

In the news

Task

PROBLEM A

Flight – How can we fly without damaging the environment?

Issues

- uses fossil fuels – one of biggest threats to climate change
- creates huge quantities of carbon dioxide (2012 – 689 million tonnes of carbon dioxide produced by planes or 2% of all human carbon emissions)
- air travel increasing so problem will get worse
- global warming could cause severe weather conditions and flooding of coastal cities
- global warming could result in increase in spread of hot weather diseases (malaria)
- global warming and pollution will affect everyone

PROBLEM B

Food – How can we ensure everyone has healthy, sustainable food?

Issues

- 925 million people suffer hunger and another billion are undernourished
- by 2050, estimated 9.1 billion people on planet who need to be fed, so problem growing
- lack of protein in diet is a big problem – more nutritious food needed for developing countries
- meat production cruel and inefficient – more humane meat production (synthetic meat)
- cheap food often unhealthy – need for healthier food for developing and developed countries
- population increase may mean famine becomes worldwide problem

PROBLEM C

Paralysis – How can we restore movement to people who are paralysed?

Issues

- paralysis physically and mentally devastating for those affected and their families
- exoskeletons (used at opening ceremony of Brazil Olympics) help those looking after paralysis victims (carers) as well as victims themselves
- research into robotic exoskeletons may lead to benefits in other areas, such as suits for extreme weather conditions and military uses
- computer-brain interface can also help the paralysed by bringing back movement
- computer-brain interface may benefit other areas – virtual reality games, space travel



PROBLEM D

Water – How can we ensure everyone has access to safe and clean water?

Issues

- 98% of our planet's water is too salty for drinking or agriculture
- 44% of the world population have poor/no access to clean water – water needed for all aspects of our lives (e.g. cooking, cleaning, agriculture)
- drought results in rise in food prices
- desalination (making sea water into drinking water) currently too expensive - desalinated water 15 times more expensive than normal water
- current desalination techniques pollute environment
- desalinated water 15 times more expensive than normal water

PROBLEM E

Antibiotics - How can we prevent bacteria becoming resistant to antibiotic medicines?

Issues

- World Health Organisation (WHO) estimates antibiotics add 20 years to our lives
- antibiotics often prescribed if doctor unsure of illness – need for cheap, accurate, rapid, and simple test for infection will allow doctors to better treat infection
- widespread use of antibiotics in agriculture to treat infection in livestock, which has been linked to other diseases
- overuse of these drugs has led to untreatable superbugs, such as MRSA and there is greater risk of epidemics
- WHO warns of return to pre-antibiotic era where minor infection can be fatal
- very few new antibiotics being made
- finding alternative to antibiotics will make us less dependent on them
- most people take antibiotics, so research will benefit everyone

