Climate Quiz

Climate Quiz Rules

The Climate Quiz is an easy-to-play game with question cards on climate change. The quiz questions complement the Climate Box textbook and make it easier and more fun for students to learn about climate change issue.

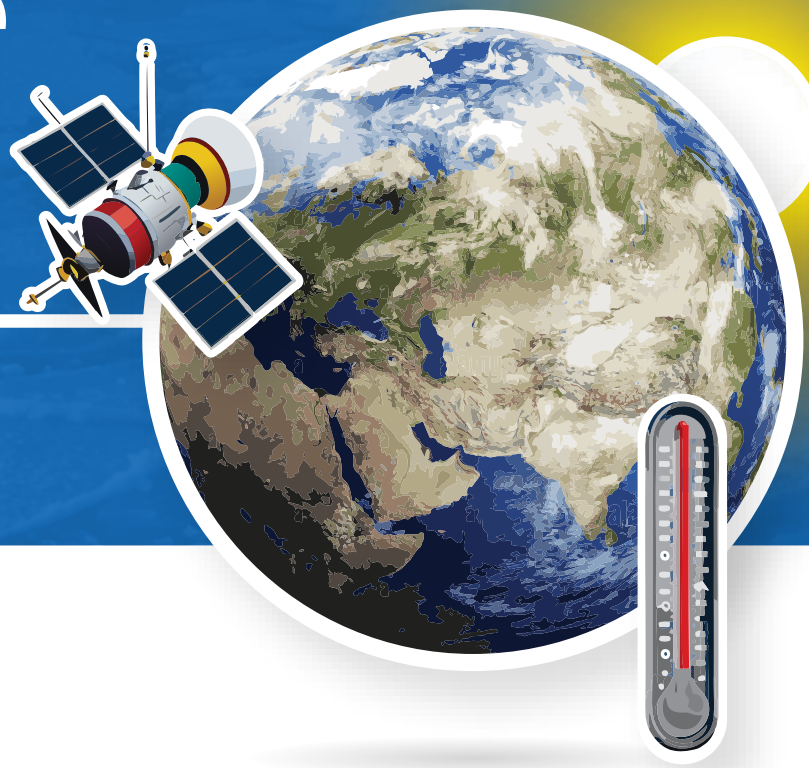
Each of the 100 cards has one question and four suggested answers, only one of which is correct. A player scores one point for each correct answer. The winner is the player who scores the most points.

The Climate Quiz questions are divided into three topics, corresponding to the three sections of the Climate Box textbook:

1. The problem of climate change
2. How climate change affects the natural world and human beings. Can we adapt to the inevitable consequences of climate change?
3. How to prevent dangerous climate change

The quizmaster can find the correct answers to the questions on a separate card entitled **'Answers'**.

The problem of climate change



1	Since the middle of the 19th century the air temperature on Earth:
A	Has not changed
B	Has fallen
C	Has risen
D	Rose sharply and then fell again

2	By how much has the temperature on Earth risen since the second half of the 19th century?
A	By 1.2°C
B	By 2°C
C	By 5°C
D	By 10°C

3	The layer of air which envelops Earth is called:
A	The hydrosphere
B	The lithosphere
C	The atmosphere
D	The cryosphere

4	Climate is:
A	The weather pattern in a particular territory over a period of many years
B	A feature of the weather specifying the frequency of precipitation
C	The state of the weather in the course of a week
D	What old people remember about weather patterns, weather lore

5 Which of these features is not relevant to climate?

A Air temperature

B The pattern of precipitation

C Dominant winds

D Longitude

6 What is the climate of Barcelona?

A Equatorial

B Temperate

C Tropical

D Sub-tropical

7	**A relatively humid climate is typical in:**
A	**Ireland**
B	**Mongolia**
C	**North Africa**
D	**Greece**

8	Which climate zone is characterized by high air temperature and much precipitation, falling evenly through the year?
A	Equatorial
B	Sub-equatorial
C	Tropical
D	Sub-tropical

9	What climate does this describe: ‘The average temperature in summer is +30°C and in winter +20°C, there is much precipitation, but most of it occurs in the summer’?
A	Equatorial
B	Sub-equatorial
C	Tropical
D	Sub-tropical

10 What air masses are present during the winter in the sub-equatorial climate zone of the northern hemisphere?

A	Arctic
B	Temperate
C	Equatorial
D	Tropical

11 What kind of air masses have high temperature and low humidity?

A Arctic

B Temperate

C Equatorial

D Tropical

12	Where was the record set for the highest-ever air temperature in the shadow on the planet (56.7°C)?
A	The Namib Desert
B	The Dead Sea
C	Death Valley
D	The Sahara Desert

13 Where is climate warming happening the fastest?

- **A** In Southern Europe
- **B** In tropical latitudes
- **C** In the Arctic
- **D** In the southern hemisphere

14 What is the name of the science that monitors, studies and forecasts the weather?

A Climatology

B Hydrology

C Glaciology

D Meteorology

15	What does paleoclimatology study?
A	Climate change that is happening today as a result of human activity
B	Climate in the past
C	Mountain climates
D	Climate in the future

16 Which of these methods do scientists use to find out about the climate on Earth hundreds of thousands of years ago?

A Study of tree rings

B Study of bubbles in Arctic ice

C Study of satellite images

D Study of meteorological data

17 When did the last glacial period come to an end?

A About 100 years ago

B About 1,000 years ago

C About 10,000 years ago

D About 100,000 years ago

18 When do scientists expect the next glacial period to begin?

A	Never
B	In 1-3 million years
C	In 10,000-30,000 years
D	In 100,000-300,000 years

19	Which of the following factors has only short-term impact on climate (a few years or decades)?
A	Continental drift
B	Volcanic eruptions
C	Change in the tilt of the Earth’s axis
D	Human emissions of greenhouse gases

20 What impact do volcanic eruptions have on climate?

A	They do not have any impact
B	They cause temperatures to rise
C	They cause temperatures to fall
D	They sometimes cause temperatures to rise and sometimes to fall

21 Which of the following is a greenhouse gas?

A Nitrogen (N_2)

B Carbon dioxide (CO_2)

C Carbon monoxide (CO)

D Oxygen (O_2)

22 Which greenhouse gas accounts for 75% of all human emissions?

A Methane (CH_4)

B Carbon dioxide (CO_2)

C Sulphur hexafluoride (SF_6)

D Nitrous oxide (N_2O)

The impacts of climate change

23 As the climate becomes warmer, the level of the world ocean:

A	Rises
B	Falls
C	Remains unchanged
D	Cannot be predicted

24 Which of these countries will suffer the most if the level of the ocean rises by more than one metre by the end of this century?

A	Bangladesh
B	Switzerland
C	Austria
D	Nepal

25 Which of these cities is not threatened by rising levels of the world ocean?

A	Bangkok
B	New Orleans
C	Shanghai
D	Vienna

26 A ‘heat wave’ in Denmark is defined as a period of at least three consecutive days in which the average maximum temperature in most of the country exceeds:

A	20°C
B	33°C
C	37°C
D	28°C

27 In which of these geographical regions are tornadoes the most frequent?

A	Central Asia
B	The Arctic
C	The west coast of Africa
D	The central and southern states of the USA

28 Which of these natural disasters are not related to climate change?

A Droughts

B Earthquakes

C Tornadoes

D Avalanches

29 Which of these houses can Eskimos not build without snow?

A	A yurt
B	An igloo
C	A tipi
D	A wigwam

30 Which of these ecosystems has the richest species diversity?

A Coral reefs

B Taiga forest

C Tropical forest

D African savanna

31 Which ecosystem is unaffected by a rise in the level and temperature of the world ocean?

A	Salt marshes
B	Coral reefs
C	Alpine meadows
D	Mangrove forests

32 You are an ecotourist if:

A You cook food on a bonfire when you are camping

B You travel to the most beautiful places on the planet

C You observe rare animals

D You minimize your impact on the natural environment while on holiday

33 The classification of protected areas by the International Union for the Conservation of Nature (IUCN) says that economic activity is not allowed in:

A Natural monuments

B Protected landscapes

C Nature reserves

D National parks

34 What is protected in a biosphere reserve?

A The whole biosphere

B Typical natural communities

C Rare animals that are hunted

D Areas of outstanding natural beauty

35 **Which country has the most forests in the world?**

A Canada

B USA

C Brazil

D Russia

36 What climate factor defines the northern boundary of boreal forests?

A Temperature

B Levels of precipitation

C Atmospheric pressure

D Cloud cover

37 What climate factor defines the southern boundary of boreal forests?

A Temperature

B Levels of precipitation

C Atmospheric pressure

D Cloud cover

38 Which of the following coniferous tree species is the most widespread in Siberia?

A	Pine
B	Fir
C	Larch
D	Cedar

39 Which of the following deciduous tree species is among the most widespread in North America?

A	Maple
B	Rowan
C	Elder
D	Willow

40 In Eastern Siberia, pine forests are advancing into steppe ecosystems because of:

A Rising temperatures

B Falling temperatures

C More precipitation

D Less precipitation

41 The absorption of carbon in young forests:

A	Is high
B	Is low
C	Does not occur
D	On the contrary, young forests emit carbon

42 In forests with many old trees, what is the ratio between the emission and absorption of carbon?

A There is more absorption than emission

B There is more emission than absorption

C Absorption is roughly equal to emission

D Old trees cannot absorb carbon

43 How do Canada's forests influence carbon levels in the atmosphere?

A	They soak up carbon dioxide
B	They are a source of carbon dioxide
C	Emission is equal to absorption
D	They have no gas exchange with the atmosphere

44 Most of the world's reserves of fresh water are concentrated in:

A Lakes

B Rivers

C Glaciers

D Underground water

45 **70% of all fresh water used by people is used for:**

A Drinking

B Cooking

C Sanitation

D Irrigation

46 Which of these regions of the world is particularly prone to drought?

A Central Africa

B South-East Asia

C Small islands of the Caribbean Sea

D Scandinavian countries

47 The main climate problem for countries of Central Asia in the next decades will be:

A Shortage of water

B Excessive damp

C Melting of permafrost

D Tropical cyclones

48 The production of which agricultural crop in South-East Asia could be significantly reduced by rising sea levels?

A	Rice
B	Wheat
C	Barley
D	Maize

49 The most obvious sign of climate change in mountain regions is:

A	The melting of glaciers
B	An increase in windy days
C	Drying up of mountain rivers
D	Reduction of precipitation

50 Which of the following authors would most likely change the title of their work if they were to write it at the end of the 21st century?

A	Robert Burns, ‘Yon Wild Mossy Mountains’
B	Thomas Mann, ‘The Magic Mountain’
C	Emily Brontë, ‘Wuthering Heights’
D	Ernest Hemingway, ‘The Snows of Kilimanjaro’

51	A landslide in the mountains is:
A	A mass of snow, which falls or slides down a slope
B	A serious flood
C	A moving mass of stones and earth
D	A hurricane wind

52 How does climate change make glacial lakes hazardous?

A	Harmful chemical compounds are formed in the water
B	The water becomes too hot due to higher air temperatures
C	Melting of glaciers raises water levels in the lakes, creating a threat of floods and landslides
D	Disease-carrying insects breed in the lakes

53 Which of these economic activities in mountain regions is least vulnerable to the impact of climate change?

A Tourism

B Mining

C Agriculture

D The production of hydroelectricity

54 How much of Russia's territory is covered by permafrost?

A	80%
B	60%
C	30%
D	20%

55 By how much has ice coverage in the Arctic shrunk in the last 40 years?

A	10%
B	20%
C	50%
D	100%

56 Which of these climate change impacts least affects people's lives and ecosystems in the Arctic?

A Stronger winds (blizzards and storms)

B Reduction in the extent and thickness of sea ice

C Long-lasting heat waves in the summer

D Melting of permafrost

57 What is a ‘heat island’?

A	An island in tropical latitudes
B	An island threatened with disappearance due to rising sea levels
C	The centre of a big city where the temperature is higher than in the suburbs
D	Part of a forest that has been burnt out in a fire

58 Which of these people will most likely be the first to lose their job as a result of climate change?

A. A banker in Singapore

B. A teacher in India

C. A farmer in Kenya

D. A fireman in Mexico

59 Who among the following could be called a climate migrant?

A. A German pensioner who moves to live by the sea in Turkey

B. A Turk who got a better job in Germany

C. A Haitian whose village is destroyed by a powerful hurricane who moves to the US

D. A farmer moving from the southern US state of Texas to the northern state of Montana because of higher wages

60 What share of the world's population lives below the poverty line?

A	50%
B	35%
C	15%
D	Less than 10%

61 In which of the following countries are personal incomes the lowest?

A	Brazil
B	Germany
C	Turkmenistan
D	Ethiopia

Mitigating the impacts of climate change

Carbon footprint

62 The main source of human greenhouse gas emissions is:

A The felling of forests

B Vehicular transport

C The production and use of energy

D Agriculture

63 Which country is the major emitter of greenhouse gases?

A USA

B China

C Russia

D Great Britain

64 Which of these energy sources is non-renewable?

A Tidal energy

B Biofuel

C Crude oil

D Solar energy

65 Which of these energy sources is not a fossil fuel?

A Uranium

B Natural gas

C Peat

D Coal

66 **Which of these energy sources is the most used in the world?**

A Natural gas

B Crude oil

C Wood

D Wind power

67 Which of these energy sources is the most climate-friendly?

A Coal

B Natural gas

C Solar energy

D Crude oil

68 Which of these energy sources emits the largest amount of greenhouse gases per unit of energy produced?

A Coal

B Solar energy

C Crude oil

D Natural gas

69 Which of these substances cannot be obtained from crude oil?

A Glass

B Rubber

C Plastic

D Gas

70 What is the difference between a combined heat and power plant (CHPP) and a thermal power plant (TPP)?

A	A CHPP heats water and a TPP generates electricity
B	A CHPP generates electricity for big cities and a TPP generates electricity for towns and villages
C	A CHPP generates electricity and heat and a TPP only generates electricity
D	A CHPP is a central distribution station, which receives energy from a network of small TPPs

71 What is the main problem with nuclear power plants?

A	They emit more carbon dioxide than other types of power plant
B	They create dangerous radioactive waste, and there is a risk of accidents with disastrous consequences
C	It is hard to find a suitable location for a plant
D	Reserves of nuclear fuel are almost exhausted

72 Offshore wind farms are built:

A On land, by the coast

B In the middle of the ocean

C In the mountains

D In the sea, not far from the coast

73 Is biomass a renewable source of energy?

A	No, because the remains of ancient organisms from deep inside the Earth's crust cannot be replaced
B	No, because its energy is converted by combustion in to electricity
C	Yes, because energy cannot be destroyed
D	Yes, because plants can grow again

74 In Brazil 1/5 of motor vehicle fuel is produced from:

A	Banana skins
B	Coffee beans
C	Sugar cane
D	Coconut oil

75 Which of these types of power plant does not use the power of water?

A An hydropower plant

B A thermal power plant

C A pumped storage power plant

D A wave power plant

76 Which of these European countries, known for volcanic activity, produces 1/3 of its electricity from geothermal power plants?

A Spain

B Italy

C Iceland

D Ireland

77 What share of all the electricity produced in the world comes from renewable sources (including hydropower)?

A Less than 5%

B 10%

C 15%

D More than 20%

78 Which country was the first to get 50% of its energy from wind farms?

A Australia

B Denmark

C USA

D Great Britain

79 Which of these cities would make the greatest use of solar power?

A Cairo

B Oslo

C London

D Moscow

80 In which country was the first tidal power station built?

A Japan

B Great Britain

C France

D USA

81 What is the meaning of the ‘Class A’ label on electric devices produced in the European Union?

A The devices were produced at energy-efficient factories

B The devices are safe to use

C The devices are very powerful

D The devices use very little energy

82 What does a thermal camera measure?

A	Heat loss from the pipes of residential and public buildings
B	Heat distribution on any surface, such as the walls of a building
C	Carbon dioxide emissions from industrial enterprises
D	The amount of heat used to keep a building warm

83 Which of these actions to maintain the temperature inside a building is not environmentally friendly?

A Use of electric heaters

B Use of heat reflectors behind radiators

C Insulation of the front door

D Sealing cracks in the window frames

84 Why is it better to use LED bulbs, although they are more expensive than energy-efficient fluorescent bulbs?

A	They have more varied designs, making them suitable for different sorts of lamps
B	They can be disposed of together with general rubbish (they do not require special processing)
C	They do not contain potentially dangerous mercury, they last longer, and they use less energy
D	They are unbreakable, since they are made from particularly strong plastic

85 What is the meaning of ‘carbon footprint’?

A Carbon dioxide emissions from all industrial enterprises

B Total reserves of carbon in the Earth’s forests

C Total emissions (direct or indirect) of all greenhouse gases by a person, an organization, an event, a product, a city or a country

D Reserves of carbon that are transformed into carbon dioxide when crude oil and natural gas are burnt to obtain electricity

86 **What is CO_2 equivalent used to calculate?**

A	Tot al carbon dioxide emitted into the atmosphere by several similar enterprises or organizations
B	Savings on fuel consumption to heat buildings
C	The amount of CO_2 absorbed by a plant over its life
D	The volume of all greenhouse gases emitted from any activity, expressed in terms of CO_2 for ease of measurement and understanding

87 What is the best way to find out the energy efficiency of a home appliance?

A Its energy-efficiency label

B Readings on the electricity meter

C Life expectancy of the appliance

D The material the appliance is made of

88 How can a person or a company compensate for their carbon footprint?

A By choosing new energy-efficient devices

B By switching off devices and lights when they are not being used

C By reducing the number of lights

D By planting trees

89 Which type of transport emits the largest quantity of greenhouse gases?

A Railway

B Ship

C Bicycle

D Road vehicle

90 What is a carpool?

A. A new type of vehicle powered by a solar battery

B. Taking passengers on car journeys

C. An environmental standard for vehicle engines

D. Special parking for electric vehicles

91 Which of these ways of getting around a city is the most climate-friendly?

A Public transport, such as buses

B Private transport with low fuel consumption

C Bicycle

D Carpool (several people using one car to get to the same place, for instance to work)

92 An active building is a building where:

A No energy is used

B Energy is produced

C Everything is managed by a computer system

D The residents are environmental activists

93 In northern countries a passive building is a building which:

A	Does not use energy
B	Is very well insulated and loses almost no energy
C	Does not meet building standards
D	Is not computer controlled

94 Most of the heat loss from a building is through the:

A Floor

B Windows

C Walls

D Ceiling

95 Which of these types of rubbish takes the longest to decompose?

A Paper

B Food waste

C Plastic

D Steel

96 What bag should you take shopping to reduce your carbon footprint?

A Don’t take a bag – use a disposable one from the shop

B Your own plastic bag

C Your own paper bag

D Your own canvas or cotton bag

97 Which of these products bought by your family has the smallest carbon footprint?

A Local products

B Products brought from some other region of your country

C Products brought from neighbouring countries

D Exotic products from distant countries

98 Which of these will make a saucepan energy efficient?

A	The saucepan bottom should be concave
B	The top should be on
C	The bottom should be smaller than the burner
D	The saucepan should always be open

99 Which country was the first to build an active house?

A China

B Denmark

C Spain

D USA

100 In which country was the Kyoto Protocol signed?

A	USA
B	Japan
C	Germany
D	France

Climate Quiz

Answers

Climate Quiz Answers

1. C	14. D	27. D	40. C	53. B	66. B	79. A	92. B
2. A	15. B	28. B	41. A	54. B	67. C	80. C	93. B
3. C	16. B	29. B	42. C	55. B	68. A	81. D	94. B
4. A	17. C	30. C	43. A	56. C	69. A	82. B	95. C
5. D	18. C	31. C	44. C	57. C	70. C	83. A	96. D
6. D	19. B	32. D	45. D	58. C	71. B	84. C	97. A
7. A	20. C	33. C	46. A	59. C	72. D	85. C	98. B
8. A	21. B	34. B	47. A	60. B	73. D	86. D	99. B
9. B	22. B	35. D	48. A	61. D	74. C	87. A	100. B
10. D	23. A	36. A	49. A	62. C	75. B	88. D	
11. D	24. A	37. B	50. D	63. B	76. C	89. D	
12. C	25. D	38. C	51. C	64. C	77. D	90. B	
13. C	26. D	39. A	52. C	65. A	78. B	91. C	