Dereham Church Infant and Nursery School- Science

Year group: 1	Area/topic: Seasonal change

(objectives from NC/ELG/Development matters)

Working scientifically:

*Performing simple tests.
*Using their observations and ideas to suggest answers to questions.
*Gathering and recording data to help in answering questions.

Seasonal changes:

*Observe changes across the four seasons. (Year 1, E1)
*Observe and describe weather associated with the seasons and how day length varies. (Year 1, E2)

Prior learning	Future 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. (Reception – Seasonal changes) *Describe what they see, hear and feel whilst outside. (Reception – Seasonal changes) *Understand the effect of changing seasons on the natural world around them. (Reception – Seasonal changes)	*Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Y3 – Light) *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)

Working scientifically & encouraging scientific enquiry

Observing over time

*Children to observe and record weather seen over a period of time through a weather journal.

Comparative and fair testing

*Children to make their own equipment to observe and measure weather. For example, a way of measuring rainfall or using an anemometer to measure wind. Children to discuss and compare results from different times of day or day to day.

Pattern seeking

*Children will keep a weather journal and be encouraged to discuss any patterns they may notice.

Research using secondary resources
*Children to see and discuss images and photographs of different types of weather during the different seasons.
*Observing seasonal change through Explorify.

What pupils need to know or do to be secure

Key knowledge and skills

*I can name and correctly order the four seasons. (E1)
*I can talk about and explain the weather I would expect to see during each season. (E2)
*I can use suitable vocabulary to describe the weather including rain, sun, cloud, rainbow, snow, wind, storm, lightning, thunder, hot and cold. (E2)
*I understand and can explain how plants and trees change during each of the seasons. (E1)
*I can explain how the changes in sunlight and temperature throughout seasons causes the leaves on some trees to change colour. (E2)
*I can explain how to stay safe in the sunshine; explaining how to protect my skin and eyes as well as why this is important. (E2)
*I can observe and talk about how the evenings and mornings get darker during Autumn. (E2)
*I understand that clocks change during the year and that sun rise becomes later whilst sun set becomes earlier in the winter time but daylight hours are longer during Spring. (E2)
*I can conduct a weather experiment and record data to then identify and discuss any patterns. (E2, A2, A3 & A6)
*I can keep a weather journal and use scientific vocabulary to discuss the weather. I can recognise any days that might have similar weather. (E2 & A5)

Key vocabulary

Weather, rain, shower, sun, cloud, rainbow, snow, wind, storm, lightning, thunder, hot, cold, warm, hail, sleet, icy, frost, puddles, seasons, winter, summer, spring, autumn, sunrise, day length, rainfall, midday, evening, temperature, thermometer, wind speed, orbit, axis, compass, measure, scale, calm, moderate, gentle, light, strong, gale, horizon, rain gauge, meteorologist.

Possible evidence

There will be evidence of children meeting the 'I can' statements through:
*Quotes taken from discussions.
*Children can correctly use the key vocabulary during lessons.
*Adults scribing to evidence children's understanding.
*Children recording through drawing.
*Photographs of children's learning.
*Children recording data at an age appropriate level.
*Children discussing patterns they notice within data.

Common misconceptions	Books linking to this area
*Children may think that it always snows in winder and it is always sunny in summer. *Children may think flowers are only around in spring and summer. *Children may think it only rains in winter or that it rains most in winter.	*My friend earth by Patricia MacLachlan *My shadow by Robert Louis Stevenson *Little acorn (Nature stories) *Little raindrop (Nature stories) *Walk in the woods by Hannah Tolson *The Story Orchestra: Four Seasons in One Day (Sound Book) by J Courtney-Tickle *One year with Kipper by Mick Inkpen *Tree: Seasons Come, Seasons Go by Patricia Hegarty and Britta Teckentrup *It starts with a seed by Laura Knowles and Jennie Webber
Memorable first hand experiences	Opportunities for communication
*Weather experiments, creating their own equipment to measure rainfall or wind speed.	*Children to be given opportunities for communication with partners, groups and whole class to discuss as completing practical activities and also to share findings. *Children to be provided with lots of opportunities to be outside observing weather and how nature is changing. Children to be encouraged to discuss and describe what they see. *Through the use of Explorify.

Communication and Interaction	Cognition and Learning
*Visual aids, pictures of equipment with words labelled, word mats with pictures for key words in that lesson. *Freedom to explore scientific equipment and investigate in own way. *Hands on experiences to encourage communication and interaction with others. *Pre teaching any new vocabulary.	*Opportunity for lots of hands on exploration and verbally sharing thoughts and ideas. *Freedom to explore scientific equipment and processes. *Pre teaching new vocabulary or concepts. *Activities adapted if needed for safety and ease. *Visual aids, pictures of equipment, mats with key words and pictures *Learning recorded through photos and adult quotes, children not expected to write for recording their understanding. *Using working walls to aid learning and remind of previous learning.
Social, Emotional and Mental health	**Sensory and Physical**
*Awareness of individual needs, any potential triggers within the curriculum and the child's background. *Pre prepare children for any activity they could find triggering or difficult in some way. *Practical activities or experiments to be completed within a smaller group or 1:1 if needed. *If the class are sharing their learning within a large group, take the child in a smaller focus group if they struggle with social situations. *Adjustments made where needed to suit individual.	*Adult support with any practical activities. *Awareness of the individual's likes or dislikes and their own reactions to sensory activities. *If a child enjoys sensory activities, then plan for this wherever possible within the lesson.