Year 2 – Plants



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| National Curriculum Outcomes: Knowledge* Observe and describe how seeds and bulbs grow into mature plants
* Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
 | National Curriculum Outcomes: Working Scientifically* Asking simple questions and recognising that they can be answered in different ways
* Observing closely, using simple equipment
* Performing simple tests
* Identifying and classifying
* Using their observations and ideas to suggest answers to questions
* Gathering and recording data to help in answering questions
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| Children might work scientifically by:Observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth. Setting up a comparative test to show that plants need light and water to stay healthy (*taken from the National Curriculum*) |
| Links to prior learning**EYFS:** Children talk about the features of their own immediate environment and how environments might vary from one another. They explain why some things occur and talk about changes (Understanding the World) | Links to future learning**Year 3:** Recognise that light from the Sun can be dangerous and that there are ways to protect their eyes..**Year 4:** Recognise that environments can change and that this can sometimes pose dangers to living things.**Year 5:** Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Use the idea of Earth’s rotation to explain day and night and the apparent movement of the Sun across the sky. |
| Key Vocabularyspring, summer, autumn, winter, season, change, weather, hot, warm, cool, cold, wind, rain, hail, snow, sun, could, temperature | Common Misconceptions* Children may think that it is winter because it is cold and summer because it is hot.
* Many children think that it will only be sunny in summer and only rain in winter
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| Important Scientists**Dr Steve Lyons** (Extreme Weather)**Holly Green** (Meteorologist) | STEM Career Links**Climatologist** (studies climate patterns)**Horticulturist** (an expert in garden cultivation and management)**Meteorologist** (studies the atmosphere and weather)**Park Ranger** (maintains parks) | Links to real life* How does our clothing change in different seasons?
* Which activities can we do in summer that we can’t do in winter?
* Which is the best season for eating ice cream? Why?
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| Key knowledge/facts that the children need to knowName some garden plants - sunflower, pansy, rose Name some wild flowers - daisy, buttercup, dandelion, nettles, brambles.Name some trees - oak, ash, birch, maple, beech(Note, these are examples, if children learn different ones they will still be at the expected standard, as long as there is variety)Know the difference between evergreen and deciduous Identify and name parts of the plant - roots, stem, leaves, petals, flowersIdentify and name parts of the tree - crown, leaves, twigs, branches, roots, trunk |
| Suggested Enquiry Activities |
| Identifying and Classifying* How many different kinds of leaves can we find in our outdoor area?
* How can we group these leaves in different ways?
* Which clothes would we wear out in summer and which are better for winter?
* Sorting summer/autumn images
* Sorting autumn/winter clothing
 | Simple Comparative Testing* Which coat/hat/pair of gloves will keep us warmest outside in winter?
 | Observation over Time* How does the view from our window change with each season?
* Make observations of daylight hours e.g. send a diary and toy bear home with one child each day and ask the child to record their activities, but the bear needs to go to bed when it gets dark and the children must record the time this happens. (This gathers evidence, over time, that day length changes and so do activities.)
* Observe the changes in the environment – take a picture in the same place at different times in the school year. What is different/similar?
* Observe a tree in the playground – how does it change throughout the year?
 | Pattern Seeking* Which is the coldest month? – look at the temperature for the first week of every month – observe this then over time.
* At the end of the year, look for patterns in evidence e.g. Does it rain more in spring? Do we have more sunny days in the summer? Which was the coldest month?
 | Research using Secondary Sources* Read books about the seasons
* Watch some weather forecasts (Newsround is a good source for this)
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| Wow Factor Experiences* Carry out seasons walks or seasons scavenger hunts
* Take a photo from the same spot in each season. This is a nice activity to set for homework
* Use autumn leaves to create collages or Andy Goldsworthy inspired pictures and sculptures
* Engage with Farmer Time and speak with a farmer about what they need to do on the farm at different times in the year and how their job differs as the seasons change
* Set up a weather station in the outdoor area that includes a ‘TV studio’ for creating weather broadcasts
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| Maths Links* Take the temperature each week with the help of an adult. Discuss each time whether this is more or less than the previous week. This can also be turned into a simple block graph
* Make rain gauges using recycled materials and measure rainfall
 | Literacy Links* Create seasons poems using precise adjectives
 | Broader Curriculum Links**Art:** Create art using natural objects – this is particularly effective in autumn. Create ‘sun print’ pictures. |
| Story LinksOne Year with Kipper – Mick Inkpen Alfie’s Weather – Shirly HughesA Year in Nature – Hazel Maskell Tree – Britta TeckentrupLeaf Man – Lois Ehlert Over and Under the Snow – Kate MessnerOne Springy Day – Nick Butterworth One Snowy Night – Nick ButterworthRain – Sam Usher Sun – Sam UsherSnow – Sam Usher Storm – Sam Usher |
| Helpful WeblinksAssessment exemplification (could also be useful with planning ideas) – <https://www.ase.org.uk/resources/y1-seasonal-changes-olivia>BBC Class Clips (useful videos) – <https://www.bbc.co.uk/teach/class-clips-video/science-ks1-ks2-wonders-of-nature-the-changing-seasons/zh4rkmn> Farmer Time (free Skype chats with farmers) – <https://leafuk.org/farmertime/home>Online CPD on this topic – <https://www.reachoutcpd.com/courses/lower-primary/seasonal-changes/>STEM Learning’s online resource library for Seasons - <https://www.stem.org.uk/resources/community/collection/277256/seasons-and-weather> |