GOD IS PROTECTOR

Weather

Term 4

Year 3

Thinking Skills Protector Yr 3

Weather and Seasons 1 Draw a fishing rod. Now redesign it by using the following steps: B – make one part **bigger** A – **add** something extra R – **replace** one part with something else	**Weather and Seasons 2** Create a new product by combining these two things: A raincoat and a sun hat
Weather and Seasons 3 Name 5 things you would NEVER use in winter.	**Weather and Seasons 4** What if summer did not exist. Give some consequences.
Weather and Seasons 5 People should not be allowed out in the summer sun unless they are wearing a hat. Give 3 good points and 3 bad points for this idea.	**Weather and Seasons 6** Work out 3 things this picture could represent in the story of Noah and his family. 

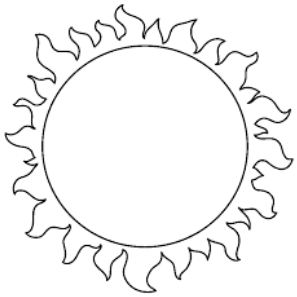
Thinking Skills Protector Yr 3

Weather and Seasons 7 Make an acrostic poem using the name of one of the seasons.	**Weather and Seasons 8** Design something new to keep the rain off you when riding a bike.
Weather and Seasons 9 Give 10 different uses for melted ice-creams.	**Weather and Seasons 10** Name 5 things that swimming pools and beds have in common. e.g. you can dive into both of them.
Weather and Seasons 11 Make an unusual hat will give you shade in summer.	**Weather and Seasons 12** Draw 3 pictures of some things you could make at the beach.

Student activities

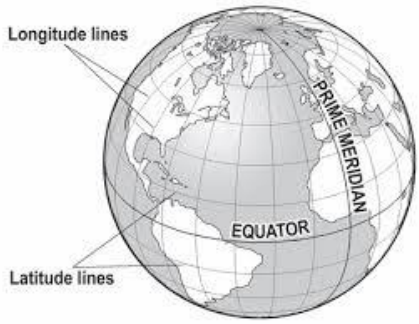
Weather 1
What is weather?

Weather is wind, rain and sunshine.



Weather starts with the Sun.

The Sun is a huge ball of exploding gases. The explosions cause the Sun to send out enormous amounts of heat. Some parts of the Earth are heated much more than other parts. Have a look at a globe of the Earth and you will see why.

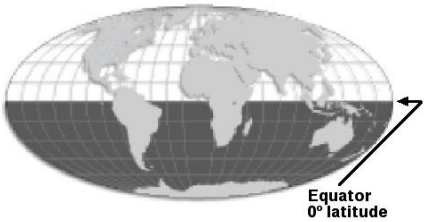


Around the middle of the globe is an imaginary line called the equator. While the Earth goes around and around the Sun, the Sun shines almost straight at the Equator. But at the North and South Poles, Sun's rays can't warm the Earth at the Poles nearly as much as at the Equator.

1. How does weather affect the way we dress?
2. How does weather affect our activities?
3. Why is the weather hotter at the Equator than the North Pole?
4. Copy the globe. Mark the Equator and the North Pole.

Weather 2
Seasons

Seasons are different types of weather.
The Earth is tipped on an angle as it goes around the Sun. For half the year, the Southern Hemisphere, (the bottom half of the globe), is tilted towards the Sun. It gets more heat at this time of the year. It is Summer in places like Australia. The northern Hemisphere is tilted away from the Sun, so places like England are cold. It is Winter there.



There are four seasons in countries that are not close to the Equator: Summer, Winter, Autumn and Spring.
Summer = hot
Winter = cold
Autumn and Spring = cool

Countries near the Equator are hot all the time. They have two seasons: wet and dry.

1. Draw a globe. Colour the Southern hemisphere green and the Northern hemisphere blue. Name them.
2. In which Hemisphere is your country?
3. Mark in the Equator.
4. Name the four seasons.
5. Name a country that has all four seasons.
6. Name a country where it is hot all the time.

Weather 3
Snowy weather

Water vapour is made of little water droplets in the air. The clouds are made of water vapour. When water vapour freezes and falls from the sky it is called snow. This happens when the temperature in the clouds is very cold.

Snowflakes are made up of crystals of ice that have formed around bits of dust in the air. The snowflakes start out very small and grow. Each snowflake is different and might contain up to 200 crystals. A snowflake has six sides.

If you live in a place where it snows you can build a snowman.

1. Name a country where it snows.
2. What is snow?
3. Draw a snowflake.
4. What can you do with snow?

Weather 4
Windy weather

What is wind?
Wind is moving air.

How do we measure wind?
When someone gives a weather report on wind, they say how fast the air is moving (*speed*), and from which *direction* it is coming.

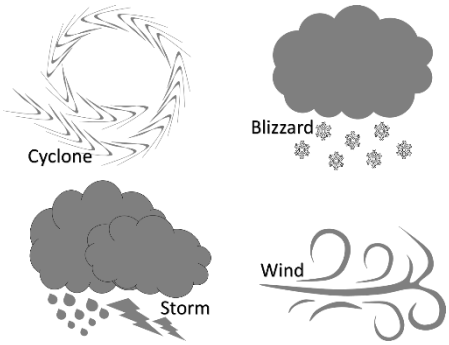
What causes the wind to blow?
Some parts of the Earth's surface are hot and other places are cold. Warm air rises because it weighs less than cold air. Then cool air moves in and replaces the rising warm air. This movement of air is what makes the wind blow.

1. What is wind?
2. What are the two words used to give a weather report on wind?
3. List four directions that the wind could be coming from.

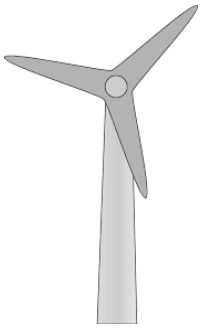
Weather 5
Stormy weather

A storm is when there are extreme weather conditions such as heavy rain, lightning, thunder, hail, snow, damaging winds, and freezing rain.

Damaging winds
Damaging winds are winds with a speed of more than 80 kilometers per hour. There can be winds that blow in a straight line, or winds that blow in a circular movement such as a tornado or cyclone.



Wind is helpful
Wind can provide us with electricity. It is not expensive and does not create pollution. Electricity is produced by windmills as wind blows over the blades which turn and cause an electric generator to produce electricity.

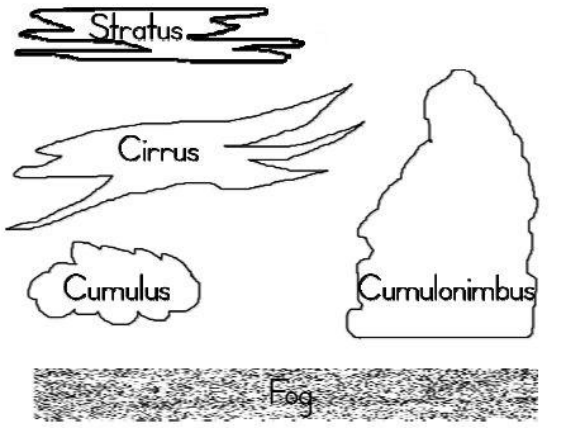


1. What types of weather make up a storm?
2. What are damaging winds?
3. How can wind be helpful?

Weather 6
Cloudy weather

A cloud is a large group of tiny water droplets. Clouds are formed when water on Earth is heated by the sun, turns to steam and goes up into the sky. This is called evaporation. Clouds are like balls of steam up in the sky. The steam turns to water droplets and then it rains.

There are different types of clouds, the main types are:
Stratus: flat clouds that look like layers of sheets, high up in the sky.
Cirrus: thin, wispy, high up in the sky.
Cumulus: puffy white clouds that look like cotton wool floating in the sky.
Cumulonimbus: dark clouds that are heavy with rain, not so high up in the sky.



1. Draw and name the different types of clouds.
2. Which type of clouds bring rain?

Weather 7
Rainy weather

Rain is made of water drops that fall from clouds.
This is called precipitation.

Water can also fall from the sky in the form of hail, sleet or snow.

Rain gauges are used to measure the amount of rain over a certain period of time.

Heavy rain can cause flooding and landslides.

Plants need water in order to survive; they receive much of this water from rain.

Forests in areas of high rainfall are called rainforests.

In areas where there is much pollution from factories and power stations, acid rain sometimes falls. It can be harmful to plants and animals.

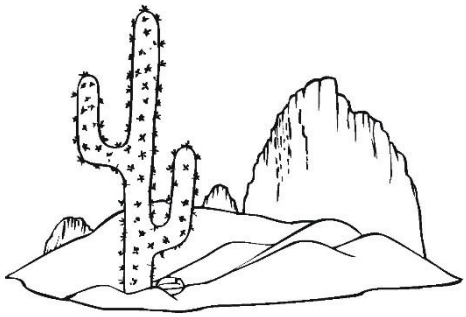
1. What is precipitation?
2. Draw a picture showing that plants need rain to survive.
3. Draw a picture showing how acid rain can be formed.

Weather 8
Hot and humid climates

Tropical climates are found in areas that are close to the equator. Here it is hot and steamy (humid). The temperature is much the same every day. You can expect lots of rain, warm nights and hot days. The seasons change only slightly.

Dry climates
Deserts are places with dry climates. Few plants, animals and people can survive here. Deserts are found in parts of Africa and the Middle East.

Deserts can be sandy or rocky. A cactus is a desert plant. It holds water inside the stems and leaves. It can survive a long time with no water. A cactus usually has prickles. These protect the plant from being eaten by animals.



1. What is hot, humid weather like?
2. Where is it hot and humid most of the time?
3. What are deserts?
4. What plants might you find there? Draw and name one.
5. What is this plant like?

Weather 9
Protection from extreme weather

When the sun is hot we can protect our face and head by wearing a ……..

We can protect ourselves from rain by using …….

We can protect ourselves from a lightning strike by …….

In countries where it snows, people protect themselves from extreme cold by ……

We can protect ourselves from very strong winds by ……

You should not shelter under a tree in very strong winds because …….

Draw and name what you need to protect yourself from three different weather types: cold, sun and wind.

Weather 10
Protection from extreme weather

The Rotahome

Some houses have been designed to stand firm in wild weather.
Here is one type, the “Rotahome”:

These houses have been designed by Peter Drysdale, an Australian, who moved to Fiji. He wanted to design houses that were low cost and also cyclone proof.

Cyclone Winston in early 2016 caused massive destruction in north and east Viti Levu.

In the hills and the sugar cane area near Lautoka there are 943 Rotahomes and 231 of them are at Koroipita. They were hit by the cyclone but there was no damage to these homes.

1. How do you think you would build a cyclone-proof house?
2. Draw your idea.

Weather 11
Protection from extreme weather

The Yurt

The people of Mongolia build tents that are round. These are called yurts. They are made of animal skins and wool. The skins are stretched over bamboo frames. The Yurt is sealed from the cold winds, and inside a fire is lit to keep them warm.

1. Look at a map of the world. Find Mongolia. Name two countries near Mongolia.
2. What is the weather like in Mongolia?
3. Draw a yurt and label the materials used.

Weather 12
The Igloo

The Inuit people live in Alaska, northern Canada and Greenland. They used to build homes of large blocks of ice. The ice sealed the home from the cold air. Inside it was warm.

Today the Inuit people live in normal homes but still make igloos when they go on hunting trips. Now they can buy food that is brought in from other places, but once they had to eat only the food that they could hunt or catch from the sea. They could not grow food because the climate was too cold.

1. Look at a map of the world. Find Alaska, Canada and Greenland. In which country is Alaska?
2. What is the weather like in these places?
3. What was their main food?

Cyclone Season

Cyclones are the most powerful storm in Fiji. They can occur in the hot months from November to April. This period of the year is known as the “cyclone season“.

The waters of the oceans are very warm at this time so there is a lot of evaporation. Huge thunder clouds form in the atmosphere as great amount of water vapor rises. When the

warm air is pushed aside by fast – moving cold air, whirlpool, also occurs if clouds form and spiral upwards.

As these storms move across the water and the land, they cause wild seas and flooding rains. Because their destructive winds can reach up to 300 kilometers per hour, cyclones cause damage to buildings, trees, crops, power lines, shipping and ports. They can also cause injury or death to people and animals. However, the very centre of a cyclone, known as the “eye“ is quite calm with clear blue skies. This centre can be up to 50 kilometers wide.

Cyclones are tracked by radar, planes and satellite photographs from space. These tropical storms are named in alphabetical order using male or female names. Frequent warnings are given to communities living in their paths so that people can take precautions. Animals are sheltered, homes are secured and loose objects are removed as people make themselves and their properties as far as possible.

Tropical cyclones are called hurricanes in America and typhoons in Asia. They occur during cyclones season from May to October.

Comprehension

1. What is the centre of a cyclone called?

2. How are cyclones tracked?

3. How are cyclones named?

4. What are cyclones called in America?

5. What are cyclones called in Asia?

6. When can cyclones occur in America?

Terrifying Tornadoes

A tornado is a violent, twisting column of air. It can be seen as a dark funnel shaped cloud, wide at the top and narrow at the bottom. This funnel hangs down from a storm cloud.

Tornadoes only do damage when the bottom of the funnel touches the ground. If they touch down where the person lives, they can wreck house and toss cars, and sometimes even trains, right into the air.

- Tornadoes have the fastest wind on earth- perhaps up to
- 400km/n
- Most tornadoes only touch down for about 10- 15 minutes
- Tornadoes usually travels about 10 km before disappearing.
- The paths make deafening roar as they come close, like a jet
- plane taking off
- The path of the usual tornado is only about 130m wide.
- The United States has more tornadoes than any other
- country- about 700 a year.

Tornadoes are really terrifying. Remember though, that even in North America, nearly everybody goes through life without even seeing a tornado, much less being hurt by one.

Comprehension

1.What is a tornado?

2.If you see a tornado, what would it look like?

3.When is the only time a tornado does any damage?

4.What sort of damage can it do if it touches down where people live?

5.Which country has the most tornadoes?

6.Why do you think tornadoes cause so much damage?