


Mendell Primary School


Aspire Challenge Achieve


Medium Term Plan Science





Year Group: 1	Term: Autumn 2	Teacher: Miss Morning	Subject lead: Sarah Bride	Overview: Seasonal Changes observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. <div style="background-color: #e91e63; color: white; padding: 5px; border-radius: 5px;"> Observation over time Observing changes that occur over a period of time ranging from minutes to months. </div> <div style="background-color: #00bcd4; color: white; padding: 5px; border-radius: 5px;"> Pattern-seeking Identifying patterns and looking for relationships in enquiries where variables are difficult to control. </div> <div style="background-color: #8bc34a; color: white; padding: 5px; border-radius: 5px;"> Research Using secondary sources of information to answer scientific questions. </div>	Key End Points: By the end of this unit children will be able to: Name the seasons and the time of year associated with them. Talk about and notice the seasons throughout the year. Talk about and describe the seasons. Talk about what we do to adapt to different seasons e.g. clothes, activities, physical environment, food Talk about the plants and animals of different seasons and what they do. Compare seasons.	
Common Misconceptions: Some children may think: <ul style="list-style-type: none"> • it always snows in winter • it is always sunny in the summer • there are only flowers in spring and summer • it rains most in the winter. 		Unit key Vocabulary: Weather (sunny, rainy, windy, snowy etc.) Seasons (winter, summer, spring, autumn) Sun, sunrise, sunset, day length				
Links to other learning: Art PSHE – Environmental change and responsibility.	Prior Learning: Understand the key features of the life cycle of a plant and an animal. (Nursery – Plants & Animals, excluding humans) Explore the natural world around them. Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them. (FS2 – Seasonal Change)	Future Learning: Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Y3 - Light) <ul style="list-style-type: none"> • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. (Y5 - Earth and space) • The seasons and the Earth's tilt, day length at different times of year, in different hemispheres. (KS3) 	High Quality Text: Autumn is here poem. One winter's day by Christian Butler. One year with Kipper – Mike Inkpen Bear Has a Story to Tell Book by Philip C. Stead Scientist to study:	Risk Assessment/Healthy and safety Ensure children wash their hands after any explorations of the outdoors.	Teacher CPD: PLAN ASE Ryan Unit of work. Reach Out CPD - https://www.reachoutcpd.com/ sign up for free.	
<u>Learning Intention</u>	<u>Lesson Outline</u> <u>(Key Questions in colour)</u>			<u>Resources</u>	<u>Vocabulary</u>	<u>Lowest 20% Adaptations</u>
Ongoing all year: send home the class bear each weekend and ask the children to write about what they did over the weekend including the time the bear went to bed. The children must put him to bed when it starts to get dark – use this data later in the year to discuss day length. Using the class floor book go on a nature walk once a month and record what children notice. – see examples in PLAN ASE Ryan unit of work. Suggested books for reading area or read aloud time can be found here: https://www.themeasuredmom.com/books-hibernation-migration-adaptation/						

<p>1</p>	<p>L.I. I can name the four seasons and can identify which months of the year they occur.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is asking questions and making observations.</p> <p>For the next three weeks ask the children to complete the what's the weather like today class grid – this data will be needed for lesson 3.</p> <p>Continuous provision weather forecast station. Read the story One Year with Kipper.</p> <p>Word of the week: season</p> <p>Big question: what are the four seasons?</p> <p>Ask the children what they already know about seasons – Can they name the four seasons? Watch the Explorify what's happening video: https://explorify.uk/en/activities/whats-going-on/seasons allow the children time to discuss what they noticed in the video. Ask them to explain what was happening in the video and share key things they noticed. – Record pupil voice in class floor book.</p> <p>Share the PowerPoint with the children and allow them to share experiences they have had in different seasons. Share with the children which months of the year there are for each season.</p> <p>Share the poem 'Autumn is Here' without sharing the title and emitting the word autumn in the first line. Ask the children to become detectives and see if they can work out which season the poem is describing.</p> <p>Once they have identified autumn ask the children to find an copy different clues about the following:</p> <ul style="list-style-type: none"> • Clues about the weather • Clues about animals • Clues about plants • Clues about day length <div data-bbox="293 852 1048 1321" data-label="Diagram"> </div> <p>Exit pass listen to the seasons song: https://www.youtube.com/watch?v=ksGiLaIx39c</p>	<p>Weather grid.</p> <p>Seasons PowerPoint</p> <p>Poem clues sheet.</p>	<p>Season, autumn, hibernating, day length, foggy, damp, wet.</p>	
----------	---	--	---	--	--

2	<p>L.I. I can observe changes across the season of Autumn.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations.</p> <p>Recap previous learning: What are the four seasons? What season are we in now? – How do you know?</p> <p>Tell the children that they will be going on another nature walk today. Remind the children about what they noticed on their September walk and show the children the floor books with responses. Ask them to consider what changes they notice today.</p> <p>Watch Explorify video – what’s going on- falling into place https://explorify.uk/en/activities/whats-going-on/falling-in-to-place ask the children what signs of autumn does it show us? Can we be detectives and go on an autumn hunt? Before we do - What is the weather like today? – How should we dress teddy for our walk outside? – Record pupil voice and decisions in floor book.</p> <p>Give the children a signs of autumn tick sheet and allow them to explore the school grounds and tick off any signs of autumn they find. Encourage the children to collect any signs of autumn they may find e.g. brown leaves, conkers etc. Allow the children to come together to discuss their findings outside and discuss together as a class. What do we notice about the leaves and plants? Are all leaves brown/red/orange? – recording through pictures and post it notes for floor book.</p> <p>Now spend time looking at the trees on school grounds. What do they children notice? What signs of autumn are there? When they children go back to class, ask them to draw the trees in autumn using labels, captions and sentences to explain what they had observed on their autumn walk and identify the months when autumn occurs.</p>	<p>Signs of autumn hunt sheet.</p> <p>Post it notes, iPad for photographs.</p>	<p>Autumn, changes, leaves, plants, cold, rainy, cloudy.</p>	
---	--	--	--	---	--

	Year	1	Topic	Seasonal changes
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe changes across the four seasons. 			
	Description of activity			
This lesson focussed on looking at and comparing the leaves on the ground and those still on the plants.				

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>Teacher observations</p> <p>Ryan noticed that the leaves on the trees and those on the floor were different colours. Some leaves that he found were more than one colour.</p> <p>He also noticed that there were some plants that still had green leaves.</p>	 <p>Image from class floorbook</p>	<p>Working scientifically</p>

3	<p>L.I. I can observe daily weather and present simple data.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations and recording data.</p> <p>Recap – What season are we in? What signs of autumn have we found?</p> <p>Big question: What do we know about the weather?</p> <p>Ask the children to think about all the different kinds of weather they can think of with their partner. Make a list together on the board as a class. Some examples might include: rain, snow, storm, thunder, lightning, cloudy, clothing, warm, cold.</p> <p>Ask the class to sit on the carpet and show them the different weather symbols (enlarged set from resources). Hold each one up and ask them to act out how the symbols make them feel. Model this for them (e.g. hold up the snowy one and pretend to shiver). When you hold up the lightning symbol,</p>	<p>Weather charts from the following few weeks, large weather symbols, symbols for pictograms and pre made axis for children to add their symbols.</p>	<p>rain, snow, storm, thunder, lightning, cloudy, clothing, warm, cold.</p>	
---	--	---	--	--	--



observe their reactions but reassure them that thunder and lightning aren't scary if they are watching and listening from a safe place (like their homes). Hold up the symbol of the rain and sun and ask them: *What do we sometimes see in the sky when it is raining and the sun is out?* (Rainbow).

Remind the children that for the last three weeks we have been using our class weather chart to describe the weather. Enlarge the three chart collected from each week and place them on the carpet. Explain to the children that we have collected data about the weather but how can we use it/ ask the children to think about what our data tells us – it tells us what the weather has been like over a set amount of days. Explain that when we collect data as scientists we need to display it to help us see patterns. Discuss how it is tricky to look for patterns using our data in a chart. **Can anyone suggest another way of showing the data?** Guide the children to consider using a tally chart to count how many days were cloudy etc... as a class create a tally chart using the weather symbols. Now ask **what could we do now?** Guide the children to think about a pictogram – explain what this is during your discussions.

Model to the children on the carpet how one picture represents one tally from the chart – use the children to help model this e.g. two days were cloudy ask two children to stand in a line on top the cloudy symbol. Support the children in creating pictograms to match their weather data – lower ability children can work with an adult to create a group pictogram.

Through discussions afterwards, encourage the children to think about what their data shows them see example of pupil voice below, please record pupil voice in floor book with photographs of their weather charts. E.g. **which was the most/least common weather?**

	Year	1	Topic	Seasonal changes
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe weather associated with the seasons and how day length varies. 			
	Description of activity			

In November, the children went out every day to look at the weather. They chose the symbol that best matched the weather and also looked at the ground to see whether it was wet or dry. Each day, two children chose the most appropriate symbol and added it to the class chart.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"The clouds are very grey, so it might rain again."	<p>Image from class floorbook</p>	Ryan chose the correct symbol to match the weather.
Teacher observations	<p>We looked at the sky and the colour of the clouds. We also felt the ground to see if it was wet or dry.</p> <p>Each day for three weeks we went outside to the playground to observe the daily weather.</p> <p>We made a class weather chart.</p> <p>26.11. Sunny but cold and sunny.</p> <p>27.11. Windy today.</p> <p>28.11. Cloudy with some rain.</p> <p>29.11. Rainy and windy.</p> <p>30.11. Windy and sunny.</p>	<p>Ryan place correct place</p>

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
	<p>Image from class floorbook</p>	Ryan stuck his symbol onto the correct place on the bar chart.
Teacher observations	<p>Ryan noticed that there were four rainy days and four cloudy days, and only 2 sunny days.</p> <p>Working scientifically</p>	



4
L.I. I can observe changes across the season of Winter

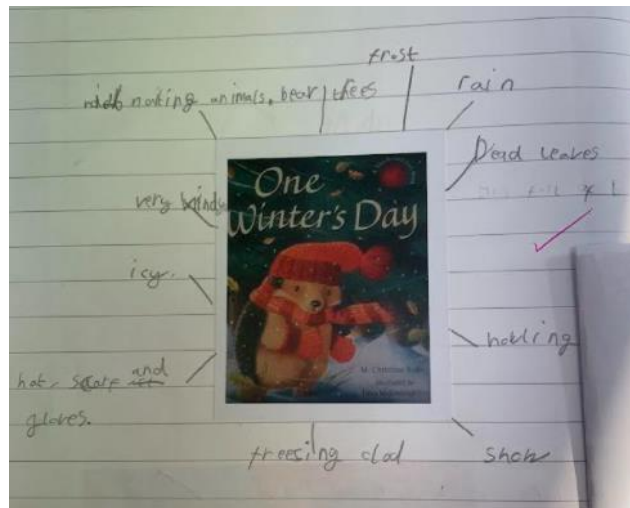
This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations.

Recap previous learning: **What are the four seasons? What season are we in now? – How do you know? –** Children might need reminding about which months the season occur.

Signs of winter.
Watch Explorify
What if – Winter never ended

winter, Sun, sunrise, sunset, day length, rain, snow, storm, thunder,

		<p>Tell the children that they will be going on another nature walk today. Remind the children about what they noticed on their autumn walk and show the children the floor books with responses. Ask them to consider what changes they notice today.</p> <p>Watch Explorify What if – Winter never ended https://explorify.uk/en/activities/what-if/winter-never-ended :</p> <p>1. In pairs, discuss what might be a Plus, Minus and Interesting way to think about the question. Stuck for ideas? They could think about:</p> <ul style="list-style-type: none"> • What indoor and outdoor activities do you enjoy in winter? • What clothing would you no longer need? • Would farmers still be able to grow the same crops? <p>2. Ask the children to share their partner’s ideas then encourage a broader discussion as a class, remember there is no wrong or right answer</p> <p>Can we be detectives and go on an winter hunt? Before we do - What is the weather like today? – How should we dress teddy for our walk outside? – Record pupil voice and decisions in floor book.</p> <p>Give the children a signs of winter tick sheet and allow them to explore the school grounds and tick off any signs of winter they find. Encourage the children to collect any signs of winter they may find. Allow the children to come together to discuss their findings outside and discuss together as a class. What do we notice about the leaves and plants? Did we notice any animals? – recording through pictures and post it notes for floor book.</p> <p>Now spend time looking at the trees on school grounds. What do they children notice? What signs of winter are there? When they children go back to class, ask them to draw the trees in winter using labels, captions and sentences to explain what they had observed on their winter walk and identify the months when winter occurs. .</p>		<p>lightning, cloudy, clothing, warm, cold.</p>	
5	<p>L.I. I can explain how the season and weather effect our daily life.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations.</p> <p>Explorify Zoom in zoom out - White and Spiky - https://explorify.uk/en/activities/zoom-in-zoom-out/white-and-spiky</p> <p>Listen to the book: One Winter’s Day https://www.youtube.com/watch?v=YBKfbo6OjII Ask the children to listen for clues of winter as they listen. Encourage them to think about things hedgehog is wearing and what is the weather like?</p> <p>On the working wall place a picture of the front cover of the book and write down clues the children remember from the story that tell them it is winter. E.g. below:</p>	<p>One winters day story.</p> <p>Explorify zoom in zoom out.</p> <p>Front cover of the book.</p> <p>Teddy’s diary.</p>	<p>winter, Sun, sunrise, sunset, day length, rain, snow, storm, thunder, lightning, cloudy, clothing, warm, cold.</p>	



What do we know about winter? Take feedback from the children. Give the children a range of non-fiction books to explore about winter. Discuss what the children have found out.

Draw the children's attention to the class teddy diary – let's look at what time teddy has been going to bed. Share the times with the children and ask them if they notice any changes. Ensure the children notice teddy is going to bed earlier and earlier because it is getting darker earlier during the winter months. **What does this tell us about the length of days in winter?** Discuss other ways winter affects what teddy gets up to at the weekend. See ASE example of responses below for the floor book.

Thinking about everything we have found out about winter, model how we can write a winter acrostic poem using what we have found out. Children complete a poem in mixed ability small groups.

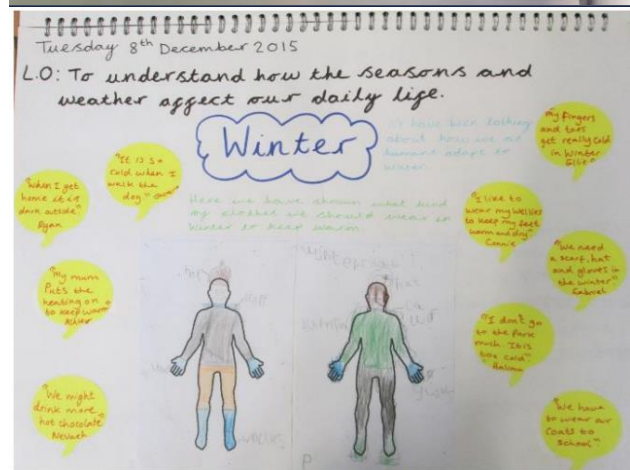
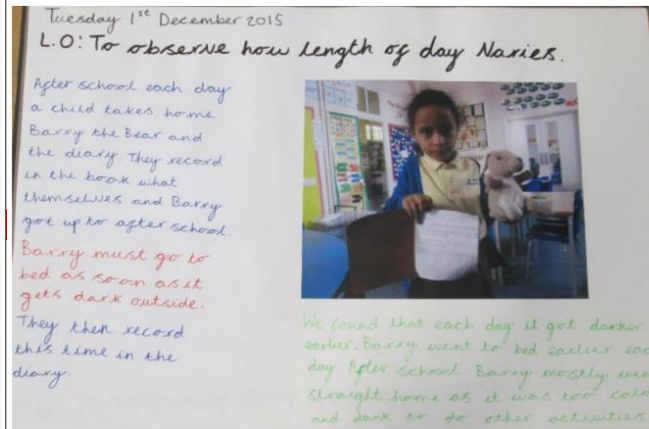


Image from class floorbook




6 L.I. I can explore

This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations and asking questions.

Animals in winter PowerPoint.

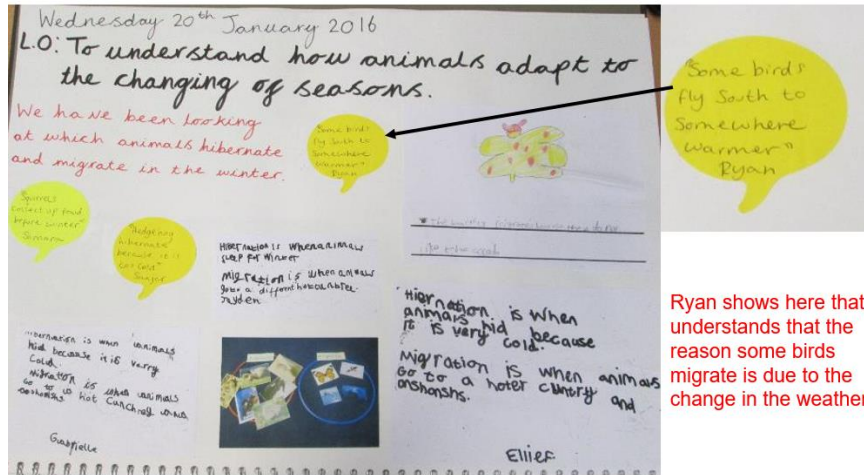
Hibernation, hibernating,

<p>how animals adapt for winter.</p> 	<p>Recap: How does winter change what we do? What do we wear? – what did we find out about winter during our last lesson/</p> <p>Big Question: How do animals adapt for winter?</p> <p>Word of the week: hibernation or to hibernate – what do they children already know? What does the word hibernation mean? Can you name any hibernating animals? Watch: https://www.youtube.com/watch?v=FonCq9YJJxw</p> <p>Read Bear Has a Story to Tell Book by Philip C. Stead to spark discussion about how animals adapt in winter - https://www.youtube.com/watch?v=LghgGco8dJY</p> <p>Use the animals in winter PowerPoint to explore hibernation, migrating and adapting for winter. Provide the children with groups of animal cards and ask them to think about which animals might hibernate. Encourage discussions and allow children to use sorting to predict which animals they think hibernate and others, which do not.</p> <p>Children complete the matching activity to explain what different animals do during winter to survive. HA draw and write about three animals, one that hibernates, one that adapts and one that migrates.</p> <p>Complete quiz on PowerPoint – embedding children's knowledge of vocabulary –hibernating and migrating.</p> <p>Discuss what it would be like if humans hibernated – can children think of a positive and a minus?</p> <p>Exit pass: Explorify sleepy heads odd one out. See PowerPoint.</p>	<p>Matching activity sheets.</p> <p>Animals to sort for predicting.</p> <p>Bear has a story to tell: https://www.youtube.com/watch?v=LghgGco8dJY</p>	<p>migrate, adapt, change, winter, body temperature, stores food.</p>	
--	--	---	--	--

Discussion after listening to stories about animals that migrate or hibernate in winter

- observe changes across the four seasons

During their weekly trips out into the playground the children had noticed that they were seeing fewer birds and squirrels. To help them to think about this the teacher read a selection of stories about animals that hibernate or migrate during winter.



Ryan shows here that he understands that the reason some birds migrate is due to the change in the weather.

Image from the class floorbook