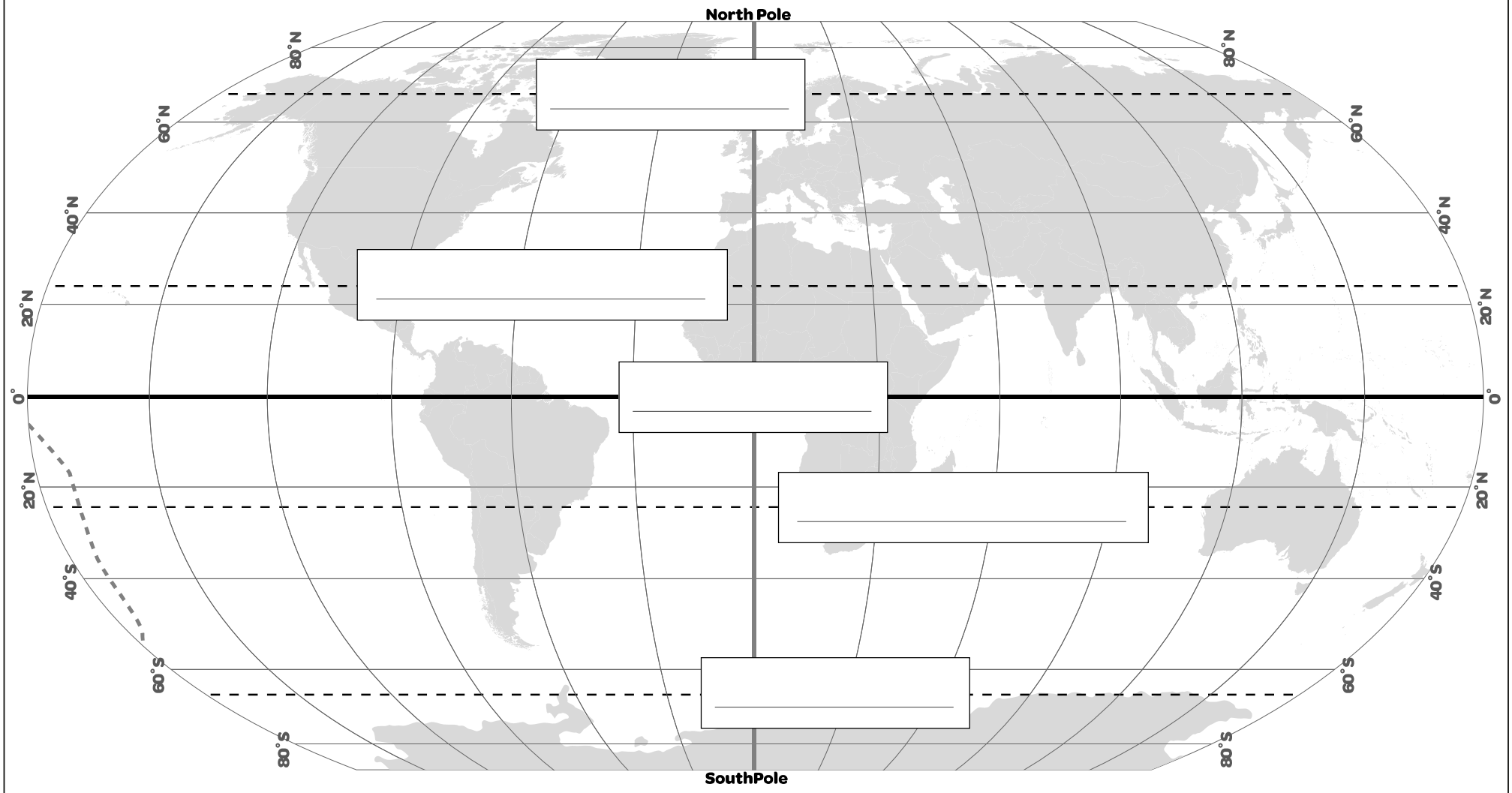
Lines of latitude



1. Label the following 5 features on your map: Antarctic Circle, Arctic Circle, Equator, Tropic of Cancer, Tropic of Capricorn
2. On which line of latitude are you most likely to:

   Find a tropical rainforest? _____ See a polar bear? _____

   Spot a penguin? _____ Ride a camel? _____

Lines of latitude

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Find a tropical rainforest?_____ See a polar bear?_____

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3. Match up these broken sentences so that they make sense. Use lines to link them.

The Arctic Circle	is the most southerly of the five major circles of latitude.
The Antarctic Circle	divides the world into the Northern and Southern Hemispheres.
The Tropic of Cancer	is the most southerly point where the sun can be directly overhead.
The Tropic of Capricorn	passes through Europe, Asia and North America.
The Equator	passes close to the city of Kolkata, in the west of India.

Lines of latitude

1. Label the following 5 features on your map:

Antarctic Circle: 66°33'N, Arctic Circle: 66°33'S, Equator: 0°N, Tropic of Cancer: 23°26N, Tropic of Capricorn: 23°26S

2. On which line of latitude are you most likely to:

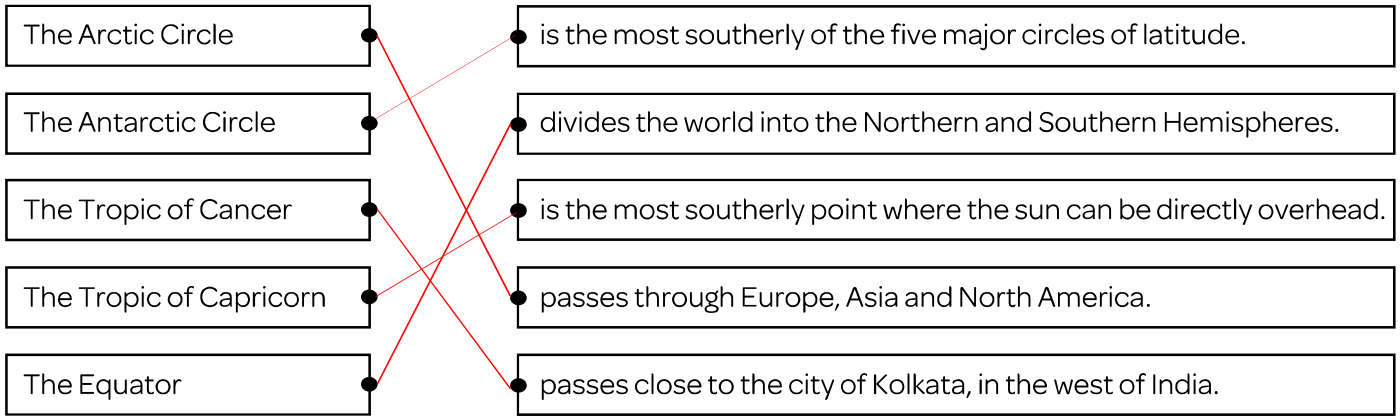
Find a tropical rainforest? Equator matches 'most likely to'; small patches of rainforest linked to Tropic of Cancer and Capricorn

See a polar bear? Arctic Circle

Spot a penguin? Antarctic Circle, Equator (Galapagos) and the Tropic of Capricorn (South Americaand Africa)

Ride a camel? Tropic of Cancer or Tropic of Capricorn – both cross desert regions

3. Match up these broken sentences so that they make sense. Use lines to link them.



Characteristics of Different Climate Zones

Identify each climate zone using the description and photograph.

Climate Zone	Description	Photograph
	Very dry: less than 250mm of rain in desert regions Temperatures peak in summer months at 40°C or more! Temperatures can drop 20°C between midday and midnight	
	High temperatures all year round Wet, wet, wet! Rainfall totals 2000mm a year Two seasons: wet and dry (or drier!)	
	Four seasons No extremes of temperature – it's tepid Year-round rainfall: summer may be the wettest season	
	Short winter days, and the midnight sun in summer Sub-zero temperatures for seven months of the year No wetter than the temperate zone, maybe drier	
	Intense sunshine ripens citrus fruits here Take a siesta in summer months to cope with the heat Plentiful winter rain makes up for very dry summer months	

Climate Zone:

Go to **www.oddizzi.com – Explore the World – Weather and Climate – Climate** to find information.

Where?	What is it like?
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
Seasons	**Across the day**
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

What's good about the climate?

.....

.....

.....

.....

Any problems?

.....

.....

.....

.....

FACT-FILE HURRICANES

What is a hurricane?

A hurricane is a violent tropical storm, with very strong winds and heavy rain. Hurricanes can be up to 600 miles wide. Winds can reach speeds of 200 miles per hour (mph), causing huge damage.

Hurricanes are violent, swirling storms

Why do hurricanes happen?

In summer or autumn, warm ocean air rises quickly. Other air is sucked in to take its place; this rises too, forming clouds. The clouds begin to spin as the earth does, creating a swirling storm. If there is enough warm water to power the storm, it strengthens into a hurricane.

What damage do hurricanes cause?

Hurricane winds are strong enough to knock down trees, buildings and power lines. Cars and boats can be tipped over and people injured or killed.

Hurricanes whip up huge waves and blow them ashore, in 'storm surges'. The waves can wash away buildings and flood homes and roads. The water may reach several miles inland.

How are hurricanes measured?

Scientists use satellites to work out the strength of the winds and rain. They also send aircraft into hurricanes to measure them.

Winds are measured by the Saffir-Simpson scale, which puts hurricanes into five categories. Category 5 is the strongest, with winds of 157 mph or higher.

Hurricanes change their strength all the time. When they move over land, they lose power, because they have no warm water beneath them to use for energy.

Did you know?

Hurricanes have a calm, clear centre, called the 'eye'. Around this eye is the 'eye wall', which is the most violent part of the hurricane.

Why do hurricanes have names?

Scientists give storms names so that they can track them easily. Harvey, Irma, Jose, Katia – notice anything? Tropical storms are named in alphabetical order! Boys' names and girls' names are used in turn.

Typhoons, cyclones and hurricanes – are they the same thing?

Yes, they are! They're all tropical storms – but they have different names, depending where in the world they form.

Hurricanes develop over the North Atlantic and north-east Pacific oceans. Typhoons are formed over the north-west Pacific ocean.

Cyclones come from the South Pacific and Indian oceans – they 'spin' the other way to hurricanes and typhoons.

Hurricanes Harvey and Irma

Key facts

In late August 2017, Hurricane Harvey hit Texas and Louisiana in the USA. A week later, Hurricane Irma reached the Caribbean islands, moving on to Cuba and Florida.

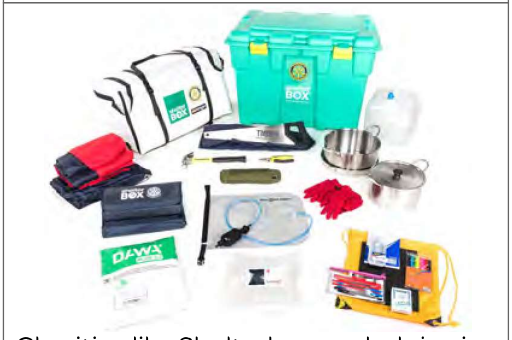
Harvey was a Category 4 hurricane, with winds of 130 mph. It was one of the wettest hurricanes ever: in some parts of Texas, a year's worth of rain fell in less than a week.

Irma was even more powerful – and very large. Some reports said it was the size of France! At its strongest, Irma's winds reached 185 mph. This was a Category 5 hurricane and the second strongest storm ever recorded in this area.

The swirling clouds of Irma - reported to be the size of France!

Roads turned into rivers after Hurricane Harvey

Category 5 storms cause severe damage



Charities like Shelterbox are helping in the area

Did you know?

Hurricane Allen, in 1980, was even stronger than Irma. It brought winds of 190 mph!

Preparing for the storms

Weather scientists predicted the path the hurricanes would take and gave people plenty of warning. Shops and homes were boarded up and schools closed. People stocked up on food, water and medicine. Many people were ordered to 'evacuate' (leave the area) or stayed in special emergency shelters. In Florida, Disney World closed.

Some people refused to leave their homes. They wanted to protect their property themselves.

Widespread damage

Hurricane Harvey flooded hundreds of thousands of homes. Around 30,000 people in Texas had to leave their houses. Over 70 people were killed.

Irma caused even worse damage. Violent winds blew down houses, hospitals and power lines. Storm surges flooded roads. People were left without electricity, phone lines or drinking water. On the island of Barbuda, almost every building was destroyed.

A 'state of emergency' was declared in a number of countries. This meant that governments stopped their usual business and concentrated on sorting out the problems.

Cleaning up – what's the cost?

Hurricanes Harvey and Irma caused billions of dollars of damage.

Governments sent help to the countries affected and charities provided money and equipment. The charity Shelterbox sent emergency Shelterkits to the Caribbean, with tools to help people rebuild their homes.

Key Words: **typhoon** **cyclone** **tropical storm** **satellite** **Caribbean** **evacuate** **state of emergency**

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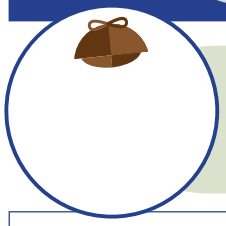
Key Words: **typhoon** **cyclone** **tropical storm** **flood** **Caribbean** **damage** **state of emergency**

YOUR MISSION: **Hurricanes**

NAME:



1. Draw yourself in the circle to become a detective!
2. Answer the questions below to complete your mission.

A. Tick 'true' or 'false' for the statements below.

Statements	True	False
1. Hurricanes can be up to 600 miles wide.		
2. Hurricanes are measured on the Richter scale.		
3. Hurricanes are given names.		

B. Circle the correct answer.

4. Hurricanes have a calm centre called the...
   a. eye
   b. knee
   c. mouth

5. Hurricanes develop over the...
   a. Indian Ocean
   b. North Atlantic and north-east Pacific oceans
   c. Arctic Ocean

6. Hurricanes lose power when they...
   a. move over the sea
   b. move over people
   c. move over land

C. Draw three ways people can prepare for a storm in a town or city.

D. Name three types of damage caused by Hurricane Irma.

OBSERVER ODD'S MISSION: **Hurricanes**

NAME:

Observer Odd needs your help!

His mission is to write a report on the facts presented in the *Hurricanes* text. Answer the questions below in full sentences so that he can use the information in his report.

1. What is the difference between a typhoon, cyclone and hurricane?

2. Why are hurricanes given names?

3. How are hurricanes measured?

4. What causes a hurricane?

5. What does a state of emergency mean?

GO ONLINE: Find out more about powerful hurricanes by visiting oddizzi.com – weather and climate – extreme weather – earthquakes.

INPSECTOR IZZI'S MISSION: **Hurricanes**

NAME:

Inspector Izzi has a new job and needs a hand!

Her task is to write a detailed analysis of the *Hurricanes* text.

6. How do people prepare themselves for a storm?

7. What caused parts of Texas to flood?

8. Make a list of things you would like to receive in a parcel of aid, after a hurricane.

9. What effect do you think a hurricane has on the local economy?

EXTRA MISSIONS:

1. Draft and design a 'Safety Poster' that clearly shows what to do before a hurricane hits.
2. Role-play a debate among a ShelterBox team: what will you include in a box for hurricane victims?
3. Write a letter to ShelterBox to thank them for all the work they do. Try to include examples and explain why ShelterBox is important.

YOUR MISSION: **Hurricanes**

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Violent winds blew down houses, hospitals and power lines. Storm surges flooded roads. Access to electricity and drinking water was affected .

ODDIZZI

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Warm ocean air rises quickly and is replaced by other air. This rises to form clouds. The clouds spin and cause a swirling storm.

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The government stops its usual business and concentrates on sorting out the problems.

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Many people evacuate the area. Shops and homes are boarded up and people stock up on food,water and medicine.

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Hurricane Harvey was one of the wettest hurricanes ever. A year's worth of rain fell in less than a week. Town, cities and roads were flooded.

8. Make a list of things you would like to receive in a parcel of aid, after a hurricane.

Answers will vary

9. What effect do you think a hurricane has on the local economy?

Shops and restaurants etc are likely to have suffered damage; it will take a while before they can open again.

If people have evacuated the area, businesses will suffer from a lack of customers.

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