**Climate Change - The Facts**

1. What is the greatest threat to human existence in thousands of years?

2. What is the evidence of climate change?

3. How many years do we have to take action before catastrophic climate changes happen to our world?

4. Why is our climate changing?

5. How many of the last 22 years were the warmest on record?

6. What is the main cause of climate change?

7. Give 3 examples of fossil fuels

8. What is produced when fossil fuels are burned?

9. How many parts per million has CO2 increased by in our atmosphere?

10. How many degrees hotter is the world since pre-industrial times?

11. In the UK what have the chance of heatwaves increased by?

12. What has happened to the frequency of extreme temperatures occurring?

13. During last year’s heatwave, how many Australian Flying foxes were saved? How many died?

14. How many more similar events would lead to the extinction of the flying fox?

15. What % of species are at risk of extinction due to climate change?

16. What was the cost of the damage caused by the Californian wildfires cause in 2018?

17. How many people lost their lives?

18. How are weather systems changing as the result of climate change?

19. What extreme event occurred in Kerala, in Indian?

20. What is happening to Earth’s ice?

21. How much ice is being lost on the Greenland ice sheet?

22. How much ice has Greenland lost compared to 25 years ago?

23. How much ice has Antarctica lost compared to 25 years ago?

24. How much warming is the ocean around Antarctica warmed by?

25. How long has sea level been stable for?

26. How much has sea level risen in last 100 years?

27. Give three examples of areas affected by rising seas

28. How much of the land at Isle de Jean Charles, Louisiana is now left?

29. How has the US government supported local people in relocating from this area?

30. What have the people of Isle de Jean Charles been labelled as?

31. Where has 90% of the heat trapped in the atmosphere been stored?

32. What proportion of the world’s coral reef has bleached and died in the last 3 years?

33. How long have scientists been predicting climate change?

34. Who played a major role in putting climate change on the international agenda?

35. Who campaigned to confuse the message of climate change?

36. What does the president of the USA think about climate change?

37. Who introduced the first legally binding target for reducing greenhouse gas emissions, The Climate Change Act, in 2008?

38. What plays a key role in managing the balance of carbon dioxide in the atmosphere?

39. What proportion of CO2 emissions are stored in the world’s forests?

40. How are trees like the lungs of the planet?

41. What provided a global perspective of the amount of deforestation occurring around the world?

42. What is the largest cause of deforestation?

43. What proportion of our carbon dioxide emissions are caused by deforestation?

44. When are we projected to reach an increase of 1.5°C in global temperature?

45. By the end of the century how much hotter is the Earth predicted to be?

46. How much is the sea level expected to rise by the end of the century?

47. What is a tipping point?

48. Give three examples of tipping points

49. How much more powerful is methane compared to CO2 as a greenhouse gas?

50. Identify the climate change agreement signed by most countries around the world in 2015

51. What did the agreement seek to achieve?

52. How can we meet the these targets?

53. What does energy production need to be moved to?

54. What has happened to the cost of renewable energy recently?

55. What is the cheapest form of newly installed energy production in 60 countries?

56. What is a benefit of using nuclear energy?

57. What will one revolution of a wind turbine power for a day?

58. What percentage of the UK’s energy comes from renewable energy?

59. How can we de-carbonised transport?

60. How are we attempting to reduce carbon emissions from aircraft?

61. How can we reduce the vast amount of carbon dioxide already in the atmosphere?

62. How does direct air capture work?

63. What is the average person’s annual carbon footprint?

64. What can we do to reduce our carbon footprint?

65. How many tonnes can be lost off the average persons carbon footprint by taking the steps above?

66. What did Greta Thunberg do to take action against climate change?

67. How has Greta taking a stand influenced other students around the world?

**Climate Change - The Facts**

1. What is the greatest threat to human existence in thousands of years?

Climate change

2. What is the evidence of climate change?

Flooding, storms, floods, heat waves and extreme sea level rise.

3. How many years do we have to take action before catastrophic climate changes happen to our world?

10 years

4. Why is our climate changing?

The world is getting hotter.

5. How many of the last 22 years were the warmest on record?

20

6. What is the main cause of climate change?

Using fossil fuels.

7. Give 3 examples of fossil fuels

Coal, oil and natural gas

8. What is produced when fossil fuels are burned?

CO2 released

9. How many parts per million has CO2 increased by in our atmosphere?

120 parts per million

10. How many degrees hotter is the world since pre-industrial times?

1°C

11. In the UK what have the chance of heatwaves increased by?

30x

12. What has happened to the frequency of extreme temperatures occurring?

It has increased

13. During last year’s heatwave, how many Australian Flying foxes were saved? How many died?

350 / Over 11000

14. How many more similar events would lead to the extinction of the flying fox?

2

15. What % of species are at risk of extinction due to climate change?

8%

16. What was the cost of the damage caused by the Californian wildfires cause in 2018?

$24 billion

17. How many people lost their lives?

106

18. How are weather systems changing as the result of climate change?

More evaporation means increase in rainfall, superstorms and flooding events.

19. What extreme event occurred in Kerala, in Indian?

Flooding

20. What is happening to Earth’s ice?

Melting

21. How much ice is being lost on the Greenland ice sheet?

4 trillion tonnes of ice

22. How much ice has Greenland lost compared to 25 years ago?

5x

23. How much ice has Antarctica lost compared to 25 years ago?

3x

24. How much warming is the ocean around Antarctica warmed by?

0.5°C

25. How long has sea level been stable for?

2000 years

26. How much has sea level risen in last 100 years?

20cm

27. Give three examples of areas affected by rising seas

South Pacific, Indonesia, Bangladesh, Louisiana (USA)

28. How much of the land at Isle de Jean Charles, Louisiana is now left?

10%

29. How has the US government supported local people in relocating from this area?

Given financial assistance (money)

30. What have the people of Isle de Jean Charles been labelled as?

The first climate change refugees in the United States

31. Where has 90% of the heat trapped in the atmosphere been stored?

In the world’s oceans

32. What proportion of the world’s coral reef has bleached and died in the last 3 years?

1/3

33. How long have scientists been predicting climate change?

30 years

34. Who played a major role in putting climate change on the international agenda?

James Hudson

35. Who campaigned to confuse the message of climate change?

Fossil fuel industry

36. What does the president of the USA think about climate change?

It’s a hoax

37. Who introduced the first legally binding target for reducing greenhouse gas emissions, The Climate Change Act, in 2008?

UK

38. What plays a key role in managing the balance of carbon dioxide in the atmosphere?

The world’s forests

39. What proportion of CO2 emissions are stored in the world’s forests?

1/3

40. How are trees like the lungs of the planet?

Absorb carbon dioxide and release oxygen

41. What provided a global perspective of the amount of deforestation occurring around the world?

US government released satellite images (Landsat)

42. What is the largest cause of deforestation?

Palm oil

43. What proportion of our carbon dioxide emissions are caused by deforestation?

1/3

44. When are we projected to reach an increase of 1.5°C in global temperature?

2040-2050

45. By the end of the century how much hotter is the Earth predicted to be?

3-6°C

46. How much is the sea level expected to rise by the end of the century?

80cm-1m sea level rise

47. What is a tipping point?

Something that will cause climate to change in an irreversible way

48. Give three examples of tipping points

* Greenland / Antarctica - melting
* Die back of the rainforest turning it into savanna
* Methane rebased from permafrost deforesting

49. How much more powerful is methane compared to CO2 as a greenhouse gas?

21 times more powerful

50. Identify the climate change agreement signed by most countries around the world in 2015

Paris Climate Agreement

51. What did the agreement seek to achieve?

* Hold temperatures below 2
* Limit warming to 1.5

52. How can we meet the these targets?

Half carbon emissions and hit 0 by 2050

53. What does energy production need to be moved to?

Renewable

54. What has happened to the cost of renewable energy recently?

Rapid decrease

55. What is the cheapest form of newly installed energy production in 60 countries?

Solar

56. What is a benefit of using nuclear energy?

Zero carbon emissions

57. What will one revolution of a wind turbine power for a day?

A house

58. What percentage of the UK’s energy comes from renewable energy?

30%

59. How can we de-carbonised transport?

Develop electric / hydrogen powered transport.

60. How are we attempting to reduce carbon emissions from aircraft?

The use of solar energy

61. How can we reduce the vast amount of carbon dioxide already in the atmosphere?

* Re-forestation (planting trees)
* Direct air capture (in the future)

62. How does direct air capture work?

Air is pumped through a filter. Carbon sticks to filters. It is then pumped, with water, into the bedrock where it solidifies and is stored.

63. What is the average person’s annual carbon footprint?

13 tonnes of carbon dioxide per year

64. What can we do to reduce our carbon footprint?

* Loft insulation
* Buying less physical products
* Buying higher quality products
* Eat everything we buy
* Avoid air freighted food
* Reduce meat and dairy consumption (especially beef and lamb)

65. How many tonnes can be lost off the average persons carbon footprint by taking the steps above?

* 2 tonnes

66. What did Greta Thunberg do to take action against climate change?

Sat outside of the Swedish parliament

67. How has Greta taking a stand influenced other students around the world?

Climate change school strikes