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|  | **Understanding the World (SCIENCE)** | | | | | | | |
|  | **Development Matters** | | | | | | | |
|  | 1. Plant seeds and care for growing plants.  2. Understand the key features of the life cycle of a plant and an animal.  3. Begin to understand the need to respect and care for the natural environment and all living things.  4. Explore how things work  5. Explore collections of materials with similar and/or different properties.  6. Talk about what they see, using a wide vocabulary  7. Use all their senses in hands-on exploration of natural materials  8. Be increasingly independent in meeting their own care needs, e.g., brushing teeth (PSED)  9. Describe what they see, hear and feel whilst outside  10. Recognise some environments that are different from the one in which they live.  11.Understand the effect of changing seasons on the natural world around them  12. Know and talk about the different factors that support their overall health and wellbeing - toothbrushing (PSED) | | | | | | | |
|  | **Knowledge** | | | | | | | **Skills** |
|  | Know that changes can be reversed – melting ice  Know that some changes eg. bread making cannot be reversed  Know that plants grow and change over time  Know that brushing teeth helps to keep them clean and that eating less sweets and sugar can help  Know what living things need to grow and stay alive – water, food, light, warmth  Know that earth is a planet in space  Know the names of common sea creatures | | | | | | | Observe changes over time – growing plants  Use scientific vocabulary eg. Chrysalis  Know how to care for living things eg plants, chicks, butterflies  Brush teeth effectively  Sort foods into healthy and unhealthy  Sort insects using different criteria  Name Earth, Sun, Moon and some other planets  Sort materials by property  Sort animals by characteristics |
|  | **Autumn 1 - 4,6,8,12** | | | | | | | Vocab |
|  | **Knowledge** | | **Skills** | | | | | Rise, mix, rise, cook, bake, change, different, prove  Teeth, tooth, healthy, toothpaste, baby teeth, adult teeth, fluoride, properly, sugar, sweets, clean, dentist |
| **Where do I belong?** | Know that some changes eg. bread making cannot be reversed  Know how to keep teeth healthy  To know they need to brush their teeth twice a day for 2 minutes  To know the effect of too much sugar  To know about baby and adult teeth  To know the role of a dentist | | Name the ingredients in bread  Use scientific vocabulary  To be able to brush their own teeth properly | | | | |
|  | How do we make bread?  1: Linked to text of Little Red Hen, taste, smell and feel a variety of breads.  2: Explore ingredients needed to make bread. Observe and describe changes whilst making bread. | | | | | | | |
|  | **Autumn 2 - 4,6,9,11,12** | | | | | | | Vocab |
| **Why and how do we Celebrate?** | **Knowledge** | | | **Skills** | | | | Power, energy, on, off, battery, plug, sun, moon, switch, candle, lantern, light, dark |
| Know that light comes from different sources | | | Name and identify some sources of light  Describe light and dark  Use scientific vocabulary  To be able to brush their own teeth properly | | | |
|  | Where can light come from?  1. Linked to text ‘Can’t You Sleep Little Bear’ and other links to celebrations of light discuss different sources of light and how the light gets brighter.  2. Explore different sources of light in the classroom and home and how they work.  3. Investigate light sources in dark places | | | | | | | |
|  | **Spring 1 – 5,6,7,9,10,11,12** | | | | | | | Vocab |
| **What makes a place cold?** | **Knowledge** | | | | | | **Skills** | Melt, freeze, reversible, cold, smooth, hard, slippery, weather, change, same, different wet, move, hard  Artic, Antarctic, fur, feather, thick, warm, insulation, waterproof, snow, ice |
| To know ice is frozen water.  To understand that ice changes back to water.  To know that changes can be reversed.  To name and recognise animals that live in the Arctic/Antarctic. | | | | | | To observe changes over time.  To use scientific vocabulary eg freeze, change.  To describe how animals are adapted to live in a cold climate.  To be able to brush their own teeth properly |
|  | What is it like in cold places?  1. Linked to text ‘We’re going on a polar bear hunt’  2. Physically explore ice. Where is it from? What does it feel like? What is happening to it? Why?  3. How is ice made? Look at water. How can we change the water? What does conditions does it need. Where shall we put it? Observe changes.  4. Ice. How can we stop the ice melting too quickly?  5. What do animals that live in cold places look like? Why do they need thick, white fur? | | | | | | | |
|  | **Spring 2 - 4,6,7, 9** | | | | | | | Vocab |
| **Where can we go?** | **Knowledge** | | | | **Skills** | | | vehicle, transport, journey, similar, different,  flight, fly, wings, aerodynamic, lift, float, sink, disintegrate |
| To know the features needed to make a paper airplane  Name some different simple materials Know that some changes  (making a gingerbread man) are permanent | | | | Begin to describe differences between materials eg. Paper/wood  Name the ingredients used to make gingerbread  Describe the process of making gingerbread beat/mix/fold/knead  To be able to make a paper airplane that will fly | | |
|  | How do we make gingerbread?  1: Linked to text of The gingerbread Man explore ingredients needed to make gingerbread.  2 Observe and describe changes whilst making bread.  3 Explore materials that would be suitable to make an aeroplane. What properties would they need?  4 Make a paper airplane that will fly linked to Emma Jane’s Aeroplane | | | | | | | |
|  | **Summer 1 – 1,2,3,6,8,9,10,11,12** | | | | | | | Vocab |
| **What can grow?** | **Knowledge** | | | | | **Skills** | | Seed, plants, living, non-living, leaves, flower, pollen, insects, animals, life-cycle, butterfly, chrysalis, caterpillar, frog, tadpole, frogspawn, eggs, chicks, hens |
| Know that plants grow and change over time.  Know about the lifecycles of a butterfly, chicken and frog.  To be able to name different minibeasts and recognise and describe their characteristics. | | | | | To observe and be able to talk about changes over time.  To understand what living things need to grow and stay alive.  To sort minibeasts using different criteria.  To use scientific vocabulary related to growth.  To be able to brush their own teeth properly | |
|  | What do plants need to grow?  1. Linked to text ‘The Little Seed’’ plant sunflower seeds. What do seeds need to grow? Experiment by planting seeds and putting some in cupboard/not watering.  2. Life cycles - Set up tank with frogspawn. - What is happening now? What happens when the tadpoles come out of the eggs? What do they eat? What else do they need? What will happen next? Set up incubator with chicken eggs and countdown to hatching calendar. Why do they need to be kept warm and turned regularly? What is happening now? What do they need when they have hatched? Observation over next few weeks.  3. Linked to text ‘The Hungry Caterpillar’. Explore healthy/unhealthy food and know the effect of eating healthy/unhealthy food has on their teeth and bodies.  4. Minibeast hunt in local environment. Where can we find minibeasts? Do they all live in the same places?  5. Sort minibeasts according to characteristics. Do they all look the same? Are they all the same colour? Do they all have wings/legs/same number of legs? | | | | | | | |
|  | **Summer 2 - 3,5,7,8,10,12** | | | | | | | Vocab |
| **Who wants to be beside the sea?** | **Knowledge** | **Skills** | | | | | | Local, Heeley, park, shops, seaside, rock pool, sea, sea creatures, seaweed, living, tide, predator, plant, animal |
| To identify and know the names of common sea creatures. | Name and describe the features of common sea creatures.  Use scientific vocabulary relating to the local environment and the seaside.  To be able to brush their own teeth properly | | | | | |
|  | What lives in a rock pool?  1. Linked to text ‘On the seashore’ What can you see? Why do we get rock pools? What creatures live in rock pools? What do they look like? Which ones are animals/plants?  2. Sort models of sea creatures eg. those with legs/ those with fins/ those with shells  3. Game - Investigate model sea creatures buried in sand and describe how they feel/characteristics to class. What sea creature could it be?  4. What are the differences/similarities between Heeley and the seaside? What can you see in the Summer at Heeley/at the seaside? | | | | | | | |
|  | **End Point:**  **Children will use scientific vocabulary in context. They will know how to care for living things like plants and chicks/caterpillar/butterflies. Children will be able to discuss how things such as ice can change over time. EYFS pupils will know how to clean their teeth effectively and how to look after them by brushing twice a day and limiting sugar intake. They will know the difference between healthy and unhealthy foods.** | | | | | | | |