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| **The Difference Between Deciduous and Evergreen Trees** | | | |
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| Understanding the difference between deciduous and evergreen trees | | | |
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| **Stay safe** | | | |
| Whether you are a scientist researching a new medicine or an engineer solving climate change, safety always comes first. An adult must always be around and supervising when doing this activity. You are responsible for:    • ensuring that any equipment used for this activity is in good working condition  • behaving sensibly and following any safety instructions so as not to hurt or injure yourself or others    Please note that in the absence of any negligence or other breach of duty by us, this activity is carried out at your own risk. It is important to take extra care at the stages marked with this symbol: ⚠ | | | |
| **Subject(s):** Science  **Approx time:** 30 - 50 minutes |  | | **Key words / Topics:**   * Deciduous * Evergreen * Leaf / leaves * Seasons (Spring/Summer/Autumn/Winter) * Tree * Bark * Branch * Trunk |
| **Suggested learning outcomes** | | | |
| * To be able to state the differences between a deciduous and evergreen tree. * To be able to describe how a deciduous tree changes with the seasons. | | | |
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| **Introduction** | | | |
| This is one of a set of resources developed to support the teaching of the primary national curriculum. They are designed to support the delivery of key topics within maths and science. This resource focusses on understanding the difference between deciduous and evergreen trees.  Trees and their leaves are an important part of our natural environment. We can use our science knowledge to better understand them and hence the environment around us! | | | |
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| **Stay safe** | | | |
| **Purpose of this activity**  In this activity learners will be shown the difference between deciduous and evergreen trees, in terms of their foliage and changes across the seasons. The difference will also be reinforced by comparison with behaviours relating to the wearing of clothing. It can also include the creation of a ‘class tree’ where learners write their names on leaves and attach them to a paper representation of a tree on a noticeboard.  This activity could be used as a main lesson activity to teach the difference between deciduous and evergreen trees. It could also be used as one of several activities within a wider scheme of learning focussing on the use of science to understand the natural environment. | | | |
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| **Activity** ⚠ |  | | **Teacher notes** |
| **Types of Tree (10 minutes)**  Presentation by the teacher (see suggestions in teacher notes), with Q&A as appropriate.  **Making a Class Tree (20-40 minutes)**  Teacher to demonstrate safe use of scissors if applicable.  Learners to each make their own leaf, writing their name on it, and attach it to the tree outline on the noticeboard. |  | | The initial part of this activity is designed as a presentation to the class, with the class tree activity carried out as individuals.  **Types of Tree**  Use the presentation to introduce the types of tree, their differences in foliage and their behaviour over the seasons.  Deciduous and evergreen are the terms used in the national curriculum, but some learners struggle may find hardwood and softwood easier. These terms also fit in well with understanding needed in Key Stage 3 design and technology. Hardwoods come from deciduous trees and softwoods come from evergreen/coniferous trees. Note that these terms are just types of wood and not the properties of the wood – hardwoods are not necessarily hard (balsa is soft enough that it can be marked using a thumbnail) and softwoods are not necessarily soft (parana pine is used to make wooden stairs).  With relation to seasonal changes, the evergreen slide could be introduced in ‘trick question’ format, asking learners to spot the differences in the tree across the seasons. Evergreen trees keen their pines or needles all year. The clue is in the name! As a result they normally grow much faster than hardwood trees – an evergreen tree might reach full size in 30 years, where a deciduous tree might need 100 years!  Understanding of seasonal variations can be reinforced by comparing the foliage to clothing, where the leaves are like the clothes worn by tree. Evergreen (softwood) trees keep their green clothing all year. Deciduous (hardwood) trees lose their coats in winter. Hence as they stand in the cold, they might think of themselves as ‘hard’. However, what would we think of a person who did the same?  **Making a Class Tree**  This could be used to reinforce understanding. It is also a useful way of developing a class identity. The trunk and branches can be made from strips of brown sugar paper stapled to a noticeboard. Learners can each make a leaf with their name to attach to a tree. Different branches could even represent different table groupings within the classroom. |
| **Differentiation** |  | |  |
| **Basic** |  | | **Extension** |
| Provide learners with pre-cut leaves for the class tree activity (possibly with names pre-written if necessary). |  | | Identify different types of deciduous and evergreen trees – this could be a sort-card type activity to classify named trees by type or an open-ended task to identify tree names and their classification using the internet. If suitable safeguarding arrangements are in place, this could be carried out outside identifying the types of trees within the school grounds, if applicable.  The associated activities ‘Leaf it!’ (identify the main parts of the leaf and explain their main purpose), ‘Put a ring on it!’ (calculating tree age) or ‘Dryads diary’ (following the changes in a tree over a year) could also be used. |
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| **Resources** ⚠ |  | | **Required files** icon-docicon-pdficon-ppt |
| * Projector * Noticeboard with ‘tree’ structure assembled from strips of brown sugar paper * Paper for learner leaves * Safety scissors (unless leaves are pre-cut) |  | | Teacher presentation – The Difference Between Deciduous and Evergreen Trees |
| **Additional websites** |  | |  |
| * **Bitesize – film clip** explaining the difference between deciduous and evergreen trees and their seasonal cycles**:** <https://www.bbc.co.uk/teach/class-clips-video/science-ks1-ks2-ivys-plant-workshop-are-plants-the-same-all-year-round/zdvct39> * **Quiz – types of tree:** a multichoice quiz of types of tree and how they are affected by the seasons. <https://www.educationquizzes.com/ks1/science/plants-tree-growth/> * **YouTube –** **Very short clip showing examples of deciduous and evergreen trees** by a horticulturist: <https://www.youtube.com/watch?v=B2xF_z31qnE> * **Identifying different types of trees:** (note - requires pinterest login) a printable sort card activity for deciduous and evergreen trees<https://www.pinterest.co.uk/pin/35043703330694260/> and a poster showing different trees and their leaves <https://www.pinterest.co.uk/pin/426223552229845667/>. | | | |
| **Related activities (to build a full lesson)** |  | |  |
| **Starters** (Options)   * Discuss the importance of trees to the natural environment. * Identify the parts of a tree (trunk, branches, leaves, bark, roots) | | **Extension** (Options)   * Identify different types of deciduous and evergreen trees. * ACTIVITY – How do deciduous trees change? * ACTIVITY – Put a ring on it * ACTIVITY – Leaf it   **Plenary**   * Create a ‘class tree’, with each learner writing their name on a leaf. * Q&A on the characteristics of the different types of tree. * Identifying trees about the school or current locale and classifying them by type. | |
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| **The Engineering Context** film |
| * Environmental engineers are tasked with improving the quality of the natural environment around them. The more they understand about this, the better they can do their jobs. * The use of different types of wood and trees has a significant environmental impact. |

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| **Curriculum links** | |
| **England: National Curriculum**  Science  KS1 Year 1 Plants:   * identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. | **Northern Ireland Curriculum**  KS1 Strand 3: My Environment  Science & Technology:   * The variety of living things in the local environment, and sorting according to observable features * Changes in the local natural environment, including how they can affect living things   KS2 Strand 3: My Environment:  Science & Technology   * Similarities and differences among animals and among plants |
| **Scotland: Curriculum for Excellence**  Sciences  Planet Earth - Biodiversity and Interdependence:   * SCN0-01a * SCN1-01a * SCN2-01a | **Wales: National Curriculum**  Foundation – Knowledge and understanding of the world – Myself and other living beings:   * observe differences between animals and plants, different animals, and different plants in order to group them * identify some animals and plants that live in the outdoor environment * identify the effects the different seasons have on some animals and plants |

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| **Assessment opportunities** | | |
| * Oral feedback and response to questions from the teacher about characteristics of the different types of tree. | | |
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