Science Term Autumn 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| EYFS | Year 1/2 | Year 3 | Year 4 | Year 5 | Year 6 |
| **Intent**  To explore the immediate environment, including textures of different materials, cause and effect, spot changes and details in the natural world around me including weather and seasons.   | **Intent – Materials**To investigate properties of materials and describe their uses | **Intent – Forces and Magnets**Compare how things move on different surfaces and identify that some forces need contact between two objects but magnetic forces can act at a distance. Compare and group a variety of everyday materials on the basis of whether they are attracted to a magnet and identify magnetic materials. | **Intent – Teeth and the digestive system** To be able to understand the functions of the digestive system | **Intent – Properties and Changes to Materials** To identify different materials and to be able to identify changes of state, both reversible and irreversible. | **Intent – Living things and their habitats** To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. |
| **Learning Sequence**  **-**Can I describe what I can hear, see and feel when outside? -Can I respond to ‘How and Why’ questions and talk about what I can see and hear whilst outside using a wider range of vocabulary?-Can I talk about the weather and season through songs and our daily calendar? -Can I investigate through play to explore a range of textures and cause and effect e.g., shaving foam, porridge, cous cous, aquabeads, mud, sand, rice, paint etc? - Can I explore scale, measurement, and cause and effect in relation to trajectory through loose parts, construction sets and large-scale block play? -Can I explore measure – length, height, distance including how tall would our book vote towers be? - Can I develop my fine motor skills by using whole hand grasp with large magnifying glasses and tweezers, using large bug pots, pestle and mortar mixing leaves and large torches, kneading, pushing, rolling, pinching, twisting, plaiting, squeezing, threading and pressing different materials and textures?     | **Lesson Sequence**1, Do you think plastic is useful? Investigate uses of different types of plastic. 2. Making plastic from milk! Investigation 3. Properties of word: Making Catapults 4. Floating and sinking 5. Boat designs6. STEM Challenge on properties of materials. | **Lesson sequence**1. Identify that friction is a force between 2 surfaces and slows moving objects. 2. Work scientifically to compare how things move on different surfaces. 3. Carry out an experiment to show that rougher materials have more friction. 4. Investigate which materials are magnetic. 5. State that magnets have 2 poles and that like poles repel each other and opposite poles attract each other. 6. Classify different materials based on whether they are attracted to a magnet or not | **Lesson sequence**1, I can correctly name the significant parts of the digestive system.2. I can describe the functions of the significant parts of the digestive system.3. I can define what digestion is and why it is necessary.4. I can name the different types of teeth in humans5. I can describe the functions of each tooth type with reference to the tooth’s shape.6. I can discuss problems that may arise from not brushing teeth regularly. | **Lesson Sequence**1. Can I classify materials as transparent, translucent or opaque? 2. Can I classify materials based on whether they are attracted to magnets? 3. Can I define the terms conductor and insulator? 4. Can I state which types of material make the best thermal and electrical conductors/insulators? 5. Can I demonstrate that dissolving, mixing and changes of state are reversible changes? 6. Can I understand that some materials will dissolve in liquid to form a solution? | **Lesson Sequence**1,To break down classifications using a flow chart. 2. To classify living things by types of organisms. 3. To extract DNA from fruits. 4. To classify mammals based on characteristics. 5. To research the similarities and differences between primates and humans |
| **Key Vocabulary:** material, properties, senses, weather, seasons, textures, feel, effect, measure | **Key Vocabulary:**materials, properties, describe, float, sink, density, buoyancy, mass, weight, submerged. | **Key Vocabulary:** force, push, pull, twist, contact force, magnetic force, magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole. | **Key Vocabulary:** digestion, digestive system, teeth, oesophagus, stomach, intestine, | **Key Vocabulary:** Transparent, translucent, opaque, magnet, conductor, insulator, thermal, dissolving. | **Key Vocabulary:** Classification, Kingdom, Species, Taxonomy, Animal, Plant, Mammal. |
| **Impact:**  Children can use describe textures and things in the immediate environment using their 5 senses. Children develop the fine motor skills to interact with different materials and equipment.   | **Impact:**To work scientifically testing materials and their uses and orally explain what they have learnt. | **Impact:** Children can describe the affects of friction and its uses in the wider world. They understand how magnetism works and identify materials which will be attracted to a magnet. | **Impact:** Children will understand how their own bodies function. | **Impact:** Children can discuss the properties of different materials and discuss changes of state. | **Impact:**Children can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution |
|   |  |  |  |  |  |