Outdoor Learning Challenges

Key Stage 2

Hello Everyone

Here are your outdoor leaning challenges for the next two weeks. This time we are going to learn about the weather. Can you make your own weather station?

Meteorologists (weather scientists) measure the speed and direction of wind using instruments called anemometers. A simpler instrument is a windsock. Discover how to make a windsock, how to measure rain with a simple gauge, and how to use a basic sun dial to tell the time.

You will be able to find these activities in J2E and in your class teams, they will also be on the school website.

Have fun and let me know how you get on.

Mrs Thomas

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Parents please be aware; Some of the video clips in this document may take your child to internet sources

Activity: Make a weather diary

You could include a table like the one below:

	Date	***Time***	***Weather***	***Rainfall cm***	***Wind direction***
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					

You could record yourself reporting a weather forecast and upload the video to your j2e files for us to see.

You could write a five-day forecast and email it to me or upload it to your j2e files.

Can you remember the welsh words for the different weather types?

Perhaps you could do your forecast in Welsh!

Watch the video to find out more about wind direction and speed.

Activity: *Make a weathervane*

You will need:

- A plant pot
- A marker pen
- Soil or sand
- A straight straw
- A pencil with a rubber on the end
- A pin
- A bead
- A piece of plastic
- Strong tape
- Compass (You could make your own)

What to do:

Write compass points N-North, S-South, E-East, W-west at equal points around the top of the pot.

Fill the pot with soil or sand, press it firmly down.

Cut a triangle arrow point and a tail shape out of the plastic (you could use an old milk carton or a plastic food tray). Tape them to either end of your straw.

Put the straw on an outstretched finger and find the point where it is completely balanced.

When you have found the spot put the straw on some plasticine and push the pin through the straw. It must be at the point where the straw was balanced.

Next put the bead on the pin and then push the pin into the rubber on the end of the pencil.

Push the sharp end of the pencil into the centre of the plant pot.

Use a compass to line up the direction signs on your pot.

*Activity: Make a **windsock***

*Meteorologists (weather scientists) measure the speed and direction of wind using instruments called anemometers. A simpler instrument is a **windsock**.*

You will need:
Used plastic shopping bags
Scissors
String
An empty plastic bottle

What to do:

1. Cut a ring from the bottle. (The edges may be a little sharp, so let an adult do this step.)
2. Cut across the plastic bags horizontally into 1-inch wide strips. You should get a loop of plastic.
3. Thread the strips through the loop and pull gently. Repeat with all your plastic strips until the bottle ring is completely covered.

4. Tightly tie one end of each piece of string to the bottle ring. Tie all the string to gather at the other end. Hang securely and start to make your observations on different days.

Track how the windsock blows over time. Which way does the windsock blow each day? Check in the morning and in the evening before bed. When is it windiest? Make some notes in your weather diary.

Quick Activity: Make a pinecone weather station

Place some pinecones on a sunny windowsill in your house.

When the weather is fine the pinecones open and when it is going to rain, they close. Give it a go and record your results.

Pinecones open and close depending on the humidity to help seed dispersal. Inside the pinecone there are lots of feather light seeds. When the weather is dry the pinecone opens, and any wind will catch the seeds and allow them to be dispersed in the air far away from the original tree.

Activity: Make a Rain Gauge

You will need:
Scissors
Marker Pen
An empty plastic bottle

What to do:

Cut the top off the plastic bottle.

Place the top upside down inside the other half of the bottle.

Measure and mark in cm from the bottom upwards.

Place in the ground and you are ready to go!

Do not forget to empty the bottle once you have recorded your data.

Use your rain gauge to record how much rain falls each day and record it in the table below:

Day	Amount of rain (cm)
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Write the answers to the following questions in your weather diary.

Which day had the most rain?

Which day had the least rain?

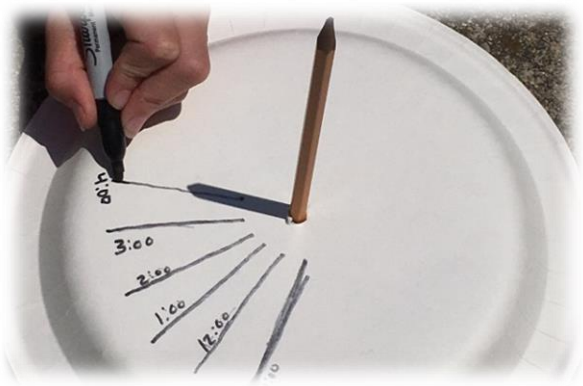
How much rain did we have for the whole week?

How much more rain was there on the wettest day compared to the driest day?

Activity: Make a sundial

You Will Need:

- Paper or polystyrene plates
- A sharp pencil
- Marker
- Clock
- A sunny and not too windy day
- Ruler
- Plasticine, blue tac or sticky tape



What to do:

1. Find a spot outdoors that is not in the shade and where the sun is shining brightly.

2. Find the centre of your plate and push the sharp end of the pencil into it so that it stands upright.

3. Secure the pencil in place with some plasticine or sticky tape.

4. Place the plate outside in your selected spot and on each hour (e.g 1pm, 2pm), look at where the shadow of your pencil falls.

5. With your marker, shade in the shadow of the pencil and write the number of the hour.

The next day test out your sundial and make sure the shadows fall on the correct time. Write the answers to the questions in your weather diary:

Did you find all the shadows the same length? Why or why not?

How are shadows created?

What makes this sundial work?

Hope you enjoy these activities, let me know how you get on!