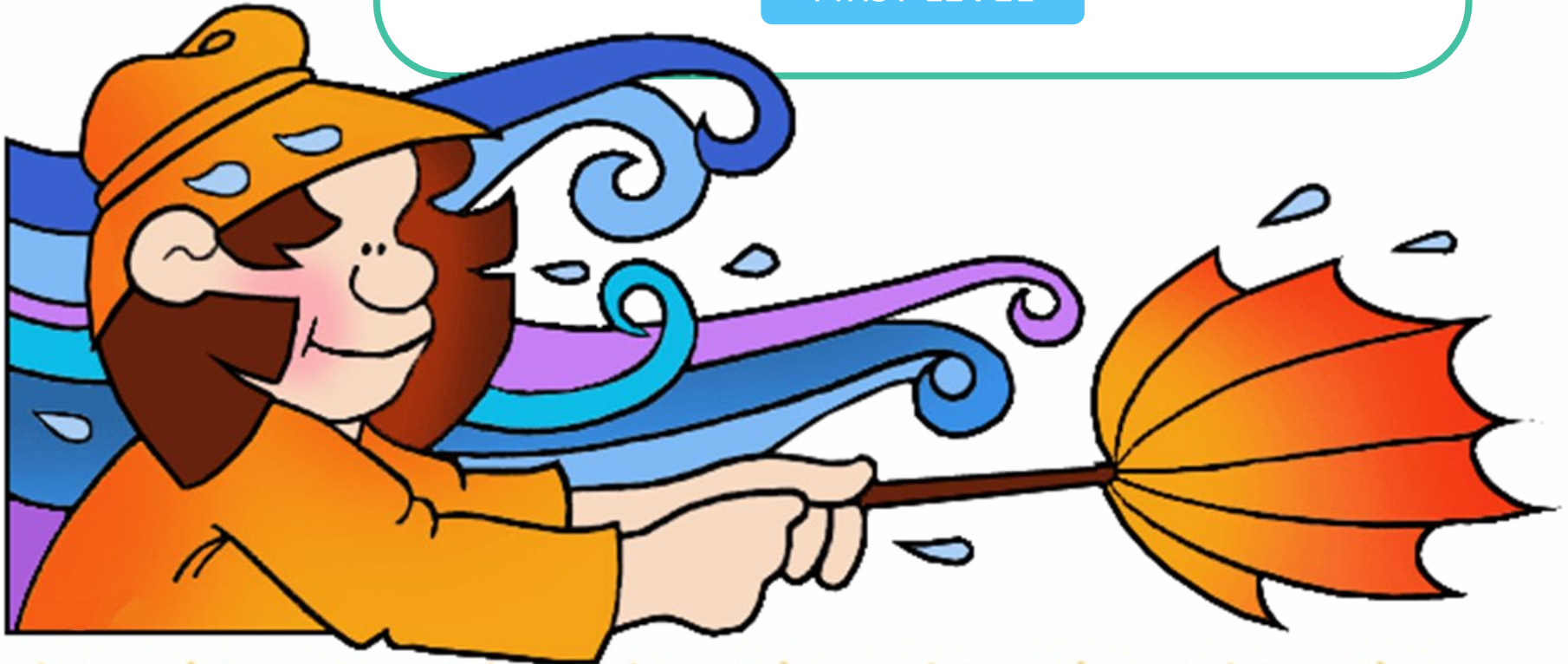




climate zones

SOCIAL STUDIES TOPIC

FIRST LEVEL



CONTENTS

Outcomes

PACE Planner

Introductory Lesson

PART ONE

Weather and Climate

PART TWO

Polar Zone

PART THREE

Temperate Zone

PART FOUR

Tropical Zone

BLURB

Find out about the climate zones of the world. Discover the freezing weather, nature and landscape of the polar zone. Explore the temperate zone and find out about the weather, nature and landscape. Learn about the varying climates of the tropical zone and the impact of rain on the landscape and living things.

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OUTCOMES

TOPIC OR THEME	LEVEL	CURRICULUM AREA	TEACHERS
CLIMATE ZONES	1 st	Social Studies	

CURRICULUM FOR EXCELLENCE OUTCOMES

ART AND DESIGN

I have the opportunity to choose and explore a range of media and technologies to create images and objects, discovering their effects and suitability for specific tasks.

EXA 1-02a

I can create a range of visual information through observing and recording from my experiences across the curriculum.

EXA 1-04a

Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through activities within art and design.

EXA 1-05a



HEALTH AND WELLBEING

I make full use of and value the opportunities I am given to improve and manage my learning and, in turn, I can help to encourage learning and confidence in others.

HWB 1-11a

I value the opportunities I am given to make friends and be part of a group in a range of situations.

HWB 1-14a

Through taking part in a variety of events and activities, I am learning to recognise my own skills and abilities as well as those of others.

HWB 1-19a

I can describe some of the kinds of work that people do and I am finding out about the wider world of work.

HWB 1-20a

LITERACY

When I engage with others, I know when and how to listen, when to talk, how much to say, when to ask questions and how to respond with respect.

LIT 1-02a

I can select ideas and relevant information, organise these in a logical sequence and use words which will be interesting and/or useful for others.

LIT 1-06a

When listening and talking with others for different purposes, I can exchange information, experiences, explanations, ideas and opinions, and clarify points by asking questions or by asking others to say more.

LIT 1-09a



LITERACY

I can communicate clearly when engaging with others within and beyond my place of learning, using selected resources as required.

LIT 1-10a

Using what I know about the features of different types of texts, I can find, select, sort and use information for a specific purpose.

LIT 1-14a

I am learning to make notes under given headings and use them to understand information, explore ideas and problems and create new texts.

LIT 1-15a

Throughout the writing process, I can check that my writing makes sense.

LIT 1-23a

I can present my writing in a way that will make it legible and attractive for my reader, combining words, images and other features.

LIT 1-24a

I am learning to use my notes and other types of writing to help me understand information and ideas, explore problems, generate and develop ideas or create new text.

LIT 1-25a

By considering the type of text I am creating, I can select ideas and relevant information, organise these in a logical sequence and use words which will be interesting and/or useful for others.

LIT 1-26a



SOCIAL STUDIES

By using a range of instruments, I can measure and record the weather and can discuss how weather affects my life.

SOC 1-12a

By exploring climate zones around the world, I can compare and describe how climate affects living things.

SOC 1-12b

Having explored the landscape of my local area, I can describe the various ways in which land has been used.

SOC 1-13a

By exploring a natural environment different from my own, I can discover how the physical features influence the variety of living things.

SOC 1-13b

To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world.

SOC 2-14a



TECHNOLOGIES

By exploring and using technologies in the wider world, I can consider the ways in which they help.

TCH 1-01a

As I extend and enhance my knowledge of features of various types of software, including those which help find, organise, manage and access information, I can apply what I learn in different situations.

TCH 1-03a

I can access, retrieve and use information from electronic sources to support, enrich or extend learning in different contexts.

TCH 1-03b

I explore and experiment with the features and functions of computer technology and I can use what I learn to support and enhance my learning in different contexts.

TCH 1-04a



PURPOSE	ACTIVITIES	CRITERIA	EVIDENCE
<ul style="list-style-type: none"> I am learning to differentiate between weather and climate. I am learning about meteorology and weather predictions. I am learning about weather in the polar zone. I am learning about plants and animals in the polar zones. I am discovering the temperate zones in the world. I am learning about countries in the temperate zone. I am finding out about weather, plants and animals in the temperate zone. I am learning about the equator and the Tropics of Cancer and Capricorn. I am finding out about seasons in the Northern and Southern Hemispheres. I am discovering the tropical wet and tropical wet/dry zones. I am learning to differentiate between rainforest and savanna. I am finding out about plants, animals and countries in the tropical zone. I am expanding the way in which I carry out my research. I can report back my findings to the class. 	<ol style="list-style-type: none"> Check the accuracy of the weather forecast. Pick clothes to match the weather. Draw different weather conditions. Complete a worksheet on the polar zone. Research different penguin species. Draw a polar explorer. Research an animal from the temperate zone. Locate places on a map. Complete a worksheet on temperate zones. Design a web page about the tropical zone. Complete a worksheet on the tropical zone. Draw a rainforest scene. 	<ul style="list-style-type: none"> I can explain the difference between weather and climate. I can explain meteorology and weather predictions. I can identify the polar zones on a map. I can talk about the weather, plants and animals in the polar zones. I can identify the temperate zones on a map. I can talk about the weather, plants and animals in the temperate zones. I can identify the tropical zone on a map. I can differentiate between wet and wet/dry zones. I can talk about the weather, plants and animals in the tropical zones. I can carry out research using a variety of resources. I can work together in a group with my classmates. I can use different types of maps to enhance my learning. 	<p>MAKE</p> <ul style="list-style-type: none"> Draw a variety of weather conditions. Draw a polar explorer. Draw a rainforest scene. <p>SAY</p> <ul style="list-style-type: none"> Verbally present information about penguins. Explain an animal from the temperate zone. <p>DO</p> <ul style="list-style-type: none"> Check the accuracy of the weather forecast. Match clothes with seasons. Carry out research using a variety of resources. Locate places on maps and Google Earth. Design a web page. <p>WRITE</p> <ul style="list-style-type: none"> Complete various worksheets.



Climate Zones – Introductory Lesson

The purpose of this lesson is to get an idea of what the children already know about the subject. It is a co-operative lesson for the whole class to get involved. Spelling and handwriting are not important.

At the end of the topic it will be useful to re-visit the results of this lesson and hold a class Q&A to discuss what they have found out and any unanswered questions they still have. The Q&A could be part of an ICT lesson where the children research their unanswered questions.

SPLIT THE GROUPS

In order to get randomly selected groups ask the children to sort themselves into date of birth order without talking to each other. Then split the children into groups of 4 i.e. the first 4 children are one group etc.

Once in their groups the following jobs should be randomly allocated:

1. Group Leader (who likes apples?)
2. Writer (who is wearing a watch?)
3. Reporter (who has brown eyes?)
4. Timer (who is the tallest?)

Sheets of A2 paper are laid out on the desks each sheet should be labelled with one of these titles:

1. Weather and Climate
2. Polar Zone
3. Temperate Zone
4. Tropical Zone

Then split the sheet into two columns:

1. What do I know?
2. What do I want to find out?

The groups then rotate around each sheet. A time limit should be given.



PART ONE

WEATHER AND CLIMATE



Weather and Climate TEACHER'S NOTES

In this pack we are going to investigate climate zones across the world. In this section we will identify the differences between climate and weather, talk about climate classification and find out about the UK climate.

MERGING CLIMATE ZONES

A common issue with classification is that zones appear to be defined, as if there is a border between one climate zone and another. However the transition between climate zones is gradual.

CLIMATE CLASSIFICATION

There are various systems of climate classification including: Holdridge, Trewartha and Koppen. The Koppen climate classification is the most commonly used, it shows that different climates can exist within relatively small areas, however, it is also quite advanced and complex to unpack. In this pack we are going to consider the fundamental climate classifications of polar, temperate and tropical.

CLIMATE DEFINITION

This is the definition of climate according to dictionary.com.
A region's usual weather patterns. The climate at any point on Earth is determined by things such as the general movement of the atmosphere, the proximity of oceans, and the altitude of the location.

WEATHER DEFINITION

This is the definition of weather according to dictionary.com.
The daily conditions of the atmosphere in terms of temperature, atmospheric pressure, wind, and moisture.

DIFFERENCE BETWEEN CLIMATE AND WEATHER

Weather shows us the day-to-day conditions in a particular place, weather changes every day and can even shift within minutes. Climate is the average weather in a place over many years, we know that certain areas in the world are hotter or colder than others.



METEOROLGY

Meteorology is a branch of science that is focussed on the study of the atmosphere, primarily to predict weather patterns and changes.

METEOROLGIST

A meteorologist is a scientist who studies meteorology. A meteorologist can work in a variety of places but the most prominent is as a weather forecaster on TV.

MET OFFICE

The Met Office is the national weather service for the UK. It was formed in 1854 as a service to mariners. Today the Met Office makes weather predictions for transport departments and the general public. Met Office scientists also study and report on climate change.

PREDICTING WEATHER

The Met Office gather information from weather satellites and weather stations, this information is processed and analysed to predict the weather over the coming days. This means that people can be warned if there is a chance of extreme weather.

Weather conditions can impact our daily activities. Weather forecasters can usually predict the weather around five days in advance. You can find out about the weather forecast in a variety of ways.

TV forecast

newspaper

Radio forecast

websites

weather channel

weather apps

UK CLIMATE

The UK has a temperate oceanic climate. Temperate means we have distinct seasons and varying temperatures throughout the year.

CLIMATE PREDICTIONS

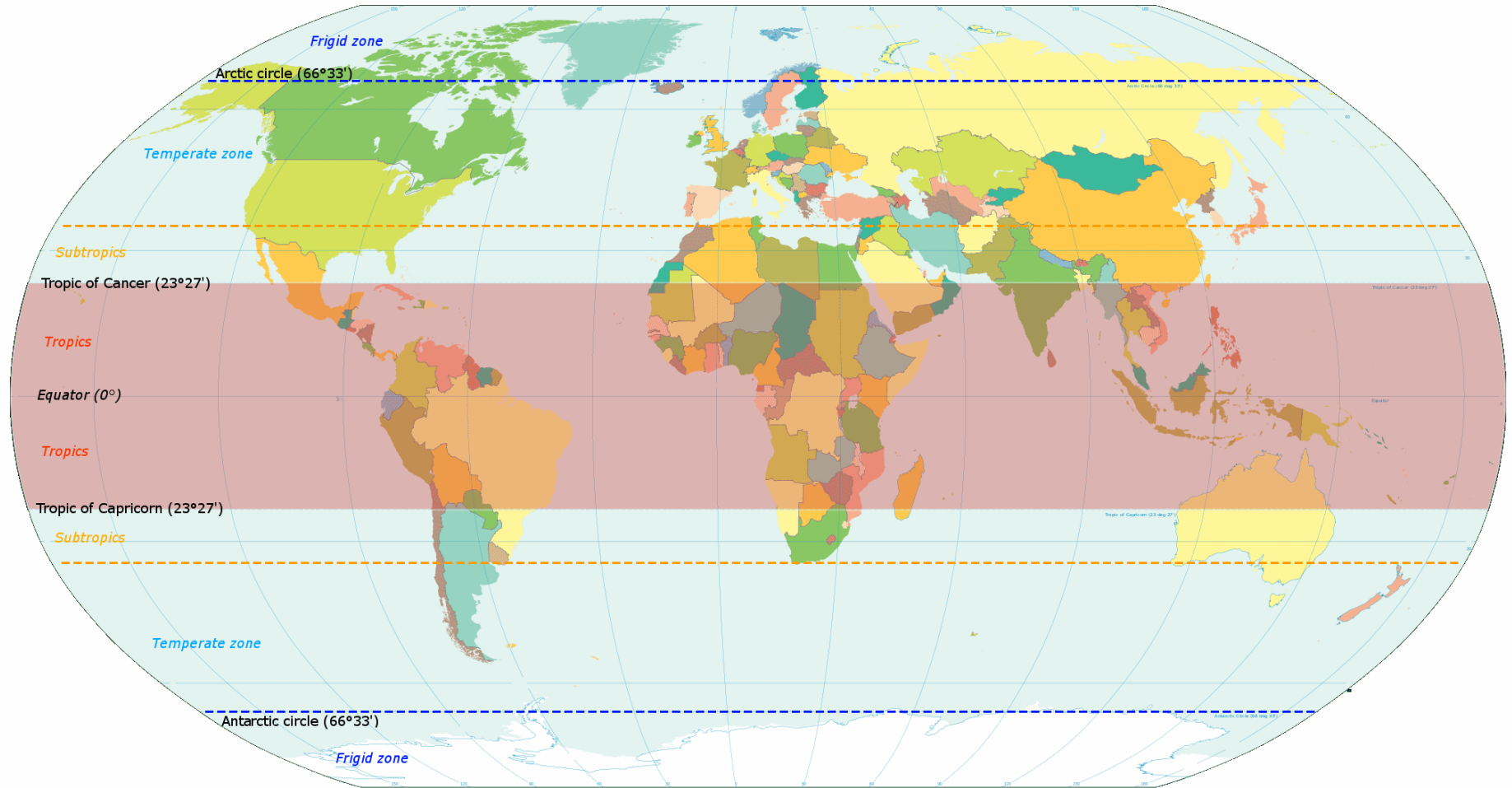
Scientists predict that the earth's temperature will continue to increase, which will cause rising sea levels, expansion of desert and extreme weather.

CLIMATE CHANGE

Climate change is a change in weather patterns of an area over a long period of time. Climate change has happened before and is a natural process for the earth, however certain human activities have been identified as the primary cause for climate change. Harmful activities include: deforestation and burning fossil fuels.



WORLD CLIMATE ZONES



World Map, KVDP, Wikimedia Commons, CC by 3.0



Weather and Climate ACTIVITY 1

Can you check the accuracy of a weather forecast?
Work with a partner. Use the weather symbol sheet to help you.

Use the BBC website to complete the weather forecast for the next five days.

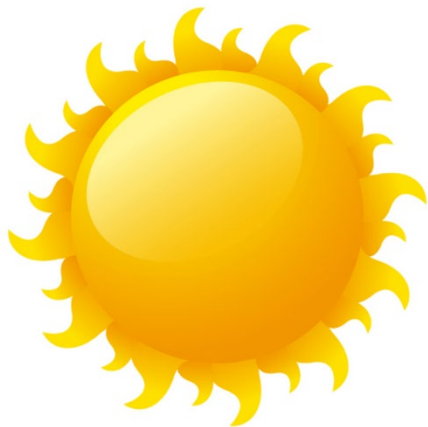
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
SYMBOL					
DESCRIPTION					
TEMPERATURE					

Record the weather each day. Compare the forecast with the weather, was it accurate?

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
SYMBOL					
DESCRIPTION					
TEMPERATURE					



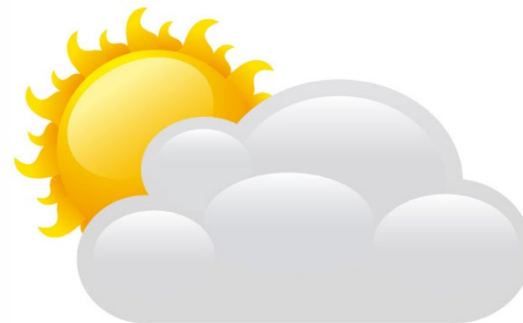
Weather Symbol Sheet



sunshine



sunshine and showers



sunny spells



thunder and lightning



heavy rain



snow



Weather and Climate

ACTIVITY 2

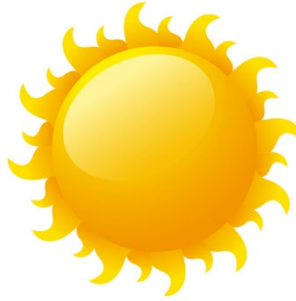
Can you pick clothes to match the weather?

We pick our clothes to match the weather outside.

When it is warm we wear clothes to cool us down, when it is cold we wear clothes to keep us warm and when it is rainy we wear clothes to keep us dry.

Working with a partner, read the list of clothes, discuss how these clothes help us in different weather conditions.

In the first box write down the type of weather. Then write the clothes from the list under the correct weather symbol.



rain coat	trainers	sun dress	gloves	sandals	shorts
sunglasses	umbrella	thick socks	wellie boots	t-shirt	warm jumper
flip flops	snow boots	rain hat	scarf	hooded top	woolly hat



Weather and Climate

ACTIVITY 2 - ANSWERS

Can you pick clothes to match the weather?

We pick our clothes to match the weather outside.

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Working with a partner, read the list of clothes, discuss how these clothes help us in different weather conditions.

In the first box write down the type of weather. Then write the clothes from the list under the correct weather symbol.



SUNSHINE

sandals

sun dress

shorts

t-shirt

flip flops

sunglasses



RAIN

rain coat

umbrella

wellie boots

rain hat

hooded top

trainers



SNOW

snow boots

warm jumper

scarf

gloves

woolly hat

thick socks

rain coat	trainers	sun dress	gloves	sandals	shorts
sunglasses	umbrella	thick socks	wellie boots	t-shirt	warm jumper
flip flops	snow boots	rain hat	scarf	hooded top	woolly hat



Weather and Climate ACTIVITY 3

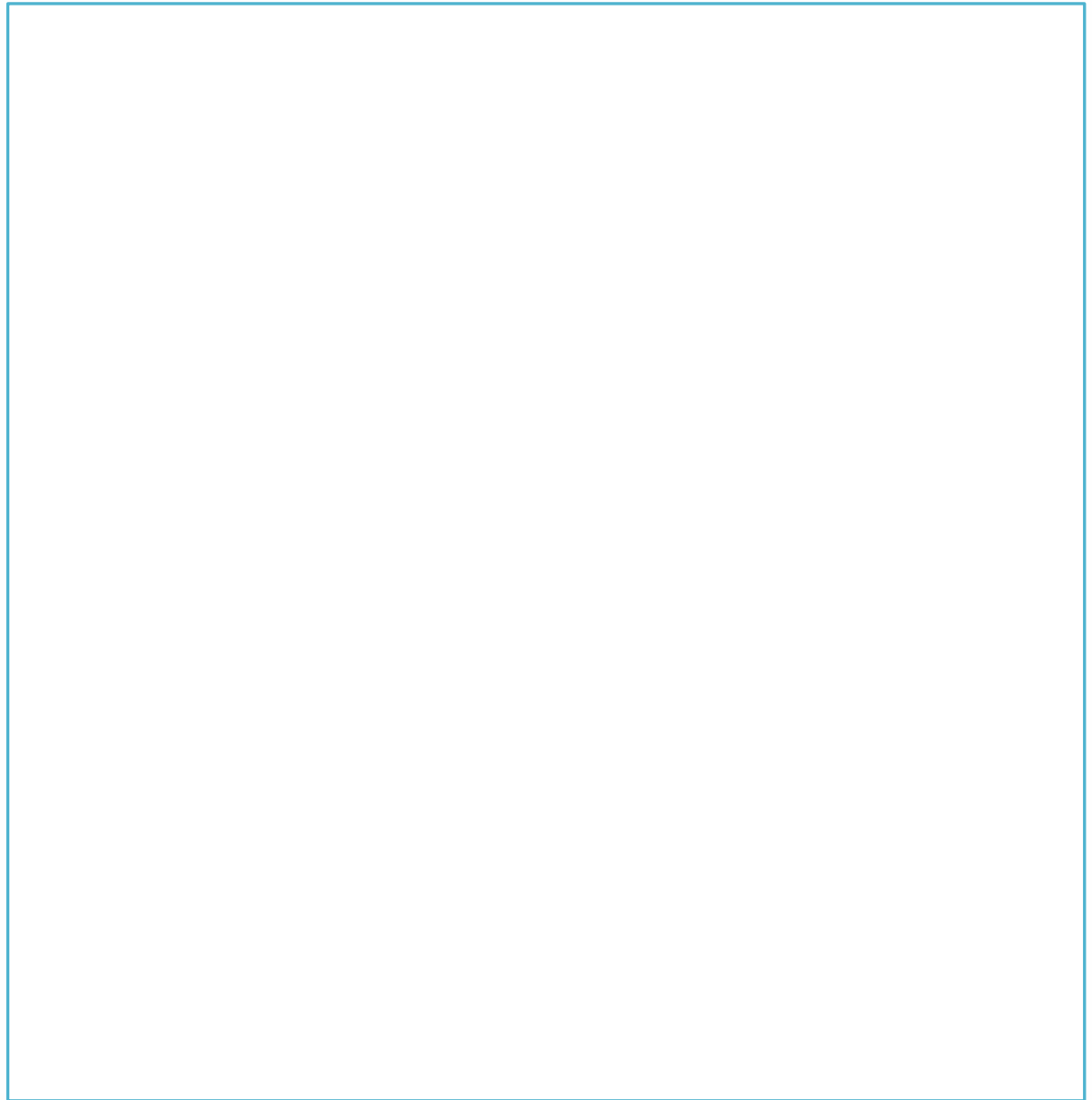
Can you draw weather conditions?

Working with a partner, take a look at the weather symbols sheet.

Discuss what type of weather you might experience for each symbol.

Discuss what it would be like outside for each type of weather.

Pick one type of weather and draw you and your friends playing outside.



ACTIVITY HINTS AND TIPS

ACTIVITY 1

Observing

CO-OPERATIVE LEARNING

The children are asked to work with partners but you could use larger groups.

EXTENSION TASK

The children could add to this task by measuring rain fall, wind speed or temperature, if the predicted weather is particularly windy, rainy, hot or cold.

PEER ASSESSMENT

The children could work together to compare their observations.

ACTIVITY 2

Sorting

CO-OPERATIVE LEARNING

The children could work in groups or as a class for this task.

EXTENSION TASK

The children could come up with different ideas for clothes to wear in the weather conditions mentioned.

They could talk about the clothes they are wearing today and if their choice was affected by the weather.

ACTIVITY 3

Art

CO-OPERATIVE LEARNING

The children could work in pairs or groups to discuss how the weather affects the activities in which they participate. They could give examples of weather appropriate activities.

EXTENSION TASK

The children could create a weather frieze and extend it to include climate zones as they progress through the pack.



Assessment 1

By completing these tasks your teacher can see how much you have learned about weather and climate. You can look back in your jotter to help you answer the questions.

Answer these questions in sentences.

1. Climate is weather in an area over a long period of time. TRUE or FALSE?
2. A symbol showing a black cloud and a yellow zig-zag is for what type of weather?
3. Name two ways to find out the weather forecast.
4. Name two items of clothing you might wear on a sunny day.
5. Describe the symbol that tells us it is going to rain.
6. What is the name of the office that predicts weather in the UK?
7. A meteorologist is a person who predicts weather. TRUE or FALSE?
8. In which season might you see snow?
9. What U word is useful when it is raining?
10. Do scientists believe the earth is getting warmer or cooler?

Write a paragraph explaining your favourite type of weather.

Draw a picture of a weather forecaster.



Assessment 1 - ANSWERS

Answer these questions in sentences.

1. Climate is weather in an area over a long period of time. TRUE or FALSE?
2. A symbol showing a black cloud and a yellow zig-zag is for what type of weather?
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10. Do scientists believe the earth is getting warmer or cooler?

1. TRUE.
2. Thunder and lightning.
3. See Teacher's Notes.
4. Various answers.
5. Dark cloud and rain drops.
6. Met Office.
7. TRUE.
8. Winter.
9. Umbrella.
10. Warmer.



Extension Tasks 1

These are internet based tasks for early finishers.
They can be done on an iPad or a computer.

In the UK windstorms take place between October and March. In 2015 the Met Office decided to start naming storms. The names picked are alternate boys and girls names using every letter in the alphabet apart from Q, U, X, Y, and Z. Can you pick names for the next storm season?

A	H	O
B	I	P
C	J	R
D	K	S
E	L	T
F	M	V
G	N	W

SHIPPING FORECAST

The shipping forecast is a radio broadcast that predicts the weather around the UK coastline. Visit the Radio 4 website and listen to the shipping forecast.

WEATHER WARNING

The Met Office issues yellow, amber and red weather warnings. Visit the Met Office website and write down any weather warnings for today or tomorrow.

Look at our Climate Zones
Pinterest board!

These towns go from the north of the UK to the south. Use the BBC weather website to check and compare the weather in each place.

Are there any differences?

Lerwick, Shetland

Glasgow

Manchester

Brighton

Tweet us
@LittleMooseEd

Use Google Images to find pictures of this weather.

ice

fog

wind

rain

snow

sun

frost





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