|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Year 4 Autumn: Animals including humans – digestive system (biology) 8** | | | | | | | |
| **What are the main parts of the digestive system?** | **What is the role of the digestive system?** | **What are the different types of teeth called?** | **What role do teeth play in digestion?** | **What do food chains show?** | **What are producers?** | **What are prey?** | **What are predators?** |
| **Year 4 Autumn: Electricity (physics) 8** | | | | | | | |
| **Where does electricity come from?**  Key learning: Electricity is generated using energy from natural sources such as the Sun, oil, water and wind  Research task – different energy sources.  Resources: range of sources of information, laptops | **Which appliances run on electricity?**  Key learning: Some appliances use batteries and some use mains electricity  Practical: PZAZ 4.5 Electricity Electrical Conductors – Electrical appliances  Put appliances out on the table (some mains powered, some battery powered, some not electrical) – chn to explore and sort  Explore why some are battery powered/some are mains powered  Resources: range of electrical equipment | **What is a complete circuit?**  Key learning: A complete circuit is a loop that allows electrical current to flow through wires  Practical: PZAZ 4.4 Electricity Circuits – Build a circuit activity. Chn to be given a range of electrical equipment and encourage chn to attempt to build a circuit (don’t tell them which equipment to use/how to do it). Encourage chn to think about how they know that the circuit is complete/not complete.  Resources: wires, bulbs, batteries, battery holders, crocodile clips | **What is a series circuit?**  Key learning: A series circuit is a simple circuit with several components one after the other.  Practical: 4.4 Electricity Circuits – Build a circuit activity. Expand on previous week’s lesson by adding different components within the circuit eg buzzers, motors. Give chn a purpose for making circuits  Resources: wires, bulbs, batteries, battery holders, crocodile clips, buzzers, motors | **How does a circuit work?**  Key learning: The battery pushes electricity along the wires from the positive terminal, through the bulb and back to the negative terminal.  Practical: Modelling moving around circuit with the children? | **What is an electrical conductor?**  Key learning: Objects that are made from materials that allow electricity to pass through them  Practical: PZAZ 4.5 Electricity Electrical Conductors – Conductor or insulator activity.  Resources: Wires (with crocodile clips), Cells, Cell holders, bulbs, various materials. | **What is an electrical insulator?**  Key learning: Objects that are made from materials that do not allow electricity to pass through them.  Practical: PZAZ 4.5 Electricity Electrical Conductors – Building a burglar alarm activity  Resources: AA Cells, Cell holders, bulbs, wooden pegs, foil, card, wire snippers, insulated copper wire. | **What can be used to break the flow in a circuit?**  Key learning: A switch controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow.  Practical: 4.4 Electricity Circuits – Board Game activity – build a board game. Explore building a circuit before making board game, add switch. What impact does this have on the circuit? What is happening when the switch is off? Is electricity still flowing?  Make board game using all components and switch.  Resources: Carboard, Aluminium Foil, Buzzer, 2 AA cells, cell holder, electrical conducting tape, wires, switch |
| **Year 4 Spring: Sound (chemistry) 8** | | | | | | | |
| **What is a sound?** | **How is a sound made?** | **How do sounds travel?** | **What is pitch?** | **What is volume?** | **How do we measure a sound?** | **How do we hear sounds?** | **What happens as the distance from a sound increases?** |
| **Year 4 Spring/Summer: Living things and their habitats (biology) 8** | | | | | | | |
| **How can living things be grouped?** | **What are vertebrates?** | **What are invertebrates?** | **What is a classification key?** | **How do habitats change over time?** | **How can environments change positively?** | **How can environments change negatively?** | **What happens as a result of habitat change?** |
| **Year 4 Summer: States of matter (chemistry) 7** | | | | | | | |
| **What is a particle?** | **What is a solid?** | **What is a liquid?** | **What is a gas?** | **What happens when water is heated?** | **What happens when water is cooled?** | **What is the water cycle?** |  |