

# Summer Term Geography Y7

## Week 3 and 4

You need to complete the tasks set on the grid in the next half term.

Do not send the whole Powerpoint back just the slide with the relevant questions/tasks or copy tasks to a word document.

Click on the task you want to do and it will then give you the instructions.



Creativity



Time



Work



Thinking

H = High

M = Medium

L = Low

Information  
box

Task Box

Complete this weeks Documentary by answering the questions attached with this Powerpoint.

**Finished Task**  
**return to**  
**tasks**

Choose your tasks...

You need to complete two of the following to undertake in the next two weeks, decide which ones and click on the box below to go to the task.

**Some of these activities can be done with family**

### Build a Weather Station

This will be a homework that will last 6 weeks or longer as it will take a little time to build the station. If you choose this you will only need to do one other task each fortnight.



Computer and internet not required but can be used to help with instructions



M/L



H



L



M

### Pole to Pole

Trek from the top to the bottom of the World sending back postcards/emails/Vlog or zoom meeting from places that you visit



Computer and internet is essential as you will need to carry out a virtual holiday



M



M



M



L

### Create a Movie

Stocksbridge Oscars are up for grabs as you produce a film showing the formation of a landscape feature with informative annotations



Computer and internet are not needed but could be useful but you will need a camera (phone)



M



M



M



H

# Build your own weather station

Learning intent: how weather is observed and recorded.

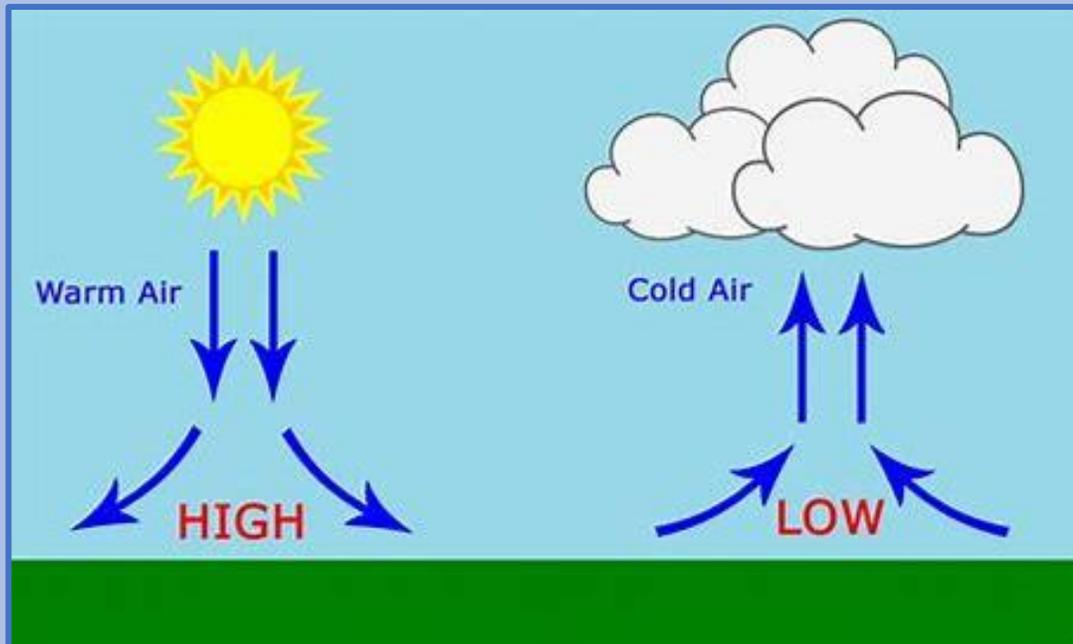
Know how the weather changes.

Know why the weather changes.

Success criteria: record and predict the weather correctly

This homework will count as one of your two week homework choices or the next 4 to 6 weeks. Remember to keep your weather records. So now you have 1 week to make, 2 weeks to record and 1 week to review. Enjoy

# What are you doing?



All you need to know about weather is the diagram opposite.

## High pressure

- Cold air is heavy so it sinks. As it gets closer to the earth it warms and water/clouds are evaporated giving clear skies and sunshine.

## Low pressure

- Air that warms gets lighter and rises so it cools, condenses (forms clouds) and it rains.

If its cloudy its low, if its blue its high. If it's getting cloudier it might rain soon.

**Weather forecasting sorted**

# What are you doing

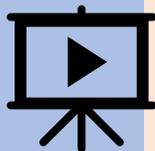


- You need to complete the building of the weather station by following the instructions on next slides. If you are unable to make one or two instruments just record the ones you can.
- Record the weather twice a day. It should be the same time everyday if possible. **KEEP THESE RECORDS AS YOU WILL NEED THEM LATER.**
- Look at the pressure (tells what weather is coming) and the wind speed (tells you how fast its coming) and try to predict what the weather will be when you record next.

# Barometer

**Function:** This instrument shows how the pressure is changing. If the water or the indicator goes up then the weather should be getting dryer and the wind should drop. If it falls then the weather should get wetter and windier.

Click on Icon to get video instructions



## Method 1 Water Barometer

You will need :

A clear straw or tube  
a clear glass bottle smaller than the straw  
Food colouring  
Water  
Selotape  
Blu tac or plastercine

Stick the straw to the inside side of your jar leaving a small gap at the bottom. Then fill the jar a third full with water and a little food colouring. BE CAREFUL- suck the coloured water half way up the straw and tightly squeeze the top of the straw just below your lip. The water should stay half way up, if so block the top of the straw with blu tac/plastercine before you stop squeezing with your fingers. Mark on the height of the water in the straw on the side of the jar and mark it 0- then higher above it Lower below the 0. Placing white paper behind the jar makes the writing easier to see

## Method 2 Balloon Barometer

You will need:

A glass jar, not plastic.  
A balloon  
A rubber band  
Some form of gel such as vaseline  
A straw, pencil, lolly stick etc  
A sheet of paper.

Cut the neck off the balloon. If possible put a small amount of gel on the top of the jar to help seal the join before stretching the balloon over the top of the jar and securing with a tight elastic band around the neck of the jar. The balloon should now look like a drum over the top of the jar. Place the end of the indicator on the centre of the balloon top and secure with selotape. Place the sheet of paper behind the jar and mark on where the indicator is pointing. H above, L below



# Anemometer

**Function:** This instrument shows the exact speed of the wind. You will require a degree in electronics or engineering to make one. Therefore we are going to use the old fashioned Beaufort scale.

Devised by Admiral Beaufort to help sailors with their sails. All you will need to do is judge what the wind is doing according to the pictures

You may want to print this off to make life easier

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

# Wind Vane

**Function:** This instrument shows the direction of the wind. This is important as it tells us what weather the wind is bringing.

If you do not have a compass to align your vane make sure at 12 midday your South mark points to the sun

## Method Wind Vane

You will need:

plastic container/bottle with lid

Water or sand

Straw or rod

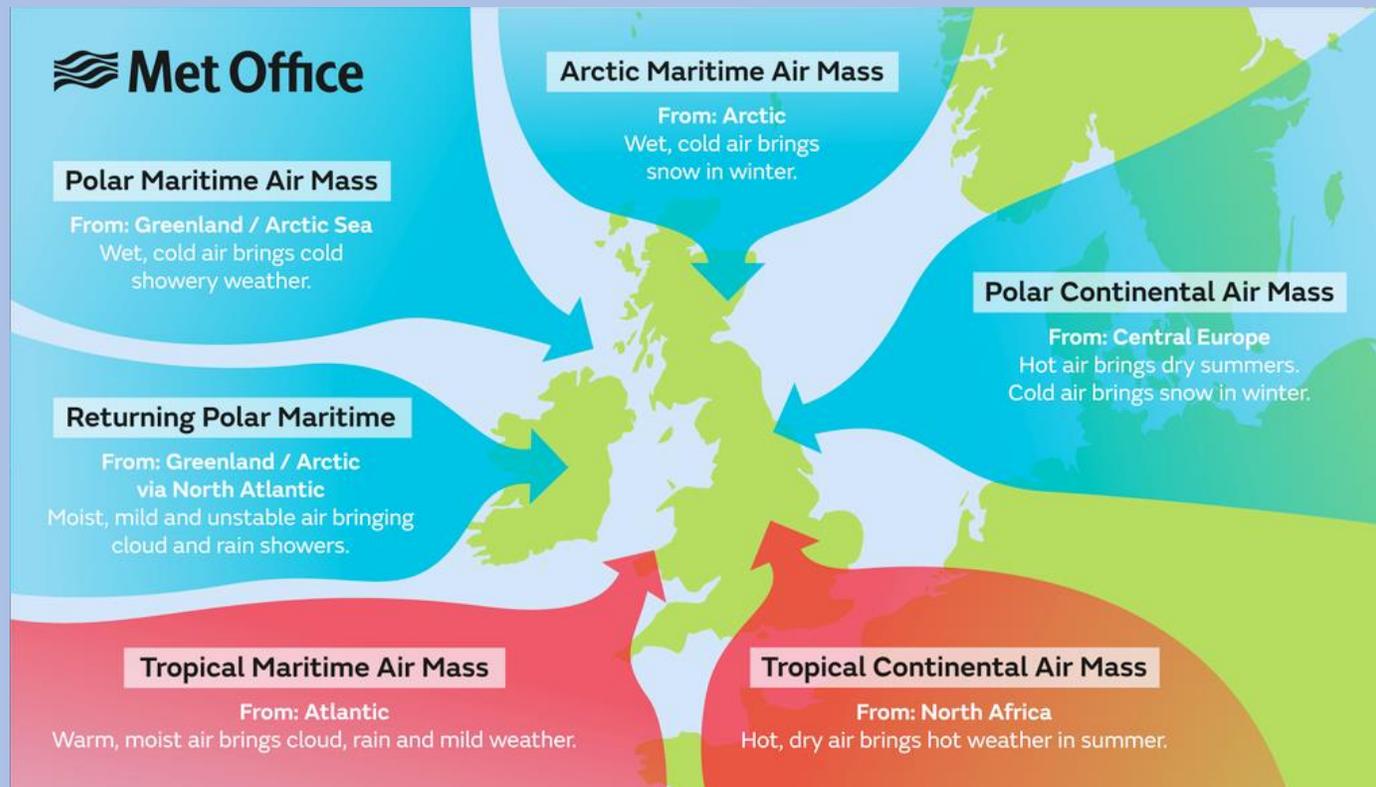
Card

Sellotape

Drawing pin stapler or equivalent

Place some water or sand in the bottom of a container to weigh the vane down otherwise it will blow over. Draw two large identical arrows on the card, big enough so they catch the wind, and cut them out. Place the top of the straw, pole or rod between the arrows and then sellotape or glue the arrows together. You should now have an arrow on top of a stick.

Make a small hole in centre of the lid so the straw can go through (You will need adult help with this bit) Place the stick through a hole in the centre of the jar lid and screw lid on. Mark on North South East and West Place outside somewhere windy. Facing the right direction



# Cloud height and Cover

**Function:** Cloud height and cover tells us about pressure. The lower and thicker the cloud the lower the pressure. There where 8 levels of cloud (cloud 9 is heaven) and the cloud level is divided into eighths (Oktas)

You will use the easier modern 3 levels of cloud, High, Middle and Low. Make a judgment on how high the clouds are and how much the cloud is covered – you have to use the okta symbols opposite

Level	Genera	Polar region	Temperate region	Tropical region
High	Cirrus Cirrocumulus Cirrostratus	3 – 8 km (10 000 – 25 000 ft)	5 – 13 km (16 500 – 45 000 ft)	6 – 18 km (20 000 – 60 000 ft)
Middle	Alto cumulus Altostratus Nimbostratus	2 – 4 km (6 500 – 13 000 ft)	2 – 7 km (6 500 – 23 000 ft)	2 – 8 km (6 500 – 25 000 ft)
Low	Stratus Stratocumulus Cumulus Cumulonimbus	From the Earth's surface to 2 km (0 – 6 500ft)	From the Earth's surface to 2 km (0 – 6 500ft)	From the Earth's surface to 2 km (0 – 6 500ft)

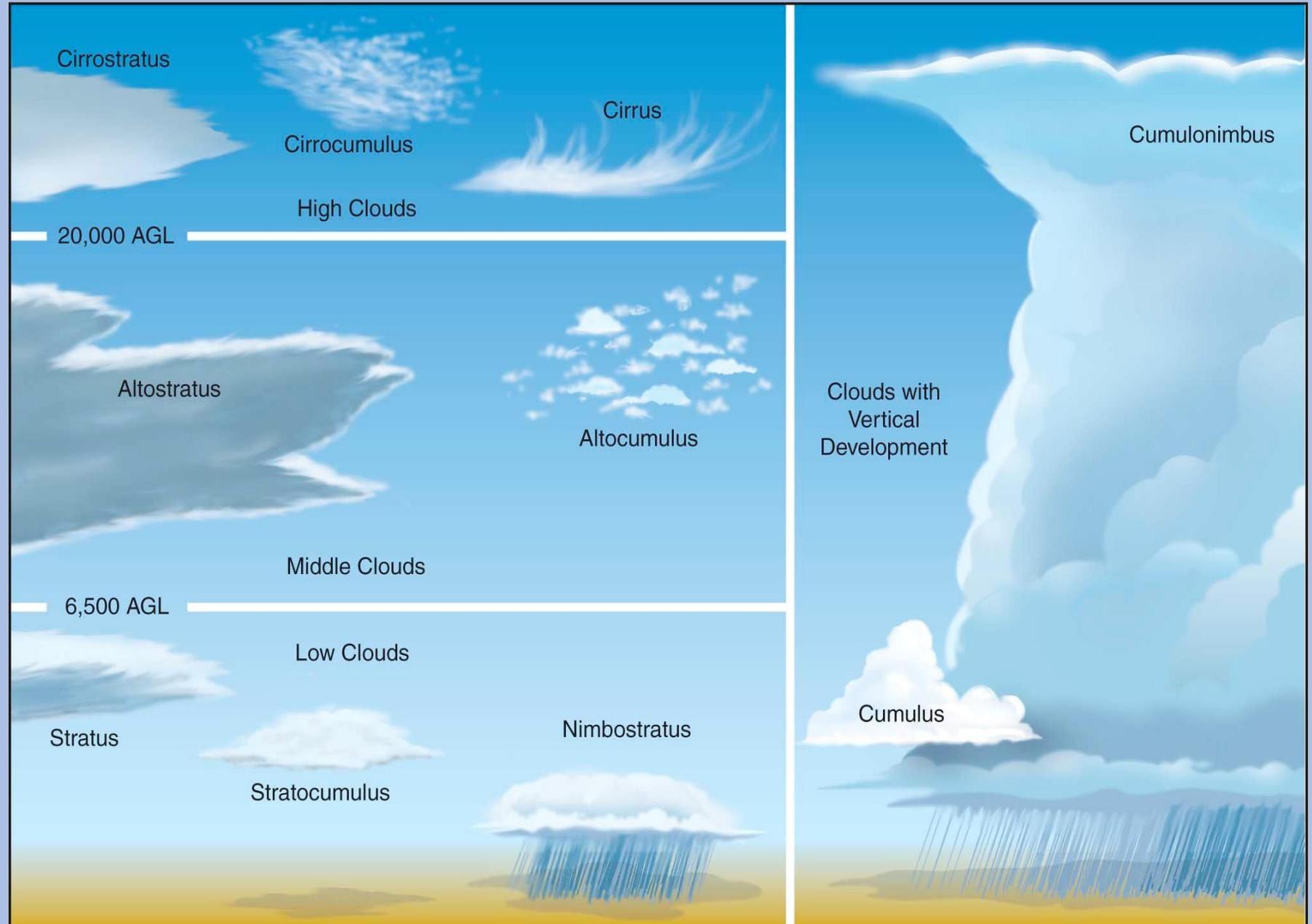
	Symbol		Symbol
Clear sky	○	5/8 covered	⊖
covered 1/8 or less, but not zero	⊙	6/8 covered	⦿
2/8 covered	◐	7/8 covered	◑
3/8 covered	◒	sky completely covered	●
4/8 covered	◓	sky obscured, e.g. by fog	⊗

# Cloud type

**Function:** it may not seem important but the type of cloud can tell you what weather is coming. High clouds like cirrus tell you poorer weather is coming. Nimbus clouds means rain

Look up at the clouds and record the type of cloud along with height and Oktas,

You may want to print off the clouds to help.



# Temperature

**Function: Temperature is recorded in a Stevenson screen, a wooden box that allows air to breeze through. The thermometer needs to record air temperature and not the direct sunshine or ground temp. That's why the screen has to be over a metre above the ground.**

If you do have a thermometer place it somewhere shady (but not too dark) or in a box with holes places around the outside. Make sure its outside your house.



# Rain gauge

**Function:** This instrument shows how the pressure is changing. If the water or the indicator goes up then the weather should be getting dryer and the wind should drop. If it falls then the weather should get wetter and windier.

Once you have recorded the rainfall figure (if you have any) empty the gauge.



## Method

You will need:

A plastic bottle

**A sharp knife(Bread)**

Cutting the bottle should be done by an adult with sharp knife or saw

Cut the neck off the bottle 2 cm below the point where the bottle starts to slope to the top.

Turn the top upside down and place it into the top of the bottle and wedge it in, this stops evaporation.

Mark along the side of the bottle the height as shown on photo.

Place the bottle outside into the ground by about 10 cm. This will stop the bottle blowing over but not too deep as water will bounce off the ground and into the gauge.

# Weather observation

Fill in the sheet twice a day. Write down the date and time and a brief description of the weather at the time. Fill in the recordings for each observation.

On the reverse of the sheet make a prediction

1. Will it be drier or wetter?
2. How much rain?
3. Will it be warmer?
4. Will it be windier?

You can you check forecast on apps such as Weather Underground that gives a lot of data.

Date 21/6/20

Time 8:45am

General weather description

Slight wind cold but dry with little cloud.

Observation	Recording
Temperature	16 C
Rainfall	0mm
Wind speed	3- 6 miles per hour
Wind direction	NE
Pressure	higher
Cloud type	Cumulus
Cloud height	middle
Cloud cover	4/8 

# Weather forecast for one day

Forecast for

Today the pressure will **fall/rise**

This will lead to **more/less** clouds

This means the weather will be  
**sunny/cloudy/rainy**

Temperature will be **cold/mild/  
warm/hot**

Rainfall will **heavy/slight/dry**

Forecast for

Today the pressure will **fall/rise**

This will lead to **more/less** clouds

This means the weather will be  
**sunny/cloudy/rainy**

Temperature will be **cold/mild/  
warm/hot**

Rainfall will **heavy/slight/dry**

# Weather recording for one day

Date	Observation	Recording
Time	Temperature	
General weather description	Rainfall	
	Wind speed	
	Wind direction	
	Pressure	
	Cloud type	
	Cloud height	
	Cloud cover	

Date	Observation	Recording
Time	Temperature	
General weather description	Rainfall	
	Wind speed	
	Wind direction	
	Pressure	
	Cloud type	
	Cloud height	
	Cloud cover	

**Finished Task**  
**return to**  
**tasks**

# Pole to Pole

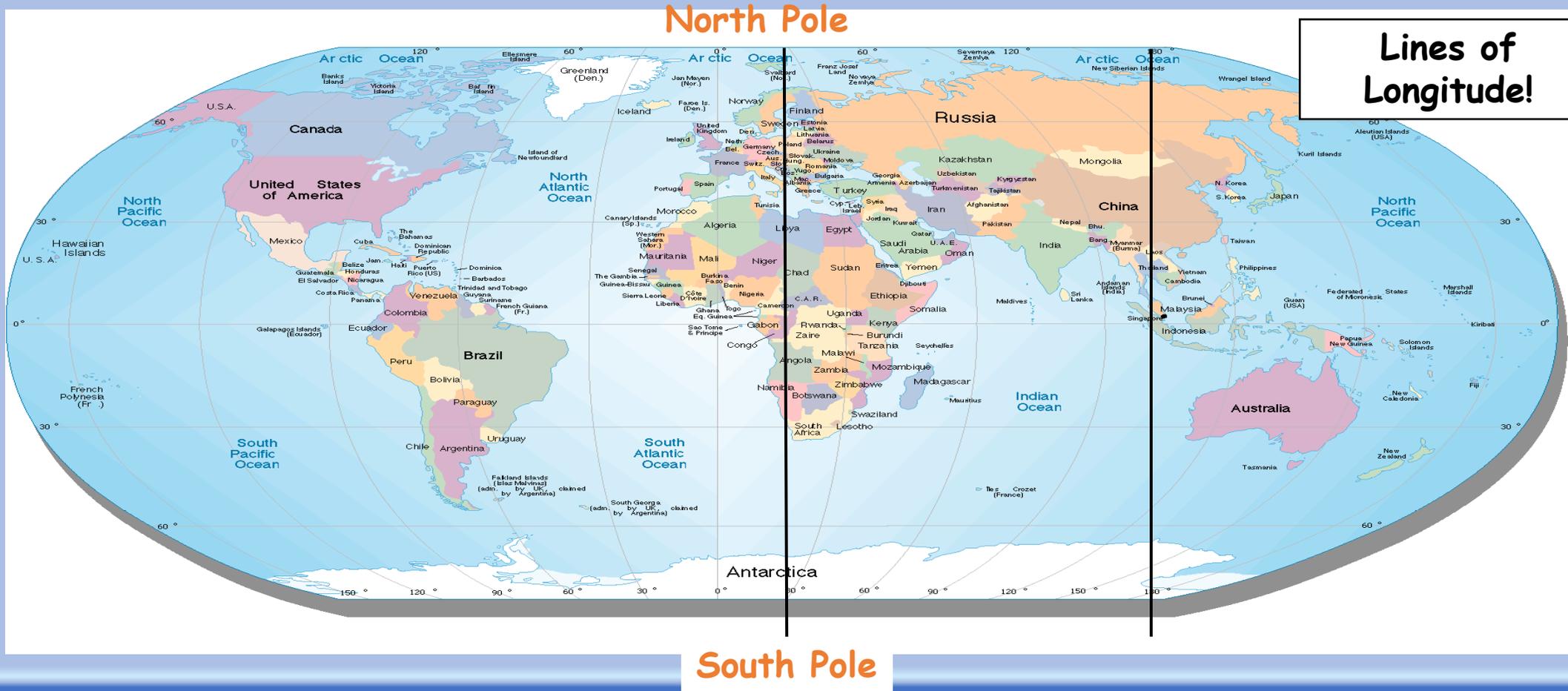
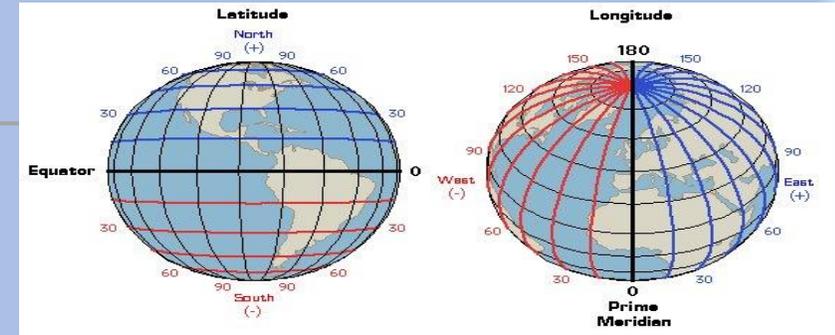
**Learning Intent: To find out about the difference in countries along one line of longitude**

**Success criteria: 3 postcards or 3 diary entries describing what you would see and experience in each country.**

# Introducing Pole to Pole project

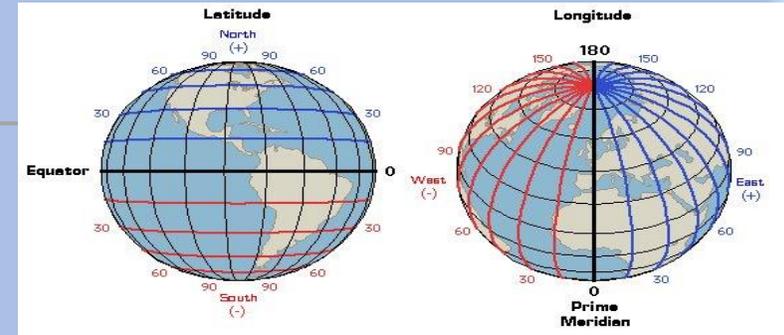
- studying fantastic places across the globe.

Which lines do you think we are going to use in our Pole to Pole project?



# Introducing Pole to Pole project

- *studying fantastic places across the globe.*



**Line 1) 20° E**

Countries along this line:

**20 degrees E**

Sweden

Hungary

Libya

South Africa

**Line 2) 120 ° E**

Countries along this line:

**120 degrees E**

Russia

China

Philippines

Australia

**Line 3) Choose your own**

Countries along this line:

Find 4 countries along your chosen line of longitude.

**Choose your line of longitude!**



You can use either of the templates on the next slides to help you.

**P**= Point  
**E**= Evidence  
**E**= Explain  
**O**= Opinions  
**E**= Explain Opinions

## Pole to Pole - Y7 Assessed Home Learning piece

Imagine you are making a journey from the North Pole to the South Pole. You have to choose a line of longitude to travel along. It must be a line that travels through at least 3 countries.

Use the internet to find out about the countries you will be travelling through. You could also find out information from the internet, books or even use your own experiences on holiday.

### Options for layout:

- You could write a diary;
- You could even send home a postcard from each country;
- You could even write Emails sent from Internet Cafes on your route.

You must save, download and use a template on the next slides

### You must include:

- A map of your route and perhaps maps of the countries you visited.
- A geographical description of where these places are.
- You must then write about your journey, about the famous places you saw (PEE), the environment (weather, rivers and mountains), the culture (PE), the adventures you had.
- You can add what people would think about the places you visit.

This project can be done on paper and photographed or done on computer:

You will be levelled/ graded on your map skills, the research you have done, the information you found out, your understanding of how life is different in other countries and your use of PEEOE.

Have a good trip!

**Title of your country**

**Information about famous places in  
your country**

**Information about the capital city**



**Highlight the country on your map**

**Information about the weather,  
rivers and mountains**



**Information about the culture  
(people)**

## Title of your country

Information about your country

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Information about the capital city

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**Finished Task**  
return to  
tasks

Photograph of famous place



Information about the weather, rivers and mountains

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Information about the culture (people)

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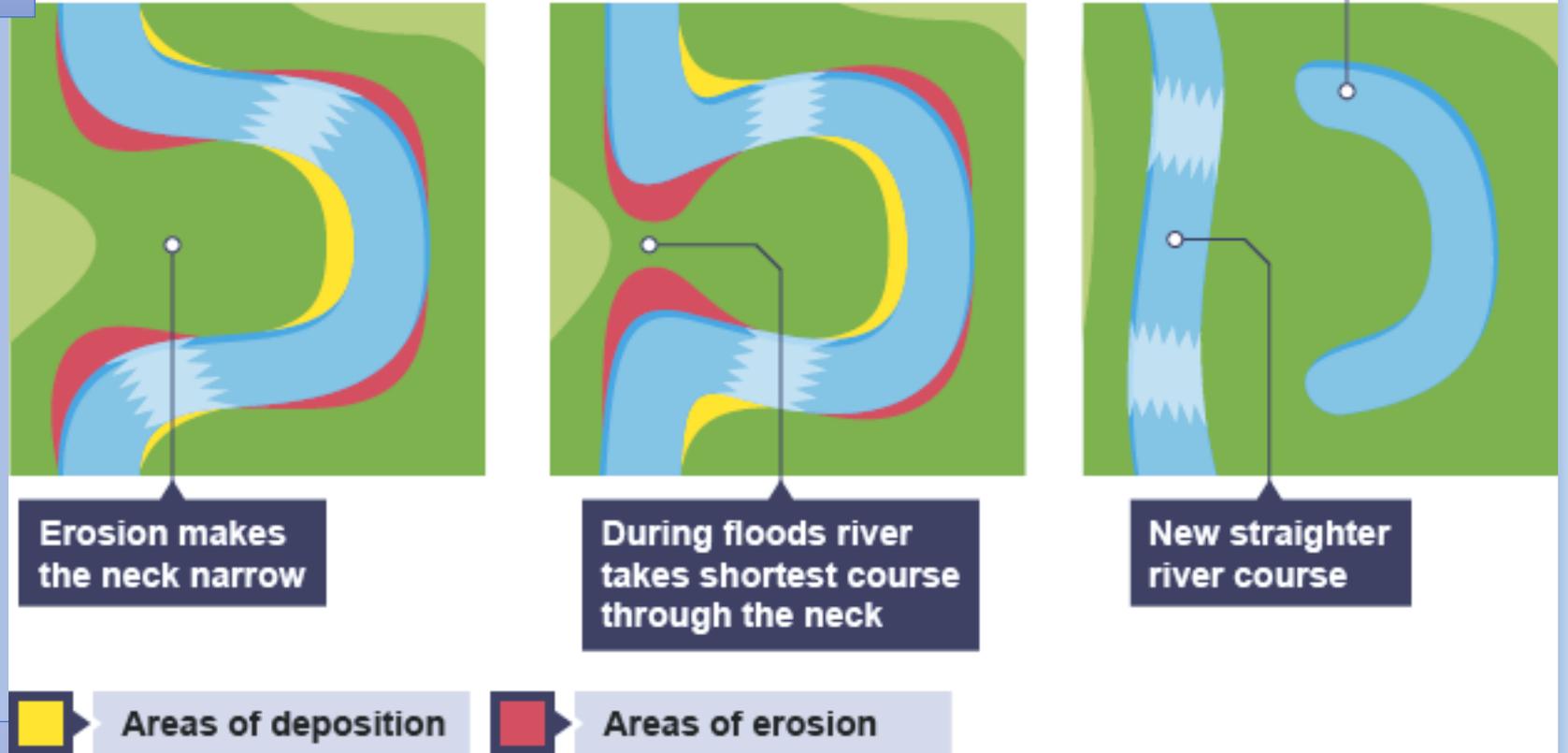
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# Create a movie

**Learning Intent: To revisit and enforce learning Plate tectonics**  
**Success criteria: a movie showing how plates and volcanoes are formed**

## How a river bends



### Types of erosion

Hydraulic action - the force of the water wears away the river bank from underneath

Attrition - rocks being carried by the river smash together and break into smaller particles. Over time, they become smaller and eventually reduced to fine particles called silt

Abrasion - stones that the river is carrying bump into the banks and wear them away

# Choose your movie

You can use a computer program including PowerPoint, you can use Stop Motion, a flip book or just a film on camera/phone.

**Either**

**How are meanders formed**

Create a film to show:

- Using labels/explanations show how river bends move.
- Show how rivers deposit on the slip off slope
- Show how they erode on the outside bend-river cliff
- If you can finish with an Ox Bow lake being formed

**Or**

**How rocks are Eroded**

Create a short film to show how rocks can be broken down by:

- Attrition
- Abrasion
- Hydraulic Action

You can use things found in your house to help explain each of these.

**Finished Task return to tasks**

Now end us the movie so we can watch your masterpiece