channels such as television and radio, in face to face meetings, at conferences or in informal situations. **The key is to ensure the content of the message and the expected outcome of the communication is suited to the communication channel.**



#### Discussion 1

Consider the following communication and methods used. Justify whether they are appropriate.

1. E-mail Message from Line Manager to employee: Don't come in tomorrow. We don't need you anymore as a large order has been cancelled.
2. Face to face conversation between Finance Director and Managing Director: Our estimated loss this year is based on extensive financial analysis and statistical analysis where the mean

response time to our order  
is  $F(120,1) = 34.9$   $p < 0.05$ .

3. Conference to 500 people:  
Any questions about your  
estimated pension  
provision?

### 26.3 How to carry out an effective presentation

Lots of people find presenting information difficult or undertaking a speech to an audience terrifying. However, the more times you do this, the easier it will get. Also the key to an effective verbal communication is preparation and planning.

### 26.4 How to plan for an effective presentation

- **Rehearsing the Presentation**

To present the most professional image, you need to know your presentation. It's OK to occasionally leave the main "script" but, wandering presentations that lack focus, or those too dependent on working from notes, or long pauses to compose your thoughts are never acceptable.

Rehearsing the presentation includes more than just going over

what you will be saying.

Rehearsing includes the entire presentation. Use the same tools too. If you are using slides, or a projector, and have access to the room you will be presenting in, rehearse there. Using a remote mouse and laser pointer for the presentation, a microphone? Rehearse the presentation with these devices.

- **Don't memorise**

Rehearsing is one thing, committing the presentation to memory and performing it by heart, is not the way to go. You need to present, not to recite.

- **But use your notes very sparingly.**

Too much time spent reading notes may convince your audience that you are unprepared.

- **Dress for success.**

Some say you can never overdress for a presentation. Others will disagree. But everyone agrees you should never underdress. How to determine what is appropriate? Worst case: Ask people. It's all part of doing it right.



- **Pace yourself - don't go too fast, or too slow.**

A general rule, every "slide" deserves at least 10 seconds, and none rate more than 100. If you find yourself spending several minutes on one slide, consider breaking it up! (We're not suggesting this as a firm rule, but a good guideline. Obviously, some charts or graphics may take several minutes to properly present.) Then again, perhaps they could be better as multiple "slides." If you are done with a "slide" - lose it. Don't leave an image up for your audience once you move on to other points.

- **The Presentation Tools**

There are a great many presentation tools available to you as a presenter e.g. Slides, LCD and DLP Projectors, Laptops, LCD panels, Video, Multimedia, Sound, Laser Pointers, Lapel Microphones, Overheads, Photo-quality printers, Posterprinters...

Determine your communication needs, the presentation environment, and select the right group of tools to get your message across.

- **Creating Support Materials**

Great, you have put together the killer presentation of all time. You looked good, your audience reacted positively. It couldn't have gone better, so what's wrong? Several attendees return to their organisations. They go to brief their superior, after two questions, it becomes apparent that they have the concept. Unfortunately, it also becomes apparent that they don't have any specifics. Why? No or poor documentation/handouts. When all the other pieces of the puzzle are in place, don't limit the staying power of your message, by providing it without the right support materials.

## 26.5 Tips for communicating effectively

**Remember: an excellent speech does not require a brilliant speaker** - you can do it. Winston Churchill is commonly regarded as one of the greatest speakers in the English language, yet he regretted the lack of practice in public speaking that he would have gained had he gone to university and he suffered from a slight lisp and a stammer. The key is preparation.

Making a good speech starts weeks before with **thorough preparation**. You should have been thinking of themes and points, noting down ideas and sources, crafting phrases and sentences.

**The best speeches tell your audience things they didn't know and/or give them insights they didn't have. So:**

- In respect of the first point, research some salient, accurate and up-date facts and figures.
- In respect of the second point, look at the subject differently - think 'outside of the box'.

You should have finalised the notes or text or slides at least the day before, so that you can concentrate on reading through the material, becoming very familiar and comfortable with it, and thinking about the actual delivery.

Once you are called upon to make your speech, pause for a couple of moments before actually starting your delivery. If you've had to walk up to a platform or over to a rostrum, this gives you time to steady your breath. **If you are nervous as a speaker, it gives you time to take a few shallow breaths and calm those nerves.**

In any event, it gives the audience an opportunity to settle down and focus on you and your message. But the pause should be a few seconds only.

You should convey a **sense of enthusiasm** for the subject. This will affect your delivery and how your speech is received.

Occasionally alter the speed, volume and tone of your delivery. Speaking slower or faster and quieter or louder and being more cheerful or more serious all adds dramatic effect and keeps the attention of your audience.

**Regularly sweep your eyes** left-centre-right and back and front-middle-rear and back, so that you engage all members of your audience. The actor Tom Cruise once told an interviewer: "A lot of the time, what acting is really about is meeting someone's eye" - the same is true of public speaking.

**Never apologise for your nervousness or your material.**

You and your speech are probably better than you appreciate but, in any event, if you don't advertise any weaknesses in your style or content, they probably won't be noticed.

**Don't make a rambling opening.**

There is nothing worse than the speaker who starts with

something like: "When I was asked to speak on this subject, I wondered what to say."

Try making a **dramatic opening** which seizes the attention with the very first words.

**Have a very clear structure.** A good technique is to tell your audience what you are going to say, tell them, and then tell them what you have said. A good structure is for the core message to be three linked points which can be sub-divided as necessary.

**Finish with a strong, positive statement**, possibly referring back to the opening sentence or question (note how many film scripts end with a variation of a line from the beginning of the movie).

["Speeches That Changed the World" with introduction by Simon Sebag Montefiore (Quercus, 2005)]



### Individual Activity 1

Plan and deliver a presentation to an audience using the advice above. Your topic is what one item you would like to place in Room 101 and why.

# Skills Knowledge

## Chapter 2 – Effective presentation of information



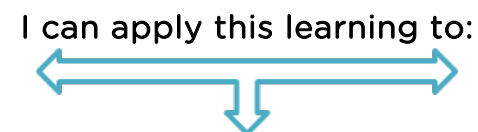
### Progress Checklist 6

Key terms:

Term	Definition	How confident do I feel in understanding and using this term?		
		Very confident	Somewhat confident	Not very confident
Communication				
Communication channel				
Barriers to communication				

I have learnt how to:	How confident do I feel in doing this?		
	Very confident	Somewhat confident	Not very confident
Effectively communicate information in a written format			
Understand what makes a PowerPoint effective			
Be able to evaluate the effectiveness of written documents			
Deliver an effective verbal presentation			

Skills and Knowledge application:



### Alternative therapy 1: Urine therapy

For almost the entire course of the 20th century, unknown to the public, doctors and medical researchers have been proving in both laboratory and clinical testing that our own urine is an enormous source of vital nutrients, vitamins, hormones, enzymes and critical antibodies that cannot be duplicated or derived from any other source. They use urine for healing cancer, heart disease, allergies, autoimmune diseases, diabetes, asthma, infertility, infections, wounds and on and on -- yet we're taught that urine is a toxic waste product. This discrepancy between the medical truth and the public information regarding urine is ludicrous and, as the news releases you've just read demonstrate, can mean the difference between life and death to you and to your loved ones.

When I contracted a crippling, incurable disease early in life, I used every available conventional medical and alternative healing method over the course of many years without success. When an acquaintance suggested I try "urine therapy" I thought she'd lost her mind, but with no options left, I swallowed my prejudice and decided to give it a go. To my own (and everyone else's) amazement, my healing was so rapid and so profound with urine therapy that no question remained in my mind that someone in the medical community had to know more than they were telling about this incredible body substance. And as a matter of fact, they did know more - a lot more.

Take for instance the doctor who reported that "urine acts as an excellent and safe natural vaccine and has been shown to cure a wide variety of disorders including hepatitis, whooping-cough, asthma, hay fever, hives, migraines, intestinal dysfunctions, etc. It is completely safe and causes no side effects." (J. Plesch, M.D., The Medical Press, 1947); or the oncologist who reported that "a patient with intractable ovarian cancer was treated with Human Urine Derivative and is now completely well and enjoying the rest of her life." (Dr. M. Soeda, University of Tokyo, 1968). These remarkable findings were published in medical journals - but did you ever hear about them?

And what about the immunologist who, after extensive clinical and laboratory research stated: "It was rapidly appreciated that undiluted urine administered orally was therapeutically effective for Immune Therapy and was initiated when it became obvious that an allergic condition had become uncontrollable." (Dr. C.W. Wilson, 1983, Law Hospital, Scotland). Or the Harvard medical researchers who discovered that active "antibodies to cholera, typhoid, diphtheria, pneumonia, polio, leptospira and salmonella have been found in the unconcentrated urine of infected individuals." (Lerner, Remington & Finland, Harvard Medical School, 1962). What about the Scandinavian researcher who, in 1951, conclusively proved that human urine can completely destroy tuberculosis? Despite what the public has been led to believe about urine, pharmaceutical companies have grossed billions of dollars from the sale of drugs made from urine constituents. Pergonal, a fertility drug made from human urine, earned a reported \$855 million in sales in 1992, and sales (\$1400 a month per patient) have increased yearly. Urokinase, a urine ingredient, is used in drug form and sold as a "miracle blood clot dissolver" for unblocking coronary arteries.

When you look at the real facts, the tragedy of the general disinformation campaign on urine is surpassed only by the irony of our unwitting, and often incredibly expensive purchases of what we all mistakenly but firmly believe to be our bodies' "useless" and "offensive" waste-product, urine.

Source: <http://all-natural.com/urine.html> May 12, 2015

## Alternative therapy 2: Crystal therapy



Crystal therapy is based on the premise that crystals can, in a sense, communicate with the energies flowing around the human body. On a microscopic level a crystal is a network of repeating geometric patterns made up of compressed ions, atoms and molecules. According to crystal therapy, every crystal has its own unique electromagnetic charge. These charges or

'healing vibrations' are supposed to interact with the body's energy centres to remove 'blockages' and restore a healthy flow through the body and mind. Crystal therapists choose crystals carefully for each individual patient as each one is believed to have a unique healing power. Crystal therapists then place the chosen crystal on different areas of the body in a grid-like fashion designed to stimulate energy.

Sometimes the colour of the crystal will be chosen to correspond with the supposed colour of each energy point on the body. From the tip of the tailbone to the top of the head the colours are as follows: red, orange, yellow, green, blue, indigo and violet.

The use of crystals dates all the way back to ancient Egyptian times. Though they often used the precious stones for jewellery and cosmetics, they also used them for protection and health purposes, such as the use of topaz for purging evil spirits.

The word 'crystal' comes from the Greek word for ice, due to the belief that clear quartz was water so deeply frozen it would remain forever solid. Many other popular crystals also have names of Greek origin, for example 'Amethyst' meaning 'not drunken' was carried or worn to prevent drunkenness. Greek soldiers were also known to associate Iron with Mars, the god of war and they would rub themselves in hematite before going into battle believing it would make them better warriors.

As well as playing a central role in the above cultures, crystals have also played a part in a number of religions and faiths and have been mentioned in both the Bible



# Skills Application

Case study based activities using Section A skills: Health



and Koran. In the Koran, the 4th heaven is described as being completely composed of garnet. The Kalpa Tree which represents an offering to the gods in Hinduism is said to be made entirely of precious stone and a Buddhist text described a diamond throne near to the Tree of Knowledge.

Instead of attempting to diagnose any physical issues you may be suffering from, a crystal therapist will first assess the condition of your aura before selecting a number of crystals designed to restore its equilibrium. An aura is an invisible emanation thought to surround each person's body. Our auras supposedly relate to our emotional, mental and spiritual make up, meaning that when we are healthy, the energy flowing through our bodies is clear and balanced. If something in our lives happens to unbalance this - such as a physical ailment or a mental issue - then this results in a blockage that could ultimately manifest as a physical illness.

Source: <http://www.therapy-directory.org.uk/articles/crystal-therapy.html>

## Alternative therapy 3: Astrology

Astrology is a humanistic attempt at trying to understand the cycles that we share with the forces in the Universe. The planets have corresponding rulership to certain vitamins, minerals, cell salts, herbs, metals, colours and parts of the body. Through the chart, one can look to see what natal health conditions exist. Through these precepts, we can then look at the present and into the future to see what areas of our lives are being affected and potentially how we can head off ill health and promote wellness. Source:

<http://www.allabouthealth.co.za/fulllistings?catid=6>

A 2005 Gallup poll conducted in the USA revealed that 28% of women believe in astrology, compared to 23% of men. In Canada 33% of women buy into it. Furthermore, a new study by the National Science Foundation shows that more than 40% of Americans think that astrology is a science, the highest levels since 1983.

Source: <http://www.astrology.co.uk/news/astrostats.htm>

## Response 4: Fasting Therapy

According to Chris Woollams of CANCERactive, fasting and calorie restriction can slow and even stop cancer progression and tumour growth, kill cancer cells and significantly improve chemo and radiotherapy effectiveness. Fasting has also been shown to boost the immune system, and reduce chemotherapy side-effects. A three or five day fast is something to seriously consider when having chemotherapy.

Leading cancer centres and experts such as Dr Valter Longo of University of Southern California, Professor Thomas Seyfried of Boston, Dr Dominic D'Agostino, Assistant Professor of Molecular Pharmacology, University of South Florida, and the Max-Planck Institute also show that fasting can play an important therapeutic role in the treatment of cancer.

Source: <http://www.canceractive.com/cancer-active-page-link.aspx?n=3408>

### Alternative therapy 5: Reiki

Reiki” (ray-key) is Japanese for ‘universal life energy, and is also a word used to describe a system of natural healing. This tradition was founded by Mikao Usui in the early 20th century and evolved as a result of his research, experience and dedication. We live in a world of energy that nourishes and maintains all living things. When this energy flows uninterrupted there is balance and harmony within and around us, and we experience a sense of well-being. There are many variations of Reiki, but in essence Reiki treatments can help the body emotionally or spiritually. It is a tradition that is open to any belief system. Reiki treatment is a process that anyone can enjoy in the normal course of their life. Reiki can be used alongside other conventional or complementary treatment and often helps to provide emotional support during recovery. The practice is taught by Reiki masters / teachers who have trained in the tradition passed on in person from master to student.

The method of receiving Reiki is simple. The recipient remains clothed and lies on a couch or sits on a chair and relaxes. The practitioner gently places their hands in a series of non-intrusive positions on or near the body. There is no massage or manipulation. The whole person is treated rather than specific areas. Sessions can take 45 minutes to an hour-and-a-half, depending on the client’s needs.

Each person experiences Reiki differently depending on their individual needs at the time. Clients may or may not feel sensations during a Reiki treatment. Benefits reported by recipients include deep relaxation promoting a calm, peaceful sense of well-being on all levels. Some people feel sensations of heat, tingling, or experience seeing colours, whilst others can have an emotional response, indicating that shifts are taking place, allowing harmony to be restored.

Gulak (1985), a healer, undertook a study on his patients measuring anxiety levels before and after Reiki healing treatment. Seventy six patients were given 15-minute treatments, with anxiety levels being assessed 14 days before and 21 days following the treatments using a specialised questionnaire. Different statistical analyses showed the reductions in anxiety to be significant.

Source: <http://www.reikiassociation.net/what-is-reiki.php>

## Alternative therapy – Pros and Cons

### PROS

**Holistic approach:** Alternative therapies are based on treating the whole person. They focus on healing the cause of the disease and address not just the physical body but also the patient's spiritual and emotional health. Many therapies encourage individuals to lead a healthy life and have treatments to prevent diseases before it occurs, in addition to being helpful when sick.

**Personal attention:** Conventional medicines are produced for the global consumption whereas alternative medicines are personalized to suit the needs of the individual patient. Alternative medicines are unique by nature and hence designed as per the needs of the individual patient.

**Reduces stress:** Stress is an important factor that reduces the immunity and makes a person weak. Modern medicines accounts for stress as a part of life and hence does not consider stress when curing any ailment.

**Inexpensive:** Alternative therapies use various herbs to treat the ailments. The herbs are naturally available and do not need any research to develop and hence are quite cheaper than the modern medicines.

**Less damaging:** Conventional medicines or antibiotics cannot distinguish between the beneficial bacteria and the virus and bacteria that can cause damage as a result eradicate the beneficial bacteria from the body. Alternative therapies are structured to destroy the damage causing bacteria and viruses.

### CONS

**Not completely reliable :** Alternative therapies can be used to complement your conventional treatment when serious illnesses are considered however; attempts to treat serious illness with alternative therapies can aggravate the ailment. It is important to educate yourself with all the options available and accordingly make decisions that are right for you.

**Lengthy process:** Conventional medicines generally show immediate results. Most Alternative therapies work on the principle of eradicating the problem from its root, hence takes a longer time to heal the problem.

**Requires dedication:** Alternative therapies not only take longer time to heal but also require serious dedication and discipline to change eating or lifestyle habits to show positive results.

**Limited research:** Most alternative therapies have not been scientifically tested and approved by any governing body.

**Source:**

<http://www.medimanager.com/my-worries/more-articles/alternative-medicines-pros-and-cons.aspx>

## Activity

1. For each alternative therapy presented, critique the credibility of the claims, including the evidence that has been presented as support for the claims.
2. Which alternative therapy presented is the most persuasive in terms of the strength of argument presented?
3. In written format, either defend or reject the notion of alternative therapies. You should construct an argument with a clear conclusion, multiple reasons and credible evidence.
4. For each alternative therapy presented, consider potential sources of vested interest.

## Response 1: Dan Goldstein – Monosanto



Dan Goldstein, MD, senior science fellow at Monsanto, an agriculture company responsible for a large share of genetically modified crops worldwide states: **“They’re the most thoroughly tested food on the market.”** There are lots of other benefits too:

**1. More food:** These plants can help farmers boost their yield by making crops that can live through a drought or the cold and resist disease. Backers say GM products will help us feed the extra 2 billion people that will fill the planet by 2050. “Not using these tools would push us back 40 to 50 years in food production,” says Kent Bradford, PhD,

distinguished professor of plant sciences and director of the Seed Biotechnology Centre at the University of California.

**2. Less stress on the environment:** Supporters say using science to make the changes is better for the planet than older farming methods. Crops built to resist pests lower farmers’ need for toxic chemical pesticides, Goldstein says. They also require less soil to be tilled, reduce runoff, and keep the soil in place.

**3. Better products:** Scientists can create crops that contain vital nutrients. Swiss researchers created a strain of “golden” rice with high amounts of beta-carotene. Monsanto produced soybeans with lots of heart-healthy omega-3 fatty acids. Other crops, like papaya and cassava, can be made to withstand disease. “Naturally occurring molds (if we don’t prevent them by creating GM crops) present huge health hazards,” Bradford says. “Why reject a technology that has the potential to benefit so many people worldwide?”

“If you’ve eaten today, chances are you’ve had a food that’s been touched by science as well as Mother Nature. Up to 80% of processed foods in the U.S. have something that’s been changed by man from the way it would grow on its own”.

Source: <http://www.webmd.com/food-recipes/truth-about-gmos>

## Response 2: World Health Organisation

Extract from a Report:

Genetically modified (GM) foods are foods derived from organisms whose genetic material (DNA) has been modified in a way that does not occur naturally, e.g. through the introduction of a gene from a different organism. Currently available GM foods stem mostly from plants, but in the future foods derived from GM microorganisms or GM animals are likely to be introduced on the market.

### Are GM foods safe?

Different GM organisms include different genes inserted in different ways. This means that individual GM foods and their safety should be assessed on a case-by-case basis and that it is not possible to make general statements on the safety of all GM foods. GM foods currently available on the international market have passed safety assessments and are not likely to present risks for human health. In addition, no effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved. Continuous application of safety assessments based on the Codex Alimentarius principles and, where appropriate, adequate post market monitoring, should form the basis for ensuring the safety of GM foods.

Consumer confidence in the safety of food supplies in Europe has decreased significantly as a result of a number of food scares that took place in the second half of the 1990s that are unrelated to GM foods. This has also had an impact on discussions about the acceptability of GM foods. Consumers have questioned the validity of risk assessments, both with regard to consumer health and environmental risks, focusing in particular on long-term effects. Other topics debated by consumer organizations have included allergenicity and antimicrobial resistance. Consumer concerns have triggered a discussion on the desirability of labelling GM foods, allowing for an informed choice of consumers.

Source: [http://www.who.int/foodsafety/areas\\_work/food-technology/faq-genetically-modified-food/en/](http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/)



## Response 3: Science magazine article



Later this year, the U.S. Department of Agriculture may approve the Arctic Granny and Arctic Golden, the first genetically modified apples to hit the market. They will be non-browning. To make Arctic apples, biologists took genes from Granny Smith and Golden Delicious varieties, modified them to suppress the enzyme that causes browning, and reinserted them in the leaf tissue. It's a lot more accurate than traditional methods,

which involve breeders hand-pollinating blossoms in hopes of producing fruit with the desired trait. Biologists also introduce genes to make plants pest- and herbicide-resistant; those traits dominate the more than 430 million acres of GMO crops that have already been planted globally. Scientists are working on varieties that survive disease, drought, and flood.

Over the past decade, the controversy surrounding GMOs has sparked worldwide riots and the vandalism of crops across the world. In May, the governor of Vermont signed a law that will likely make it the first U.S. state to require labels for genetically engineered ingredients and stated: "As consumers, we are guinea pigs, because we really don't understand the ramifications."

Many people worry that genetic engineering introduces hazardous proteins, particularly allergens and toxins, into the food chain. It's a reasonable concern: Theoretically, it's possible for a new gene to express a protein that provokes an immune response. That's why biotech companies consult with the Food and Drug Administration about potential GMO foods and perform extensive allergy and toxicity testing. Those tests are voluntary but commonplace; if they're not done, the FDA can block the products.

One frequently cited study, published in 2012 by researchers from the University of Caen in France, claimed that one of Monsanto's corn GMOs caused tumours in lab rats. But the study was widely discredited because of faulty test methods, and the journal retracted it in 2013. More recently, researchers from the University of Perugia in Italy published a review of 1,783 GMO safety tests; 770 examined the health impact on humans or animals. They found no evidence that the foods are dangerous.

Source: <https://richarddawkins.net/2014/07/core-truths-10-common-gmo-claims-debunked/>

### Response 4: Friends of the Earth

Wildlife in UK farmland is already in severe decline because of intensive, chemical farming. For example, plants which were considered to be arable weeds 40 years ago are now listed as rare or scarce and some are endangered species. Similarly more than 20 bird species including the tree sparrow, grey partridge and song thrush have shown drastic declines in numbers since the 1970s. There is widespread concern that the use of GM herbicide tolerant crops could make this worse.

GM herbicide tolerant crops allow farmers to apply 'broad spectrum' weed killers to their field, which kill all other plants. There is concern that this will continue the decline of farmland wildlife because the use of these GM crops could lead to the removal of weeds from all crops in the normal arable rotation. This will reduce the food supply for insects and birds. These Genetically modified crops and food concerns led English Nature to state in 1998 that the *"untested introduction of GM crops could be the final blow for such species as the skylark, corn bunting and the linnet, as the seeds and insects on which they feed disappear."*

Source: [http://www.foe.co.uk/sites/default/files/downloads/gm\\_crops\\_food.pdf](http://www.foe.co.uk/sites/default/files/downloads/gm_crops_food.pdf)

### Response 5: Results from a Welsh public opinion poll 2014

- A third of the public believes that genetically modified foods are safe to eat
- 52 percent believe such foods are unsafe, and an additional 13 percent are unsure about them
- 93 percent — says the government should require labels on food saying whether it's been genetically modified, or "bio-engineered"
- Fifty-seven percent also say they'd be less likely to buy foods labelled as genetically modified
- Five percent of the public say they'd be more likely to buy a food labelled as genetically modified, 52 percent say they'd be more likely to buy food that's labelled as having been raised organically
- Genetically modified foods are particularly unpopular among women, another problem for food producers since so many women do the family shopping
- Sixty-two percent of women think genetically modified foods are unsafe to eat, a view that's shared by far fewer men (40 percent)

Adapted

from: <http://www.geneticliteracyproject.org/2015/01/29/pewaaas-study-scientific-consensus-on-gmo-safety-stronger-than-for-global-war>

## Response 6: The Telegraph (Thursday 23 April 2015)

### Farmers are in favour of growing genetically modified crops

Farmers are in favour of growing genetically modified crops in Britain despite public fears over their safety, new research has revealed. An Open University study has found that farmers and farming industry leaders believe GM technology is the only way to produce enough high-quality food as the country's climate changes and the population soars.

Farmers claim that using GM crops will help them cut down on herbicides and pesticides while increasing the amount of food that can be harvested. But their views contrast with the strong public scepticism over GM foods and fears that the genes artificially introduced into plants could escape into the wild, changing natural plants.

Professor Andy Lane, who led the series of interviews and workshops with 50 farmers and members of farming organisations, said: "New technology such as GM is attractive to farmers. They want to produce high-quality food profitably and they want to farm in an environmentally sensitive way. GM may allow them to reconcile this conundrum." The findings come just one week after government officials confirmed they were considering growing GM crops at secret locations to combat vandalism caused by anti-GM campaigners.

Biotechnology companies have warned the Department for Environment, Food and Rural Affairs that GM trials have become too expensive to conduct in Britain. Farming leaders also agree that they are suffering as other countries have embraced biotechnology.

Source: <http://www.telegraph.co.uk/news/earth/earthnews/3326601/UK-farmers-want-to-grow-GM-crops.html>

## Response 7: International News France 24/7 Live feed - 20/9/12

### GM food: the latest scare



The safety of genetically modified (GM) food is in question once again, following the publication of a French study linking it with cancer. Professor Gilles-Eric S  ralini and his team spent two years monitoring rats fed a lifetime diet of GM corn. They say 70% of females and 50% of males died prematurely, while some developed massive tumours and suffered severe damage to their liver and kidneys.

Source: <http://www.france24.com/en/20120919-2012-09-19-cancer-gm-food-seralini-rats-genetically-modified>

### Activity

1. Explain how expertise has been used to influence arguments in at least 3 of the Responses.
2. Are any of the Responses neutral? Justify your answer.
3. Who is more credible? Dan Goldstein or Friends of the Earth? Justify your answer.
4. Create a verbal presentation with visuals in response to the question 'Should we promote GM foods?'

### Response 1: Mum – why I had a large family

Having grown up in a family of four children, Rhian Hunter always knew she wanted more than one child.

I was one of four and I knew I wanted more than two children of my own. Two didn't feel enough – probably because I'd come from a bigish family myself. I had three and then Emily, our fourth, was our little surprise, followed by two more after that. I think six is a lovely number. The children have company all the time. I think they have little friendships right away. I think it enables them to have social skills that only children don't have because they have to share and they have to respect each other's ages, such as Emily, as the youngest, will go to bed first. They learn from each other constantly how to deal with situations. Of course, they fight – but they also make up and learn to tolerate one another. I think children from bigger families tolerate people more easily because they've had to learn that growing up. One disadvantage might be that children in bigger families don't get as much individual attention. But then you can have disadvantages to an only child as you can have only children who are spoiled and also only children who are lonely.

My mum was an only child and she said, 'An only is a lonely'. She was desperate for a sibling and a friend. When you have more than one child you instantly give your child a support network that they'll have for life. We still have holidays. I save up to make sure we can still do things. Financially it can be harder but I think there are ways of juggling it. You do have to make some sacrifices because you can't have everything. But what they don't get from a more affluent situation their life is enriched from being together.

Adapted from: <http://www.dailyrecord.co.uk/lifestyle/family-relationships/big-family-question-two-mums-4937051>

### Response 2: Government Legislation in Wales– Child benefit

**Child benefit** (children's allowance) is a [social security](#) payment which is distributed to the parents or guardians of [children](#), [teenagers](#) and in some cases, [young adults](#). In the UK, child benefit is administered by Her Majesty's Revenue and Customs (HMRC). As of April 2015, £20.70 per week is paid for the first child (including the eldest of a multiple birth) and £13.70 per week is paid for each additional child.

# Skills Application

Case study based activities using Section A skills: Population



In October 2010, the Conservative-Liberal Democrat coalition government announced that Child Benefit would be withdrawn from households containing a higher-rate taxpayer from January 2013. After some controversy this was amended so that any householder with a least one person with prescribed income over £50,000 would lose Child Benefit by a taper which removed it altogether when the income reached £60,000. This came into force on 7 January 2013.

Source: [http://en.wikipedia.org/wiki/Child\\_benefit](http://en.wikipedia.org/wiki/Child_benefit)

## Response 3: Tabloid news article: Parents criticised for having a large family



Parents of 11 children on benefits equivalent to a job worth £60,000 per year said people have been very negative towards us. The unemployed 37-year-old parents, who have never held full-time jobs in their lives, receive benefits worth £900 per week for eight of the kids. They are also in line to receive a six bedroom half a million pound newly built house. The parents of two boys and nine girls are due to move from their three

bedroom council house into a six bed mini-mansion for free. The property has six bedrooms, three bathrooms and a large garden with a shed in it.

Adapted from: <http://www.express.co.uk/news/uk/436086/Mum-of-11-on-60-000-benefits-People-talk-more-s-about-me-than-Fred-West>

## Response 4: A broadsheet news article on China's One Child Policy

**Who introduced the one-child policy and why?** During Chairman Mao's rule, China's birthrate was as high as four children per family and there were food shortages that led to famine. At the beginning of the 1980s, the Communist party decided to restrict China's population growth in order to stabilise food and water supplies and improve individual prosperity. In September 1980, an open letter to the country was issued by the Communist party calling for "one child per couple" rules to "keep the population below 1.2 billion at the end of the 20th century".



# Skills Application

Case study based activities using Section A skills: Population



**How large an impact has it had?** According to the Chinese Health ministry, doctors have performed 336 million abortions and 196 million sterilisations, since 1971 and inserted 403 million intrauterine devices. By contrast, in the United States, which has a population a quarter of the size of China's, there have been 50 million abortions since 1973. Chinese officials believe the one child policy has reduced the population by 400 million but demographers, citing falling birth rates across Asia, believe it is closer to 100 million.

**Are there any exceptions?** The policy has been a patchwork of measures. China's ethnic minorities, such as Uighurs and Tibetans, are exempt. Families in the countryside are permitted to have a second child if their first is a girl and recently couples that were only children themselves were allowed to apply to have more kids.

**What are the punishments for breaking the policy?** Women are regularly inspected to check if they are pregnant, even well into their 40s and 50s. Those who are found to be in breach can suffer forced abortions and even sterilisations. In millions of cases, families have been successful in hiding new children. The 1990 census recorded 23 million births but the 2000 census put the number of ten-year-olds at 26 million, suggesting at least three million babies had escaped the notice of family planning officials. Those who are caught can also opt to pay a "social upbringing fee", usually a multiple of the average income in the city where the child is born, designed to cover the cost of education and healthcare.

**When will China stop the one-child policy?** Demographers have warned the Communist party that it must take drastic action to encourage more babies or face a rapidly ageing society. By 2030, a quarter of China's population will be over 60. However, in March 2008 officials predicted the policy would stay in play for "at least a decade".

Source: <http://www.telegraph.co.uk/news/worldnews/asia/china/11197594/What-is-Chinas-one-child-policy.html>

## Response 5: Government statistics

- The welfare state is a big part of British family life, with 20.3 million families receiving some kind of benefit (64% of all families), about 8.7 million of them pensioners. For 9.6 million families, benefits make up more than half of their income (30% of all families)
- In 2011 there were just 130 families in the country with 10 children claiming at least one out-of-work benefit. Only 8% of benefit claimants have three or more children. What evidence there is suggests that, on average,

unemployed people have similar numbers of children to employed people ... it is not clear benefits are a significant incentive to have children.

- Figures from Eurostat suggest the UK spends about the same as the EU average on benefits. The UK spends 12% less a head than France and 19% less than Germany, but almost twice as much as the Czech Republic.

Adapted

from: <http://www.economist.com/blogs/blighty/2013/04/benefit-cuts>

## Response 6: Britain's accidental one-child policy

Last week an insurer, Liverpool Victoria, confirmed what every aspiring parent (and grandparent) in Britain suspected: the cost of raising a child in Britain is surging. It has risen by 62 per cent over the past 11 years and stands at an almighty £227,000. And this terrifying arithmetic doesn't include any school fees. Add the extra bedrooms and, in my case, I'd have to earn £50,000 just to cover the cost of one child for a year — and that's without any luxuries. So two children? Right now, it's unimaginable.

It wasn't so long ago that we chortled along to a BBC1 comedy called *2point4 Children* — named after the average family size. Now the average British woman has 1.9 children. Most strikingly, in the past ten years, the number of one-child families has grown from 42 per cent to 47 per cent — suggesting that soon this will be the norm. Meanwhile, the proportion of families with two and three children is on the slide. The ONS concludes bluntly that 'families are getting smaller, on average'.

So are we witnessing the emergence of a Britain where rampant house-price inflation and soaring childcare costs are putting the pinch on procreation? Is breeding a luxury we can no longer afford? Are we about to see the implosion of the 20th century's two-plus-two nuclear family?

Certainly Justine Roberts, the founder of Mumsnet, believes that having a large family is 'becoming the preserve of the rich'. Childcare costs can quickly gobble up a third of monthly income, she says, and cost as much as the mortgage. Most Londoners can forget the idea of having a large house and a large family — but the same is happening in the hot spots of Manchester, Edinburgh and Glasgow. No wonder John Lewis has seen a six fold increase in bunk-bed sales over the last three years.

What will life be like in this reduced-child, ageing Britain? A glance at China's 35-year-old experiment in population control shows that it's not necessarily good news. A study published last year in Science endorsed the Chinese media stories about 'Little Emperor Syndrome' in the generation of children born after the introduction of the one-child policy in 1979, who have been lavished with attention

# Skills Application

## Case study based activities using Section A skills: Population



from their elders. The authors concluded that the children of this policy grew up to be 'less trusting, less trustworthy, more risk averse, less competitive, more pessimistic and less conscientious'. Crucially, the scientists said that the existence of cousins and socialisation in childcare did not compensate for the absence of siblings. So this may not be the blueprint for producing well-adjusted people. And there are much broader demographic impacts caused by the rapid emergence of a generation of lone children. China's 'four, two, one' phenomenon, for instance, sees one child effectively providing economic support for potentially two parents and four grandparents. How ironic that the cost of living here is pushing middle-class Britons in that direction just as China relaxes its rules. The more fearful lesson of China is that, when people know they can only have one child, they start to choose what they get. If boys are preferred, then far more are born than girls. Some studies identify 30 million 'missing' girls, which mean no blushing brides for millions of Chinese bachelors. For these men the result is social stigma, higher rates of depression, alcoholism and more aggressive behaviour. Some reports suggest that the 2011 National Census for the UK has shown the problem of gender-specific abortion is starting to crop up here, too.

Source: <http://www.spectator.co.uk/features/9127482/britains-one-child-policy/>

### Activity

1. Is there any evidence of propaganda in the Responses above?
2. In verbal format, either defend or reject the notion that Britain has an accidental one child policy. You should construct an argument with a clear conclusion, multiple reasons and credible evidence.
3. Which Response(s) is the most neutral?
4. Using evidence from at least 4 sources, identify biased words and phrases
5. What conflicting evidence has been presented? On which side does the weight of evidence sit?
6. In written format, either defend or reject the notion of the government providing child benefit. You should construct an argument with a clear conclusion, multiple reasons and credible evidence.

## Response 1: Woodland Trust



The Government plans to build a high speed rail line known as High Speed 2 (HS2), linking a number of the UK's major cities.

### Phase 1

Phase one of HS2 intends to link London and Birmingham. 27 ancient woods will be directly affected with a further 21 at risk of secondary effects such as disturbance, noise and pollution.

We are petitioning Government in relation to the impacts of this phase. Our petition has been submitted with a view to first avoid, and if not possible, minimise damage to ancient woods and trees, and the species dependent on them.

### Phase 2

Phase two will form a 'Y', running from Birmingham to Leeds and Manchester. 14 ancient woods face the threat of destruction with a further 21 exposed to secondary effects.

We are currently lobbying MPs that have woods within 200m of the proposed line, urging them to speak up for their local ancient woods and trees. To help avoid irreplaceable habitat loss, email your MP now to express your concerns.

**Impact of development** Whilst generally supportive of green transport measures we are yet to be convinced that this proposed rail route by the Government is as green as it claims. We echo many people's concerns over HS2's potential environmental impact. Our primary worry is the high level of damage to ancient woodland along the route.

**Source:** <https://www.woodlandtrust.org.uk/get-involved/campaign-with-us/our-campaigns/hs2-rail-link/>

## Response 2: Government Announcement

Our railways are increasingly busy. Demand for long distance rail travel has doubled in the past 15 years, and Britain's population is forecast to increase by 10 million over the next 25 years. Good transport links make our economy stronger and our lives easier. Congested transport networks are unreliable and constrain travel opportunities, restricting growth.

We plan to invest more than £70 billion in all forms of transport by 2021. High Speed 2 (HS2) is part of this, accounting for £16 billion of this investment.

# Skills Application

Case study based activities using Section A skills: Transportation



We are developing HS2 to provide Britain's railways with new capacity, better connectivity and quicker journeys.

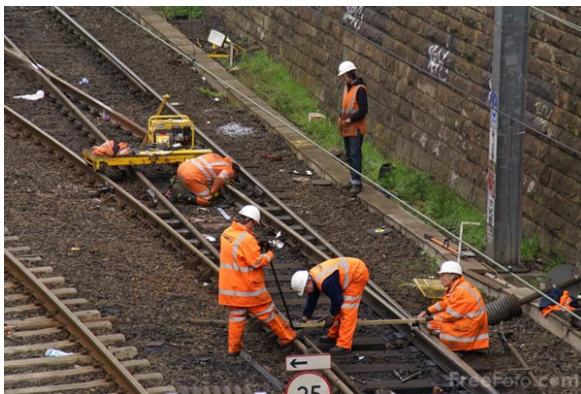
HS2 will link 8 of Britain's 10 largest cities, serving 1 in 5 of the UK population. It will allow more passengers to use trains and more freight operators to use rail rather than road.

The new railway will greatly increase capacity. It will treble the number of seats on trains into Euston and almost double the number of trains per hour on the West Coast Main Line. It will free up capacity on existing rail lines for more commuter, rural and freight train services, and mean fewer cars and lorries on our roads, cutting congestion and carbon. The new railway will be an engine for economic growth. HS2 will generate jobs and help rebalance the economy between north and south. We will build HS2 in 2 phases. Construction along the line is due to start in 2017 and be completed by 2025. The first train services will run between London and Birmingham from 2026.

We recognise that a scheme on the scale of HS2 will have impacts on the local environment and communities and we're committed to minimizing these impacts and treating those affected fairly.

Source: <https://www.gov.uk/government/policies/hs2-high-speed-rail>

## Response 3: BBC News Report



The government has no convincing case for spending £50bn building the HS2 rail link between London and the North, a report by the House of Lords Economic Affairs Committee says.

The government's main arguments in favour of HS2 - increasing railway capacity and rebalancing the economy - were still to be proven, peers said.

There are less-expensive options than HS2.

Lord Hollick, chairman of the Lords' committee, said overcrowding on the West Coast Main Line was largely a problem on commuter trains and on long-distance services on Friday nights and some weekends.

"The Government have not carried out a proper assessment of whether alternative ways of increasing capacity are more cost-effective than HS2," he said. "In terms of rebalancing, London is likely to be the main beneficiary from HS2. Investment in

improving rail links in the North of England might deliver much greater economic benefit at a fraction of the cost."

Committee member and Labour peer Lord McFall told Wake Up to Money on BBC Radio 5 live that the committee was not against HS2 in principle, but that the government needed a firmer transport strategy if it wanted to achieve its aim of rebalancing the economy. "We're against the government initiating public projects at £50bn without adequate assessment against their objectives," he said.

Source: <http://www.bbc.co.uk/news/business-32041167>

## Response 4: Friends of the Earth

Wildlife in UK farmland is already in severe decline because of intensive, chemical farming. For example, plants which were considered to be arable weeds 40 years ago are now listed as rare or scarce and some are endangered species. Similarly more than 20 bird species including the tree sparrow, grey partridge and song thrush have shown drastic declines in numbers since the 1970s. There is widespread concern that the use of GM herbicide tolerant crops could make this worse.

GM herbicide tolerant crops allow farmers to apply 'broad spectrum' weed killers to their field, which kill all other plants. There is concern that this will continue the decline of farmland wildlife because the use of these GM crops could lead to the removal of weeds from all crops in the normal arable rotation. This will reduce the food supply for insects and birds. These Genetically modified crops and food concerns led English Nature to state in 1998 that the "*untested introduction of GM crops could be the final blow for such species as the skylark, corn bunting and the linnet, as the seeds and insects on which they feed disappear.*"

Source:  
[http://www.foe.co.uk/sites/default/files/downloads/gm\\_crops\\_food.pdf](http://www.foe.co.uk/sites/default/files/downloads/gm_crops_food.pdf)

## Response 5: HS2 publicity campaign excerpt

High Speed Rail is projected to generate significant local and national benefits, including:

- Boosting the West Midlands' economy by £4 billion pa.
- Delivering 50,000 jobs to the West Midlands.
- Up to 2,000 operational and maintenance jobs.
- Travel time of 45 minutes between Birmingham and London, down from the current 83 minutes.
- Travel time of 38 minutes between Birmingham Interchange Station and London from the current 70 minutes.



# Skills Application

Case study based activities using Section A skills: Transportation



- Travel times of 41 minutes between Birmingham and Manchester (reduced from 90 minutes) and 57 minutes between Birmingham and Leeds (reduced from two hours).
- Reduced carbon of up to a million tonnes a year by 2055.

Adapted

from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/3648/hs2-decisions-and-next-steps.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3648/hs2-decisions-and-next-steps.pdf)

## Response 6: The Wildlife Trust

High Speed 2 (HS2) is the proposed new High Speed rail network for the UK - connecting London to Manchester and Leeds via Birmingham. The Wildlife Trusts are concerned about the impact HS2 will have on the landscapes and habitats and the damage it will cause to wildlife and ecosystems along the proposed route.

Although The Wildlife Trusts are generally supportive of sustainable transport schemes - they are an important part of our necessary transition to a low carbon economy - we believe this must not be achieved at the expense of the natural environment. So, alongside others, we have been campaigning to ensure that any scheme that goes ahead avoids further erosion of England's much depleted wildlife and ecosystems.

In phase 1 Seven Sites of Special Scientific Interest (the very best of our wild places), 3 Wildlife Trust nature reserves, 66 Local Wildlife Sites and 25 proposed Local Wildlife Sites are all directly affected and will be damaged or destroyed by the line for Phase 1. A further 92 wildlife sites are indirectly affected.

In phase 2, 3 SSSIs, 6 Wildlife Trust nature reserves, 87 Local Wildlife Sites and 17 proposed Local Wildlife Sites are all directly affected and will be damaged or destroyed by the proposed route.

Source: <http://www.wildlifetrusts.org/hs2>

## Response 7: My Money Magazine

**Compensation, a bond or diddly-squat: What would you get if High Speed 2 ran past your back door?**



Hundreds of homeowners living along the route of the planned high speed railway between London and Birmingham could be entitled to some form of compensation. Property owners could be able to claim money, receive a bond - or even have the opportunity to sell their home and rent it back again - if their property suffers long term damage as a result of High Speed 2.

The Department for Transport currently estimates that 509 homes will be eligible for compensation. This includes 327 set for demolition.

**If you live within 60 metres of the central line of HS2...**

The government could agree to buy your home if you want to move. If so, you will be paid the estimated value of your home if there was no HS2 - plus an additional ten per cent. You can also claim reasonable costs of moving house. This could include removal fees, post redirection and surveys of the new property. The ten per cent additional cost paid out is capped at £47,000 - so if your home is considered to be worth more than £470,000 you will be receiving less than ten per cent.

**If just part of your property is within 60 metres of the line...** You could still be eligible, but properties are considered on a case-by-case basis.

Source: <http://www.thisismoney.co.uk/money/mortgageshome/article-2418957/What-Government-HS2-runs-past-door.html>

## Activity

1. Carry out a PESTLE analysis for HS2.
2. Construct an argument for HS2. It should contain a clear conclusion, with at least three reasons and supporting evidence.
3. Create persuasive propaganda for and against HS2. It should be effectively presented in written format using persuasive words and phrases.
4. Identify sources of vested interest in the sources for and against HS2.

## Response 1: Number 2 Antwerpsche Diamantkring – a retailer in Antwerp

A window shopper in search of a diamond engagement ring in the city would give Hoveniersstraat little thought; probably my shop even less thought. However, it is a pretty unknown fact that 85 per cent of the world's diamonds change hands on this spot. In this street there are 1,500 diamond offices, eight thousand people, representing 160 nationalities, who handle diamonds worth £85 million every day. Inside our safes are uncut, cut and polished gems worth hundreds of millions more. Indirectly away from the scene, 25,000 insurers, bankers, security guards and drivers take part in a business that is worth five per cent of Belgium's exports. All our visitors must hand over their passport and have the print of their right index finger scanned before receiving a swipe card. The details are then checked on criminal record databases. Undesirables will trigger a silent security alarm and find the armed police waiting for them when they try and leave the building. Not only is it exciting, it is also terrifying. Terrorists too have struck at our Jewish community. On October 20, 1981, a car bomb exploded near a synagogue in the Hoveniersstraat. Three people died and the street was devastated. Our rooms and desks are stark. We sit around desk lamps with our eyes glued to our jeweller's "loop" scrutinising, and usually rejecting, uncut and polished diamonds. The gems are wrapped in "parcels", the uncut in folds of the kind of paper you usually see in a cheesemongers, the cut and polished diamonds carefully arranged in padded boxes to avoid scratching.

I estimate that for every carat, a fifth of a gram, of rough stone scattered in front of us, up to 1,750 tons of earth has been mined to get at them. Diamonds come in over 16,000 different categories and there is no technology where you can just analyse what the criteria are. Technology can tell you the size and the shape but not the colour and clarity. That is not an exact science; it is more like an art that will always require human interaction. All diamonds are different. Even with those 16,000 categories there are many others. There are very few jobs or industries that inspire this passion. If you are not excited about this industry, what are you going to get excited about? The rough diamonds look a bit like broken glass but once they are polished you can see all the lustre, sparkle and brilliance, the life and colour. For me, even after 15 years in the business it is sheer excitement. For example, this finished stone has an estimated value of £2 million and the price of gems is rocketing as supply dwindles, as traditional monopolies are broken by Asia and as wealthy new middle classes in China, India, Latin America and Russia snap up stones as an investment.

**Adapted**

from: <http://www.telegraph.co.uk/news/worldnews/europe/belgium/10502563/Antwerps-secret-heart-of-the-31bn-global-diamond-trade.html?mobile=basic>



## Response 2: Human Rights Campaign Group

Many of the world's diamonds are mined using practices that exploit workers, children, and communities. A million diamond diggers in Africa earn less than a dollar a day. Miners are dying in accidents, child labour is widespread, and corrupt leaders are depriving diamond mining communities of funds badly needed for economic development. Diamond miners

produce about 15% of the world's diamonds. But their wages do not reflect the value of their work. As a result, hundreds of thousands of miners lack basic necessities such as running water and sanitation. Hunger, illiteracy, and infant mortality are commonplace. Even within developing countries, diamond mining communities are often the most impoverished. Besides being grossly underpaid, many diamond miners work in extremely dangerous conditions. Small-scale diamond mining is often conducted without training or expertise. Miners may lack safety equipment and the proper tools. They can easily die or be injured in landslides, mine collapses, and other accidents.

Diamond mining also contributes to public health problems. The sex trade thrives in many diamond mining towns, leading to the spread of HIV and other sexually transmitted diseases. Environmental devastation resulting from diamond mining is another cause of disease. In Sierra Leone, miners have littered the landscape with thousands of abandoned mining pits. These pits fill with stagnant rainwater, become infested with mosquitoes, and serve as breeding grounds for malaria. Because children are considered an easy source of cheap labour, they are regularly employed in the diamond mining industry. In some areas of Africa, children make up more than a small part of the workforce. One survey of diamond miners in the Lunda Norte province of Angola found that 46% of miners were between the ages of 5 and 16.

For children trapped in the diamond mines, life is full of hardship. Children work long days, often six or seven days a week. Compared with adults, they are even more vulnerable to injuries and accidents. Physically challenging tasks such as digging with heavy shovels or carrying bags of gravel can leave them hurt or in pain. Because of their small size, children also may be asked to perform the most dangerous activities such as entering narrow mineshafts or descending into pits where landslides may claim their lives.

Source: <http://www.brilliantearth.com/conflict-diamond-child-labor/>

## Response 3: Newspaper Report – International Business Times. April 9<sup>th</sup> 2014

Is the so-called King of Diamonds behind the Hatton Garden jewellery heist? A criminal mastermind known as the "King of Diamonds" could a potential suspect behind Britain's biggest diamond heist, a former detective chief superintendent has claimed. The man captured on CCTV wearing a Panama hat following a £13m (\$19m) diamond raid at a Graff Knightsbridge store in London in 2007 "cannot be ignored" as a suspect to the Hatton Garden Safe Deposit company's raid over Easter, Barry Phillips told The Times.

"This was a very slick operation and the role of the draftsman [planner] was vital to get the detail exactly right," Phillips said. "There simply aren't that many faces who could have done it."

The mysterious figure and his accomplice were never caught. It was said they entered the store from a chauffeur-driven Bentley. Until this day, the 2007 raid remains unsolved. However, a 16-carat yellow diamond stolen in the robbery eventually turned up at Hong Kong pawn store and was valued at £1m, according to the Daily Mail. The mysterious criminal was later linked to another Graff diamond store raid in New Bond Street in 2009 where £40m gems were stolen.

Source: <http://www.ibtimes.co.uk/hatton-garden-robbery-mysterious-king-diamonds-behind-uks-biggest-jewellery-heist-1495570>

## Response 4: A fiancé

From around the 15th century, the diamond ring has been the symbol of engagement between two lovers - as a precursor to marriage. But this raises a moral dilemma as to the ethics behind where they actually come from (no, not Tiffany's). The majority of our diamonds come from some of the least developed countries on the planet where workers are far more vulnerable to exploitation. Our 'Western' desire for these precious stones has led to civil wars in countries such as Sierra Leone - where diamond miners work just to be fed. However, does this make me think that perhaps I should buy my fiancée a ring that doesn't contain a diamond – No! She would never forgive me.

Adapted from: <http://hubpages.com/forum/topic/43900>



## Response 5: The Whistle Blower

### Why diamonds are a waste of your money

I've been in the diamond business for over 10 years. I've travelled all over the world buying and selling diamonds. I've passed through most of the major airports across the United States with about a million dollars' worth of diamonds in a leather wallet stuffed inside my pants. I've bought and sold diamonds in Dubai, Mumbai, Moscow, Hong Kong, Paris, Stockholm, Tel Aviv, Madrid and Barcelona. Even today I am involved on the fringe of the diamond business, running a diamond education site helping would-be buyers.

Considering my deep personal involvement in the diamond business, my opinion might surprise you -- ***diamonds are a terrible waste of your money.***

Here is the reason why: The most common misconception about engagement rings is that they're some kind of ancient tradition that's deeply embedded in human history in societies around the world. This is completely false. The idea of a diamond engagement ring is roughly a century old. Guess who invented the concept? Not surprisingly, it's the same people who mined the diamonds -- the De Beers diamond syndicate. How far did De Beers go in their quest to create demand for diamonds? Edward Jay Epstein notes in his famous investigative article:

"In its 1947 strategy plan, the advertising agency strongly emphasized a psychological approach. "We are dealing with a problem in mass psychology. We seek to strengthen the tradition of the diamond engagement ring to make it a psychological necessity capable of competing successfully at the retail level with utility goods and services." It defined as its target audience "some 70 million people 15 years and over whose opinion we hope to influence in support of our objectives." N. W. Ayer outlined a subtle programme that included arranging for lecturers to visit high schools across the country. "All of these lectures revolve around the diamond engagement ring, and are reaching thousands of girls in their assemblies, classes and informal meetings in our leading educational institutions," the agency explained in a memorandum to De Beers.

I have nothing against clever marketing campaigns, but this is different. In this case De Beers spent millions upon millions convincing the public that they needed to buy a product that they basically created out of thin air (thin air that they alone controlled). However, I don't believe the diamond business is any more guilty than any other industry that does most of its production in poorer countries on the other side of the world. If you find yourself not being able to fight the social pressure to get a diamond ring, it's OK. There are many like you. It's not a simple thing to resist. Just please do yourself a favour and speak to an expert who can

help you make sure that at the very least you spend as little as possible on the illusion and still come away with something that serves its purpose.

Adapted from: [http://www.huffingtonpost.com/ira-weissman/7-reasons-why-you-shouldn\\_t\\_1720870.html](http://www.huffingtonpost.com/ira-weissman/7-reasons-why-you-shouldn_t_1720870.html)

## Response 6: Teranga Gold's sustainable mining

Although diamond mining is not the worst form of mining in regards to its environmental impact, impacts are already being felt from the two diamond mines currently operating in our portfolio of mines. Those physical impacts include:

- loss of fish habitat through draining of lakes, destruction of streams, changes in water quality.
- loss of land-based habitat for wildlife such as caribou, grizzly bears, and wolverine. For instance, radio-collared cows from the Bathurst caribou herd spend 7-8% less time feeding in close proximity to a mine.
- Increased production of greenhouse gases. Both diamond mines are currently fuelled by millions of litres of diesel. Each mine makes a significant contribution to the greenhouse gas produced in the area

Social and cultural impacts from the two existing diamond mines are also being felt.

A sudden influx of money into communities creates some social tensions, and this can show up in increased amounts of substance abuse and family violence. The shift-work patterns imposed on workers at the mines disrupt normal social rhythms, taking parents away from children and elders for weeks at a time.

However, nothing can dispute the positive impact Teranga Gold has had on the provision of jobs and money to the area, but it must be recognized that some negative effects can accompany the benefits. These negative effects are always taken into account in planning diamond mines to attempt to minimize the disruption that comes with the benefits of development. And as such, we will be addressing the issues outlined above.

Adapted

from: [http://www.carc.org/index.php?option=com\\_content&view=article&id=92:diamonds-and-sustainable-development&catid=41:mining-and-sustainability&Itemid=153](http://www.carc.org/index.php?option=com_content&view=article&id=92:diamonds-and-sustainable-development&catid=41:mining-and-sustainability&Itemid=153)

## Activities

1. To what extent is there evidence of propaganda in Response 5?
2. Which Response contains the most credible evidence? Explain your answer
3. Carry out a PESTLE analysis. What conclusions does the weight of evidence lean to?
4. In written format, present a case for or against the diamond trade. Include a clear conclusion, multiple reasons with appropriate evidence.
5. What is the intended message behind each photograph?

## Response 1: The Anti-Whaling Protest Group



Whale numbers have dropped about 90% in some species, but all the hunted species are badly affected. Some species, e.g. the Atlantic Gray Whales were hunted to extinction. Whale populations take a long time to recover. They only have one young in every two or three years, and it is way too early to say that the populations have recovered due to the quotas issued by The

International Whaling Commission.

Another argument against whaling is cruelty. There are no humane methods to kill whales.

Explosive harpoons which explode inside them, are cruel and painful. Being such large animals, one shot doesn't always kill them. It may take many minutes or even hours before they die and it should turn anyone with a heart against whaling.

Some countries argue that whaling is necessary to maintain successful commercial fishing. They say that whales eat so many fish and if we kill whales, lots of fish are saved in the oceans. However, if whales ate enough fish to affect global fish stocks, the amount of fish would have significantly increased when the whale populations crashed - but they did not. Other countries claim that whaling is needed in order for research that actually benefits the whales themselves. But it is obvious that the countries most interested in whale research are the countries where whale meat is part of their traditional diet. Japan makes full use of IWC's requirement that nothing goes to waste after the research is done and sends all whale meat to shops and markets. Is the real purpose of whaling in Japan for research or for meat? Why are whaling ships used that can process the meat of several whales on board? Is the research overdone? Can some of the data they are finding be obtained by non-lethal means? And is all of the data they are finding so necessary that it is worth so many lives? What good is all of the research if the whale population is decimated by it?

Source: <http://www.whale-and-dolphin-facts.com/arguments-against-whaling.html>

## Response 2: London School of Economics and Political Science Report - The scale of whale hunting

Four political entities in Europe currently engage in whale hunting: Iceland, Norway, Greenland, and the Faroe Islands. All are members of the International Whaling Commission and none is a member of the European Union.

Norway reports that its whalers took 533 whales in 2011, though the government issued permits for around 1,200 whales. These are minke whales, which are hunted in the summer months off the northern coasts of Norway. They are hunted from small boats using grenades attached to harpoons, which are shot from cannons into the thorax of the whale. The meat is almost all sold and consumed locally, with small quantities exported to the Faroe Islands and (in recent years) to Japan.

Iceland hunts minke whales (about 215 in 2012) in the North Atlantic, as well as fin whales. The minke whale is consumed locally in Iceland, while the fin whales are exported to Japan. Fin whales are classified as endangered species by the CITES treaty. They are an 'Appendix I species' in CITES, meaning that they are "threatened with extinction" and international trade in their products is illegal. The number of fin whales killed in Iceland's hunt spiked to 148 in 2010, but seems likely to return to zero given the failure of the Japanese market after 2011.

Greenland and the Faroe Islands are both parts of the Kingdom of Denmark, but for whaling matters (and much more) they are autonomous from the Danish government. They allow whale hunting even though Denmark itself does not. (This makes for a difficult position for the Danish representative at the International Whaling Commission meetings, who must speak on behalf of all three entities). Greenland has a seasonal whale hunt by aboriginal groups, taking about 100 minke and 10 fin whales per year, along with a small number of bowhead and humpback whales.

The Faroe Islands' hunt is distinctive in that it takes place on-shore after the whales have been chased by small boats and made to beach themselves. About 1,000 pilot whales are killed this way each summer, and the practice takes the form of a community festival. The whale meat is then taken home by the participants. It is therefore mainly consumed by those who participate in the activity and does not enter into a market. Together, these four territories kill about 2,000 whales per year. The other whaling countries around the world kill about 1,500 more. This is mostly done by Japan (about 1,200, mainly in the southern ocean), but also in smaller numbers by aboriginal groups in Russia (about 150 per year) and the US (about 100 per year), and by a handful of other countries. Source: <http://blogs.lse.ac.uk/euoppblog/2013/02/18/whaling-europe-eu-norway-iceland-greenland-faroe-islands-cites-international-whaling-commission/>

### Response 3 – Rakuten, the Japanese retailer of whale meat



Rakuten, the Japanese e-commerce company which owns Play.com and Kobo, is the world's biggest online retailer of whale meat.

It is what our customers' demand, so why should we not sell it? We have some very discerning customers. Our target market are males 40 to 49 who are the most likely to enjoy a piping hot plate of whale meat, followed by men between 50 and 59. The numbers aren't too surprising considering whale meat was served frequently in school lunches in the years following World War II, likely making it a sentimental favourite of children of that generation.

### Response 4: An Anthropologist reporting on her visit to the Faroe Islands

In Tórshavn, capital of the Faroe Islands, I met a man who first helped his father kill a whale with a sharp knife when he was eight years old. The spouting blood soaked his hair and covered his face like war paint. He remembered the warmth on his skin, a contrast to the cold North Atlantic in which they stood. These days we assume that people who kill whales and dolphins must be bad. Indeed images are portrayed of the sea stained red, the flapping pilot whales being dragged ashore with ropes and grappling hooks, and being killed with a sharp instrument that severs the spine close to the head, resulting in almost instantaneous death.

Historically, the islanders have relied on whale meat as an essential part of their survival. These are fiercely independent people, intimately connected to their natural environment in spite of modern heating, air links (when the clouds clear for long enough) and the internet. They have never set out to look for pilot whales: they kill them only when a school is discovered close to shore, and only if one of a small number of designated beaches is near enough to use as a landing ground. According to the North Atlantic Marine Mammal Conservation Organisation, pilot whales number more than 750,000, and each year the slaughter is estimated to take less than 0.1 per cent of the population. Records have been kept since 1584 – which makes this the longest recorded tradition of any human-animal interaction. Experts think the practice has been going on for more than 1,200 years. I'd defend the right of that father and his young son to hunt and kill whales. Theirs is a dramatic land, a green and treeless collection of 18



# Skills Application

Case study based activities using Section A skills: Natural Environment



islands in the North Sea where just 50,000 people still live a life intimately connected to the elements. The grindadráp (whale hunt) is not merely something from the Faroese past. It is a reminder of their relationship to the sea, and the meat is still a favourite delicacy.

Source: <http://staging.spectator.co.uk/features/9126932/why-we-should-let-faroe-islanders-hunt-whales/>

## Response 5: An expert in Marine Biology

Many nations, including the UK, participated in commercial whaling throughout the 19th and 20th centuries. However by the 1960s most of the world's whale populations had been decimated and in many places it was no longer economically viable to hunt whales. Since 1986 the International Whaling Commission has imposed a fixed quota system on whaling in an effort to support the recovery of whale populations. To enhance this effort the IWC established the Southern Ocean Whale Sanctuary in 1994. This was to provide whales with a safe haven from commercial whaling within their Antarctic feeding grounds. Japan continues to hunt whales claiming that it is done for scientific research, which is permitted under a provision in the IWC charter. As a marine ecologist this concerns me. Present day research techniques make it completely unnecessary to kill whales in order to learn about their life history and ecology. In addition, all the whale meat collected by Japan is packaged for human consumption on their factory ship the Nisshin Maru while still in the whale sanctuary, indicating that "Research" is not the top priority for this annual hunt. Furthermore, I find Japan's implication that it is okay to kill whales for Scientific Research potentially damaging to the reputation of science.

Adapted from: <http://www.talkingnature.com/2010/01/conservation/whaling-sustainable/>

## Response 6: A resident of Lamalera

Lamalera is on the south coast of the island of Lembata, and is our Indonesian whaling communities. As hunters, we obey religious taboos that ensure we use every part of the animal. About half of the catch is kept in the village; the rest is bartered in local markets. In 1973, the United Nations' Food and Agriculture Organization (FAO) sent a whaling ship and a Norwegian whaler to modernize our hunt. This effort lasted three years, and was not successful. According to the FAO

# Skills Application

Case study based activities using Section A skills: Natural Environment



report, the Lamalerans "have evolved a method of whaling which suits their natural resources, cultural tenets and style."

As a community living on Lembata Island we are completely dependent on the



ocean for our food. In our village we use simple and traditional methods to fish, that haven't changed for years. It's the whaling season soon and the villagers are determined to catch migrating sperm whales. A huge effort by the villagers' usually results in a successful fishing trip. Our villagers of Lamalera catch only around six whales a year. This is called subsistence

whaling. Catching a whale transforms the villagers' fortunes as whale meat; bone, skin and blubber all serve as currency on this remote island.

Adapted from: <http://en.wikipedia.org/wiki/Whaling>

## Response 7: An eye witness to catching and killing a whale

I was travelling on an Australian whaler in 1977 when I witnessed the long death of a great whale:

*"The harpoon seemed to pass right through it, which can happen and the second explosion took longer. The whole event this time seemed in slow motion. The whale dived, and a great green cloud burst up to the surface. Blood turns green underwater at 50 feet...or was this some of its intestines? It came up on the starboard side, its huge head, a third of its total body size, shaking itself, and then it gave out a most terrible cry, half in protest, half in pain, and then it dived again. They loaded the next harpoon, the killer, but could not get a shot at it as it twisted and turned, hurting itself all the more. Finally, the lookout in the crow's nest shouted down that it was coming up dying. Its mouth was opening."*

Source: [http://www.endangeredspecieshandbook.org/pdfslive/esh\\_chapter10.pdf](http://www.endangeredspecieshandbook.org/pdfslive/esh_chapter10.pdf)

### Response 8: A broadsheet news article

Japan today unveiled its widely anticipated new whaling research programme for the Antarctic. The plan sets a target of capturing 333 minke whales annually as part of a 12-year-long research effort "to achieve conservation of Antarctic marine ecosystem resources while pursuing their sustainable utilization and to understand and predict the effects of factors such as climate change."

The draft, which will now be presented to the Scientific Committee of the International Whaling Commission (IWC), is open to revision. "We are willing to improve the research plan in response to comments and suggestions," says Joji Morishita, Japan's commissioner to the IWC. Japan plans to resume research whaling during the 2015 to 2016. The IWC has no legal authority to block the resumption of research whaling, and it's not clear if any country will take the matter back to the ICJ. International criticism may be the only option to stop research whaling, it has been stated.

Critics have long claimed that Japan's research programme is a fig leaf to sidestep the IWC's 1982 moratorium on commercial whaling. The 1946 International Convention for the Regulation of Whaling allows taking whales for research purposes and allows the meat to be sold on the market; Japan uses the proceeds to defray research expenses. Whale meat dishes are widely available at specialty restaurants, in supermarkets, and online, and some Japanese consider it a delicacy. But consumption has declined in recent years and much of the annual catch ends up in storage.

Australia took the matter to the ICJ in 2010. In its 31 March decision, the court found that, among other shortcomings, the target sample size of the Japanese program was not scientifically justified, nonlethal means of doing the research were not sufficiently considered, and there was little peer-reviewed science. "The evidence does not establish that the program's design and implementation are reasonable in relation to achieving its stated objectives," said the court, which ordered Japan to immediately halt whaling operations under the Antarctic research programme.

Source: <http://www.internationalwhaleprotection.org/forum/index.php?/topic/8806-details-out-for-japans-new-whaling-plan/>

## Activity

1. Construct an argument that either defends or critiques whale hunting. There must be a clear conclusion, multiple reasons with appropriate evidence.
2. Is there any evidence in the Responses above for vested interest?
3. Is there any evidence in the Responses above of ethnocentrism?
4. Who has the most credible reputation? Explain your answer.
5. To what extent can the eye witness account be trusted?
6. Which Response contains the most credible arguments? How have you reached this judgement?

## UNIT 33: How to carry out effective evaluation.

### 33.1 What is self-evaluation?

Self-evaluation is important at any stage in your life. Self-evaluation is an important part of being committed to lifelong learning - the understanding that you will never complete your learning journey and grab every opportunity to learn new skills.

Anything you do, be it in school, college, work or your personal life, can go through a circular process. The process starts with you developing an idea of what you want to achieve. Following this, you should consult with those who will be influenced by your idea or what you want to achieve to think of the best way to implement this. You then implement your idea. Next you spend some time monitoring how well it is going and then consult again. Following this consultation, your developed ideas will change and the process starts again with you consulting about proposed changes, implementing the changes, monitoring the changes, consulting again, and so on.

### 33.2 Some questions to consider:



#### Reflection Point 1

How much effort did you put into learning about Global Citizenship?

Where do you think you did very well and where do you think you could do better?

What could you do to improve?

What are the most important things you have learned from looking at Global Citizenship?



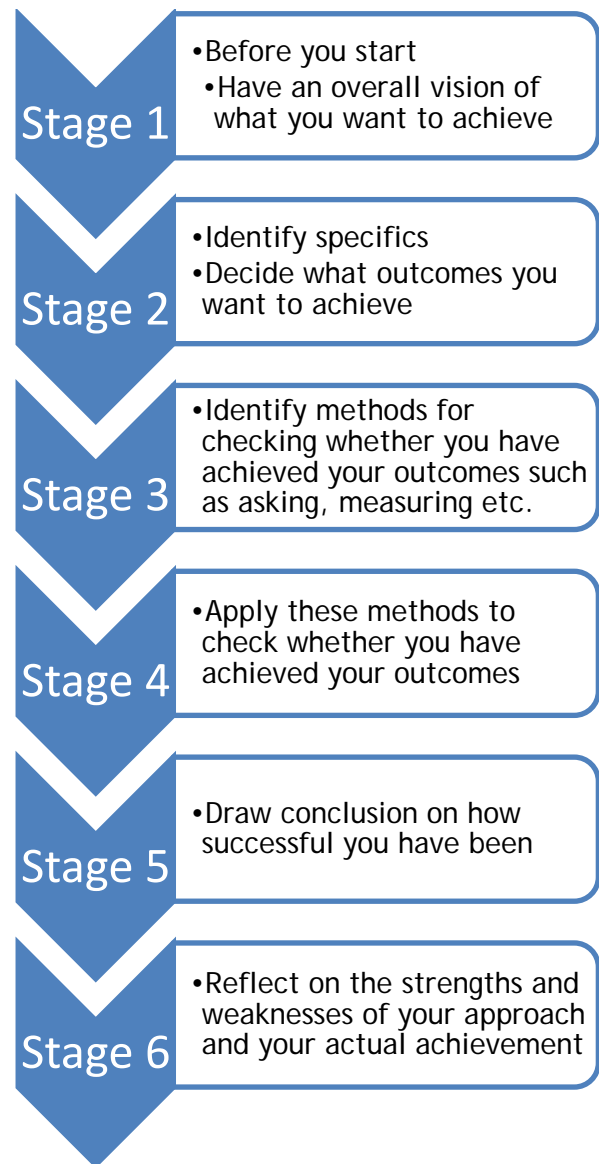
### 33.3 Why Self Evaluation is important

The idea behind self-evaluation is that our judgment of what we think we are doing and what we actually are doing is not always the same. This is why it is so

important to perform regular self-evaluation.

Did you know, for example, that fighter pilots, politicians and top athletes perform self-evaluation? They do this by reviewing video footage of their performance and identifying where they could have improved.

## 33.4: The stages of evaluation of performance



## 33.5: Stage 5 and 6 in more detail

When drawing conclusions about how successful you have been you should also consider the following questions:

- What would have made this experience better?
- How did you feel about the situation?



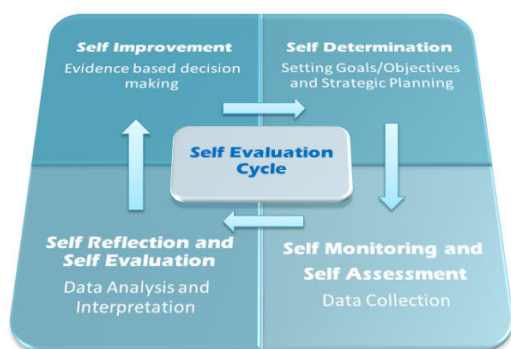
- What from this experience do you most appreciate about yourself?
- What could you do differently next time?
- What do you remember thinking but not saying?
- What did you feel but not reveal?
- What is the most radical thing you could have done?
- What is the easiest thing you could have done?
- What don't you know about the situation?
- What could you definitely not have done?
- What might you have invented or imagined about the situation?
- What surprised you about the situation?
- What surprises you about it now?



### Reflection Point 2

Reflect on what you have achieved in learning about Global Citizenship by responding to the points above.

## 33.6: The self-evaluation cycle



GROWTH is a framework to help you explore an issue and reach a plan of action.

**Goal:** What do you want to achieve next?

**Reality:** What is the current situation? How have you carried out a similar goal before? Were you successful?

**Options:** What could you do? What did you do before and was this approach successful?

**Will:** What will you do now based on previous experience?

**Timescale:** How long will it take?

**How:** How will you measure impact?

### Summary

Personal development using self-evaluation, for example, is a lifelong process. It's a way for people to assess their skills and qualities, consider their aims in life and set goals in order to realise



and maximise their potential in whatever they set themselves.

## Unit 5

### 5.2 The reputation of people

Image 1 – Mother Teresa of Calcutta

Image 2 – Robert Maxwell

Image 3 – Vladimir Putin

Image 4 – Nelson Mandela

## Unit 7

### 7.3 What is a non-argument?

#### Individual Activity 1

There is only a conclusion in the argument, there is no reason. The conclusion is:

Everyone should be made to swap their petrol cars for electric cars

#### Test yourself 1

1. BBC news reports about the level of unemployment in Wales are usually reliable.

**Non argument**

2. American news reports about the level of unemployment in America are usually unreliable.

**Non argument**

3. BBC news reports about the level of unemployment in Wales are usually reliable because the BBC obtains their information from reliable sources.

**Argument**

4. American news reports are unreliable because they do not use reliable sources.

**Argument**

5. Unemployment levels in Wales are in decline because the Welsh Government has introduced effective policies.

**Argument**

6. Unemployment are not effective said someone who does not want to be named.

**Non argument**

7. I don't think unemployment polices are working whether they are new or not.

**Non argument**

8. Welsh employment policy is similar to the UK's employment policy.

**Non argument**

## 7.4 How to present arguments symbolically

R1 R2



C

## Unit 8

### Activity 2

1. Because cars emit pollution, there should be good public transport options available.
2. As indicated by reports on global warming, people should become more environmentally friendly.
3. More people are giving up smoking since cigarette vaporisers have been introduced.
4. Children are eating healthier food in school canteens owing to Jamie Oliver's campaign to improve school dinners.
5. Given that population levels are creating detrimental impacts on the environment, a one child policy should be introduced in more countries.

## Unit 9

### Test Yourself 1

**Argument 1:** Wales has relatively high rainfall. Poole in Dorset has relatively low rainfall. In deciding where to go on a beach holiday, Poole will probably be the best choice.

**Standard form:**

R1     Wales has relatively high rainfall.

R2     Poole in Dorset has relatively low rainfall.

---

C     In deciding where to go on a beach holiday, Poole will probably be the best choice.

**Symbolically:**

R1 R2



C

**Argument 2:** Exercise is very good for you. It keeps you fit, it makes you feel good, it increases bone density which limits osteoporosis and it keeps you flexible.

**Standard form:**

R1     It keeps you fit.

R2     It makes you feel good.

R3     It increases bone density which limits osteoporosis.

R4     It keeps you flexible.

---

C     Exercise is very good for you.

**Symbolically:**

R1 R2 R3 R4



C

**Argument 3:** Breast feeding provides babies with a nutritious diet. As a result, mothers should be able to feed babies in any location. Therefore breast feeding in public places should be encouraged.

**Standard form:**

R1     Breast feeding provides babies with a nutritious diet.

IC     Mothers should be able to feed babies in any location.

---

C     Therefore breast feeding in public places should be encouraged.

**Symbolically:**

R1



IC



C

**Argument 4:** The population is getting older. People need to be taxed more in order to support an aging population.

**Standard form:**

R1     The population is getting older.

---

C     People need to be taxed more in order to support an aging population.

**Symbolically:**

R1



C

## Unit 10

### 10.1: What are assumptions in arguments?

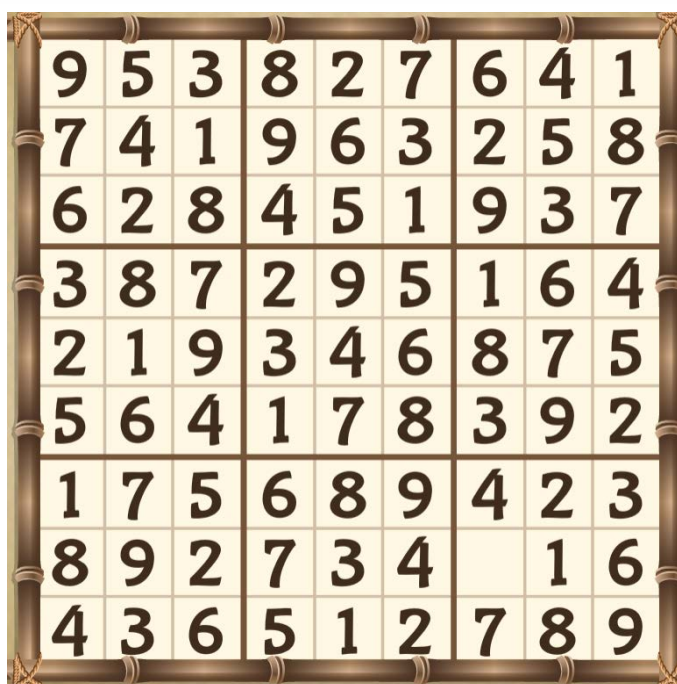
1. Wherever possible we should travel by train than car. This will be reduce greenhouse gases and global warming.  
**Assumption: Global warming needs to be tackled (or similar)**
2. All rubbish should be recycled. Putting it in land fill harms the environment.  
**Assumption: The environment is worth protecting (or similar)**
3. Greenpeace should be supported. Dolphins and Whales are hunted and killed by poachers.  
**Assumption: Dolphins and whales should be protected (or similar).**

## Unit 19

### Individual activity 2

1. What is the smallest number of socks that you will have to take out to ensure you have a matching pair?  
**3 – if the first 2 you pick out are of different colours, the 3<sup>rd</sup> must match one of them**
2. What is the largest number you can take out and still not have a matching pair?  
**2 – as for above. If the first 2 are different, the third must match one of them**
3. What is the smallest number you can take out to be sure you have one of each colour?  
**9 – the first 8 you pull out could all be brown – the ninth must be dark grey so then you would have one of each**
4. What is the largest number you can take out and still have all of one colour?  
**8 – all the first 8 you take out could be the same colour**
5. What is the smallest number you can take out to be sure you have a grey pair?  
**10 – the first 8 could be brown so you would need another 2 to get a grey pair.**





5 is the remaining missing number.

## Individual activity 5

Name	Surname	House No.	Cat
Rhys	Morgan	21	Dave
Mohamed	Jones	23	Tippytoes
Stewart	Smith	22	Smudge

## Unit 21

### 21.1: What are possible formats of information?

#### Individual activity 1

- I. What stop do you walk to?  
**Yorkshire Bridge Hotel**
- II. What time bus do you get?  
**08:30**
- III. How long are you on the bus for?  
**22 minutes**
- IV. What time bus do you get back to Sheffield station?  
**15:52**

## Individual activity 2

	Type			
Age	Sky	Freeview	NetFlix	Total
18-25	45	57	21	123
26-40	119	83	34	245
41-60	54	50	28	132
Total	218	190	92	500

This should be 43

## Individual activity 3

June

## Individual activity 4

Team Football Fanatics played 4 matches. This can be inferred because the first round had 32 teams so subsequent rounds had 16, 8 and 4 when they were knocked out. Each match lasted 2 x 20 minutes = 40 minutes. However, Team Football Fanatics played the two extra periods in one match – a total of 20 minutes. So their total playing time was 4 x 40 minutes + 20 minutes = 180 minutes or 3 hours in total.

## Individual activity 5

One

## Individual activity 6

Replace bulb

## 21.2: How do we access reliable and credible information using the internet?

1. Melt the butter, sugar, treacle and syrup in a small saucepan, whisking until smooth. Set aside to cool for 10 mins.
2. Heat oven to 160C/140C fan/gas 3. Grease and line a 2lb loaf tin with baking parchment (our tin was 22 x 7 x 7cm).
3. In a bowl, mix the flour, bicarbonate of soda, ground ginger, cinnamon and 1/2 tsp salt.
4. Pour in the warm syrup mixture and the milk, followed by the egg yolks. Whisk until you have a smooth batter.
5. Pour into the tin and bake for 1 hr or until a skewer comes out clean. Cool in the tin for 30 mins., then slice off the top to give you a smooth surface.
6. Flip onto a wire rack and remove the baking parchment.
7. To make the buttercream, put the ingredients in a large bowl and mash together with a fork or spatula (this prevents the icing sugar from going everywhere).

8. When roughly combined, blend with an electric hand whisk until smooth.
9. Now make the marshmallow icing. Put the egg whites, sugar, 1 tbsp water and a good pinch of salt into a heatproof bowl. Place over a pan of simmering water, making sure the bowl doesn't touch the hot water, and whisk.
10. On a cake stand or plate, reassemble the cake, with the largest slice on the bottom, layering with the buttercream.
11. Transfer half to a piping bag fitted with a large round nozzle and set aside.
12. When ready to assemble, slice the cake lengthways into 3 even layers
13. Using a small offset palette knife or small butter knife, cover the cake with the marshmallow icing left in the bowl
14. Use the palette knife to create vertical lines along the edges
15. Now use the piping bag to pipe spikes of meringue over the top of the cake.
16. Use a cook's blowtorch to toast the meringue to a golden brown – a few charred patches will add to the effect.
17. Serve straight away or chill for up to 2 days, removing from the fridge 30 mins before serving.