

A satellite image of a tropical cyclone, showing a large, dark, circular eye surrounded by a dense, swirling cloud structure. The image is taken from a high altitude, looking down at the storm. The background shows the Earth's surface with various cloud patterns and the horizon line.

Weather Hazards & Climate Change

Multiple choice knowledge checker

1.	What is a natural hazard?	
<input type="radio"/>	A.	An extreme hazard caused by human activity.
<input type="radio"/>	B.	An extreme natural event that threatens people or has the potential to cause damage, destruction and death.
<input type="radio"/>	C.	A hazard caused by climate change.
<input type="radio"/>	D.	A hazard resulting from the movement of tectonic plates.

2.	What helps explain the location of world climate zones and the distribution of weather hazards?	
<input type="radio"/>	A.	Global atmospheric circulation
<input type="radio"/>	B.	The Hadley Cell
<input type="radio"/>	C.	Low pressure systems
<input type="radio"/>	D.	Tropical storms

3.	<p>True or false?</p> <p>When the Sun's rays strike the Earth, they are concentrated differently on areas of the land depending on latitude. At the Equator the Sun's rays are concentrated so it is much hotter than at the Poles where they are more spread out</p>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

4.	<p>Air at the Equator is heated strongly so it rises, creating low pressure conditions. The air then flows north and south high in the atmosphere, then sinks as it cools. Which convection cell is responsible for this?</p>	
<input type="radio"/>	A.	Polar Cell
<input type="radio"/>	B.	Ferrel Cell
<input type="radio"/>	C.	Hadley Cell
<input type="radio"/>	D.	Pressure Cell

5.	<p>True or false?</p> <p>As air rises at the Equator it cools, condenses and brings cloud and rain.</p>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

6.	Air sinks at 30 degrees north and south of the Equator. What kind of pressure does this bring?	
<input type="radio"/>	A.	High pressure
<input type="radio"/>	B.	Low pressure

7.	What kind of weather is associated with sinking air 30 degrees north and south of the Equator?	
<input type="radio"/>	A.	Cloudy skies
<input type="radio"/>	B.	Cloudy skies and heavy rain
<input type="radio"/>	C.	Clear, dry skies
<input type="radio"/>	D.	Thunderstorms

8.	From the equator, moving north, identify the correct order of the three convection cells	
<input type="radio"/>	A.	Polar, Ferrel then Hadley Cell
<input type="radio"/>	B.	Ferrel, Polar then Hadley Cell
<input type="radio"/>	C.	Hadley, Ferrel then Polar Cell
<input type="radio"/>	D.	Ferrel, Hadley and Polar Cell

9.	True or false? Winds on the surface of the Earth are caused as air moves from high to low pressure areas in the convection cells.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

10.	On the surface of the Earth, winds bend as the Earth spins. What is this effect known as?	
<input type="radio"/>	A.	Coriolis effect
<input type="radio"/>	B.	Cirrus effect
<input type="radio"/>	C.	Gravity effect
<input type="radio"/>	D.	Trade winds

11.	<p>True or false?</p> <p>Surface winds bend to the right in the northern hemisphere and to the left in the southern hemisphere.</p>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

12.	<p>True or false?</p> <p>Tropical storms occur between 5 and 30 degree north and south of the Equator.</p>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

13.	True or false? Tropical storms occur between 5 and 30 degrees north and south of the Equator because due to areas of intense high pressure.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

14.	When are hurricanes most likely to occur in the Atlantic Ocean?	
<input type="radio"/>	A.	August to October
<input type="radio"/>	B.	January to March
<input type="radio"/>	C.	June to August
<input type="radio"/>	D.	November to January

15.	What are tropical storms that move north in the Indian Ocean known as?	
<input type="radio"/>	A.	Hurricanes
<input type="radio"/>	B.	Typhoons
<input type="radio"/>	C.	Cyclones
<input type="radio"/>	D.	Willy-willies

16.	What temperature does the ocean need to be for a tropical storm to form?	
<input type="radio"/>	A.	25°C
<input type="radio"/>	B.	26°C
<input type="radio"/>	C.	27°C
<input type="radio"/>	D.	28°C

17.	True or false? Tropical storms occur when air pressure is high.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

18.	Wind within a tropical storm is constant and doesn't vary with height so clouds rise to high altitudes without being torn apart. What is this better known as?	
<input type="radio"/>	A.	Low wind shearing
<input type="radio"/>	B.	Low wind shear
<input type="radio"/>	C.	Coriolis effect
<input type="radio"/>	D.	Low pressure

19.	What is the centre of a tropical storm known as?	
<input type="radio"/>	A.	Eye
<input type="radio"/>	B.	Nose
<input type="radio"/>	C.	Mouth
<input type="radio"/>	D.	Centre

20.	What is the name of the clouds that form at the centre of a tropical storm?	
<input type="radio"/>	A.	Stratus
<input type="radio"/>	B.	Cirrus
<input type="radio"/>	C.	Nimbus
<input type="radio"/>	D.	Cumulonimbus

21.	When does a tropical storm lose its energy?	
<input type="radio"/>	A.	When air temperatures increase.
<input type="radio"/>	B.	When the tropical storm makes landfall.
<input type="radio"/>	C.	When oceanic temperatures increase.
<input type="radio"/>	D.	When wind speeds increase.

22.	Identify the direction tropical storms spin in the northern hemisphere.	
<input type="radio"/>	A.	Clockwise
<input type="radio"/>	B.	Anti-clockwise

23.	True or false? A cross section of a tropical storm is symmetrical in shape.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

24.	Identify the conditions associated with the eye of a tropical storm.	
<input type="radio"/>	A.	Calm, temperatures are warmer, no wind or rain.
<input type="radio"/>	B.	Calm, temperatures are colder, no wind or rain.
<input type="radio"/>	C.	Temperatures are warmer, strong wind and rain.
<input type="radio"/>	D.	Temperatures are colder, strong wind and rain.

25.	Which of the following can be caused by a tropical storm?	
<input type="radio"/>	A.	Tsunami
<input type="radio"/>	B.	Storm surge
<input type="radio"/>	C.	Earthquake
<input type="radio"/>	D.	Drought

26.	True or false? Climate change is likely to have an impact on tropical storms.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

27.	Which of the following are expected to be impacts of climate change on tropical storms?	
<input type="radio"/>	A.	There may be more tropical storms in areas such as the South Atlantic and parts of the sub-tropics.
<input type="radio"/>	B.	The frequency of tropical storm is likely to increase.
<input type="radio"/>	C.	The frequency of category 4 and 5 storms is likely to increase.
<input type="radio"/>	D.	Tropical storms are expected to become more intense.

28.	Which of the following are primary effects of Typhoon Haiyan?	
<input type="radio"/>	A.	50% of houses destroyed.
<input type="radio"/>	B.	6,190 people died.
<input type="radio"/>	C.	4.1 million people were made homeless.
<input type="radio"/>	D.	Infection and diseases spread.

29.	Which of the following is not a primary, social impact of Typhoon Haiyan?	
<input type="radio"/>	A.	50% of houses destroyed.
<input type="radio"/>	B.	6,190 people died.
<input type="radio"/>	C.	4.1 million people were made homeless.
<input type="radio"/>	D.	US\$12 billion of damage

30.	Which of the following is not an example of a primary, economic impact of Typhoon Haiyan?	
<input type="radio"/>	A.	The UN stated 75% of farmers and fishermen lost their income.
<input type="radio"/>	B.	Damage to rice cost US\$53 million.
<input type="radio"/>	C.	Looting was rife, due to a lack of food and supplies.
<input type="radio"/>	D.	US\$12 billion of damage.

31.	Which of the following is not an example of a primary, environmental impact of Typhoon Haiyan?	
<input type="radio"/>	A.	An oil barge ran aground resulting in a 800,000 oil spill.
<input type="radio"/>	B.	400mm of rainfall caused flooding.
<input type="radio"/>	C.	1.1 million tonnes of crops were destroyed.
<input type="radio"/>	D.	Flooding caused landslides.

32.	Identify the secondary, social impact of Typhoon Haiyan.	
<input type="radio"/>	A.	Infection and disease spread due to contaminated surface and ground water.
<input type="radio"/>	B.	The fishing industry was disrupted due to oil leaks contaminating fishing waters.
<input type="radio"/>	C.	Flooding caused landslides.
<input type="radio"/>	D.	The airport was damaged and roads were blocked.

33.	Identify the secondary, economic impact of Typhoon Haiyan.	
<input type="radio"/>	A.	Infection and disease spread due to contaminated surface and ground water.
<input type="radio"/>	B.	The fishing industry was disrupted due to oil leaks contaminating fishing waters.
<input type="radio"/>	C.	Flooding caused landslides.
<input type="radio"/>	D.	Eight people died in a stampede for rice.

34.	Identify the secondary, environmental impact of Typhoon Haiyan.	
<input type="radio"/>	A.	Infection and disease spread due to contaminated surface and ground water.
<input type="radio"/>	B.	The fishing industry was disrupted due to oil leaks contaminating fishing waters.
<input type="radio"/>	C.	Flooding caused landslides.
<input type="radio"/>	D.	Eight people died in a stampede for rice.

35.	True or false? Immediate responses to a disaster occur during and immediately after the event. Long-term responses occur in the following weeks, months and years.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

36.	Which of the following is not an example of an immediate response to Typhoon Haiyan?	
<input type="radio"/>	A.	The government televised a warning for people to prepare and evacuate.

<input type="radio"/>	B.	Over 1,200 evacuation centres were set up.
<input type="radio"/>	C.	To reduce looting the government imposed a curfew two days after the typhoon.
<input type="radio"/>	D.	Oxfam replaced fishing boats.

37.	Which of the following is not an example of a long-term response to Typhoon Haiyan?	
<input type="radio"/>	A.	Mangroves were replanted.
<input type="radio"/>	B.	A no-build zone was established close to the coast.
<input type="radio"/>	C.	Emergency aid supplies arrived by plane three days after the typhoon.
<input type="radio"/>	D.	A cash for work programme paid people to clear debris and rebuild properties.

38.	Which of the following is not a way the effects of tropical storms can be reduced?	
<input type="radio"/>	A.	Monitoring
<input type="radio"/>	B.	Prediction
<input type="radio"/>	C.	Protection
<input type="radio"/>	D.	Probation
<input type="radio"/>	E.	Planning

39.	What is the use of satellites to seek cloud patterns associated with tropical storms an example of?	
<input type="radio"/>	A.	Monitoring
<input type="radio"/>	B.	Prediction
<input type="radio"/>	C.	Planning
<input type="radio"/>	D.	Protection

40.	What is the reinforcement of buildings to reduce the impacts of tropical storms an example of?	
<input type="radio"/>	A.	Monitoring
<input type="radio"/>	B.	Prediction
<input type="radio"/>	C.	Planning
<input type="radio"/>	D.	Protection

41.	Early warnings, issued by national hurricane centres is an example of what?	
<input type="radio"/>	A.	Monitoring
<input type="radio"/>	B.	Prediction
<input type="radio"/>	C.	Planning
<input type="radio"/>	D.	Protection

42.	Preparing disaster supply kits in the event of a tropical storm is known as what?	
<input type="radio"/>	A.	Monitoring
<input type="radio"/>	B.	Prediction
<input type="radio"/>	C.	Planning
<input type="radio"/>	D.	Protection

43.	True or false? An extreme weather event is where the weather is severe or out of season and different to the usual pattern.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

44.	Which of the following is not an example of extreme weather experienced in the UK?	
<input type="radio"/>	A.	Storm Events
<input type="radio"/>	B.	Flooding
<input type="radio"/>	C.	Droughts and heatwaves
<input type="radio"/>	D.	Extremes of cold weather
<input type="radio"/>	E.	Typhoons

45.	True or false? Air masses affect the type of weather the UK experiences.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

46.	Identify the type of pressure system that brings strong winds and rain to the UK.	
<input type="radio"/>	A.	High pressure
<input type="radio"/>	B.	Low pressure

47.	Which of the following is not a cause of flooding in the UK?	
<input type="radio"/>	A.	Tsunami
<input type="radio"/>	B.	Storm surge
<input type="radio"/>	C.	Prolonged rainfall
<input type="radio"/>	D.	Torrential rainfall

48.	Which of the following is the correct definition of a drought in the UK?	
<input type="radio"/>	A.	10 or more consecutive days with less than 0.2mm on any one day.
<input type="radio"/>	B.	15 or more consecutive days with less than 0.2mm on any one day.
<input type="radio"/>	C.	20 or more consecutive days with less than 0.2mm on any one day.

49.	Which of the following is not an example of a potential impact of a storm event?	
<input type="radio"/>	A.	Death
<input type="radio"/>	B.	Downed power supplies
<input type="radio"/>	C.	Roads can melt and railways can buckle
<input type="radio"/>	D.	Disruption to transport

50.	Which of the following is not an example of a potential impact of a flood event?	
<input type="radio"/>	A.	Crops ruined
<input type="radio"/>	B.	Death by drowning
<input type="radio"/>	C.	Landslides
<input type="radio"/>	D.	Increased risk of falling in the snow

51.	Which of the following is not an example of a potential impact of a drought and heatwave?	
<input type="radio"/>	A.	Reservoirs run low
<input type="radio"/>	B.	Death by drowning
<input type="radio"/>	C.	Railway lines can buckle
<input type="radio"/>	D.	Elderly vulnerable to heat exhaustion

52.	Which of the following is not an example of a potential impact of extreme cold weather?	
<input type="radio"/>	A.	Increased injuries caused by people falling.
<input type="radio"/>	B.	Storm surge
<input type="radio"/>	C.	Roads, railways and airlines shut.
<input type="radio"/>	D.	Crops fail and cattle may not survive.

53.	Which type of extreme weather event was the Beast from the east?	
<input type="radio"/>	A.	Storm Event
<input type="radio"/>	B.	Flooding
<input type="radio"/>	C.	Drought/heatwave
<input type="radio"/>	D.	Extreme cold weather

54.	Which air mass was responsible for bringing the Beast from the East to the UK?	
<input type="radio"/>	A.	Tropical continental
<input type="radio"/>	B.	Arctic Maritime
<input type="radio"/>	C.	Polar Maritime
<input type="radio"/>	D.	Polar Continental

55.	Over which sea did the Beast from the East pick up water that resulted in heavy snowfall over the UK?	
<input type="radio"/>	A.	Irish Sea
<input type="radio"/>	B.	North Sea
<input type="radio"/>	C.	English Channel
<input type="radio"/>	D.	Norwegian Sea

56.	Which of the following is not an example of a social impact of the Beast from the East?	
<input type="radio"/>	A.	10 people died
<input type="radio"/>	B.	Hundreds of schools were forced to close
<input type="radio"/>	C.	Many rail services were cancelled
<input type="radio"/>	D.	There was a shortage of food in some supermarkets

57.	Which of the following is an example of a primary impact of the Beast from the East?	
<input type="radio"/>	A.	10 people died
<input type="radio"/>	B.	Hundreds of schools were forced to close
<input type="radio"/>	C.	The National Grid issued a 'gas deficit warning' prompting fears of a shortage, but households were reassured domestic supplies would not be affected.
<input type="radio"/>	D.	There was a shortage of food in some supermarkets.

58.	Which of the following is not a response to the Beast from the East?	
<input type="radio"/>	A.	Flood warnings were issued by the Environment Agency for parts of Cornwall's south coast.
<input type="radio"/>	B.	The Royal Air Force was drafted in to help relief efforts in snow-hit Lincolnshire. Ten RAF vehicles and their crews transported doctors and stranded patients after local police admitted they were struggling to cope.
<input type="radio"/>	C.	High on the Pennines on the M62, the military was called in to help rescue vehicles.
<input type="radio"/>	D.	Drifting snow led to the isolation of a number of villages

59.	True or false? The frequency of extreme weather events in the UK is increasing.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

60.	Since the 1980s what has happened to temperatures in the UK?	
<input type="radio"/>	A.	Stayed the same
<input type="radio"/>	B.	Increased by around 1°C
<input type="radio"/>	C.	Increased by around 2°C
<input type="radio"/>	D.	Decreased by around 1°C

61.	What has happened to winter rainfall in the UK since the 1980s?	
<input type="radio"/>	A.	Remained the same
<input type="radio"/>	B.	Increased
<input type="radio"/>	C.	Decreased

62.	True or false? There have been more weather records broken recently than ever before.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

63.	True or false? The UK experienced its highest recorded temperature in 2019.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

64.	Which of the following is not an example of a future prediction for UK weather?	
<input type="radio"/>	A.	Precipitation is expected to become even more seasonal.
<input type="radio"/>	B.	Some rivers are expected to flood more frequently in winter due to increased rainfall.
<input type="radio"/>	C.	Air temperature is expected to increase, causing more drought.
<input type="radio"/>	D.	Precipitation is expected to become less seasonal.

65.	True or false? Climate change cannot be responsible for individual extreme weather events.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

66.	True or false? Scientists suggest that the increasing frequency of extreme weather events can be blamed on climate change.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

67.	True or false? The increase in the temperature of the Atlantic Ocean may simply be a long-term cycle or due to the position of the jet stream and not climate change.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

Causes and Effects of Climate Change

68.	True or false? There has been an unprecedented increase in global temperature since the 1970s.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

69.	An increase in greenhouse gasses in the atmosphere has what impact?	
<input type="radio"/>	A.	Less infrared radiation reflected from the surface of the Earth can escape the enhanced greenhouse gases leading to an increase in temperature.
<input type="radio"/>	B.	More shortwave radiation from the sun can pass through the atmosphere leading to an increase in global temperatures.

70.	Which of the following is not an example of a natural cause of climate change?	
<input type="radio"/>	A.	Orbital changes
<input type="radio"/>	B.	Solar output
<input type="radio"/>	C.	Agriculture
<input type="radio"/>	D.	Volcanic activity

71.	Which of the following is not an example of a human cause of climate change?	
<input type="radio"/>	A.	Fossil fuels
<input type="radio"/>	B.	Solar output
<input type="radio"/>	C.	Deforestation
<input type="radio"/>	D.	Agriculture

72.	Which of the following is not an example of evidence for climate change?	
<input type="radio"/>	A.	An increase in average surface air temperature by 1°C over the last 100 years.
<input type="radio"/>	B.	Average precipitation has increased by 3000mm per year.
<input type="radio"/>	C.	The warmest ocean temperatures since 1850.
<input type="radio"/>	D.	Sea levels have risen by 19cm since 1900.

73.	Which of the following is not an example of a natural recorder of climate change?	
<input type="radio"/>	A.	Tree rings
<input type="radio"/>	B.	Ice Cores
<input type="radio"/>	C.	Igneous rock cores
<input type="radio"/>	D.	Ocean sediment

74.	True or false? The Quaternary period has over twenty cycles of cold glacial periods, and warmer glacial periods.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

75.	Identify the social effects of climate change. You can select more than one.	
<input type="radio"/>	A.	Increased risk of diseases and skin cancer.
<input type="radio"/>	B.	Milder winters will lead to fewer winter-related deaths.
<input type="radio"/>	C.	Flood risks increases insurance costs.
<input type="radio"/>	D.	Sea-level rise will increase flooding and coastal erosion.

76.	Identify the environmental effects of climate change. You can select more than one.	
<input type="radio"/>	A.	Increased droughts in the Mediterranean area.
<input type="radio"/>	B.	Declining fishing in the Lower Mekong delta.
<input type="radio"/>	C.	Ice melts, so wildlife declines in places such as the Arctic.
<input type="radio"/>	D.	Increase in forest growth in northern Europe.

77.	Reducing or preventing the effects of climate change is known as what?	
<input type="radio"/>	A.	Adaptation
<input type="radio"/>	B.	Mitigation
<input type="radio"/>	C.	Migration
<input type="radio"/>	D.	Prediction

78.	Identify the examples of climate mitigation listed below.	
<input type="radio"/>	A.	Alternative energy production
<input type="radio"/>	B.	Carbon capture
<input type="radio"/>	C.	Managing water supplies
<input type="radio"/>	D.	International agreements

79.	True or false? Climate adaptation does not involve reducing or stopping global warming. Instead it involves responding to climate change by limiting its negative effects.	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

80.	Constructing flood defences such as the Thames barrier is an example of which type of adaptation strategy?	
<input type="radio"/>	A.	Changes in agricultural systems
<input type="radio"/>	B.	Managing water supplies
<input type="radio"/>	C.	Reducing risk

91.	Which type of volcanic eruption risk management involves educating people about avoiding injury and loss of life?	
<input type="radio"/>	A.	Prediction and monitoring
<input type="radio"/>	B.	Protection
<input type="radio"/>	C.	Planning

Answers

1 – B	26 – A	54 – D
2 – A	27 – A, C and D	55 – B
3 – A	28 – A, B and C	56 – C
4 – C	29 – D	57 – A
5 – A	30 – C	58 – D
6 – A	31 – D	59 – A
7 – C	32 – A	60 – B
8 – C	33 – B	61 – B
9 – A	34 – C	62 – A
10 – A	35 – A	63 – A
11 – A	36 – D	64 – D
12 – A	37 – C	65 – A
13 – B (it is due to low pressure in this area)	38 – D	66 – A
14 – A	39 – A	67 – A
15 – C	40 – D	68 – A
16 – C	41 – B	69 – A
17 – B	42 – C	70 – C
18 – B	43 – A	71 – B
19 – A	44 – E	72 – B
20 – D	45 – A	73 – C
21 – B	46 – B	74 – A
22 – B	47 – A	75 – A, B and C
23 – A	48 – B	76 – A, C and D
24 – A	49 – C	77 – A
25 – B	50 – D	78 – A, B and D
	51 – B	79 – A
	52 – B	80 – C
	53 – D	