**Newquay Junior Academy - Summer 1 Sequence – SCIENCE**

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| Logo  Description automatically generated |  | **YEAR 3**  **Prior knowledge...**  Animals including humans  Basic stages of an animal life cycle. The importance of exercise for humans. The basic needs of animals including humans for survival. |  | **YEAR 4**  **Prior knowledge...**  States of matter  Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials.  Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. |  | **YEAR 5**  **Prior knowledge...**  Animals including humans  Describe the simple functions of the basic parts of the digestive system in humans.  Identify the different types of teeth in humans and their simple functions. |  | **YEAR 6**  **Prior knowledge...** |
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| **INTENT** |  | Animals including humans  Pupils will develop knowledge, skills and understanding in nutrition, muscles, bones and joints and conduct their own research to answer questions. |  | States of matter  Pupils will understand the molecular structure of the three states of matter (solid, liquid and gas). They will practically investigate the processes involved to change these states. Pupils will be able to use scientific vocabulary to explain how the water cycle works. |  | Animals including humans  Pupils will be able to describe the different stages of a human life cycle. |  |  |
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| **VOCABULARY / STICKY KNOWLEDGE** |  | Animals including humans - Nutrients, nutrition, carbohydrates, protein, fats, vitamins, water, fibre, skeleton, bones, joints, endoskeleton, exoskeleton, vertebrates, invertebrates, muscles, contract, relax.  Different animals are adapted to eat different foods.  Many animals have skeletons to support their bodies and protect vital organs. Muscles are connected to bones and move them when they contract. Movable joints connect bones. |  | States of matter - Solid, liquid, gas, particles, state, materials, properties, matter, melt, freeze, water, ice, temperature, process, condensation, evaporation, water vapour, energy, precipitation, collection.  Solids, liquids and gases have different properties.  Materials can be divided into solids, liquids and gases.  Heating causes solids to melt into liquids and liquids evaporate into gases.  Cooling causes gases to condense into liquids and liquids to freeze into solids.  The temperature at which given substances change state are always the same. |  | Animals including humans - foetus, embryo, womb, gestation, baby, toddler, teenager, elderly, growth, development, puberty, hormone, physical, emotional.  Different animals mature at different rates and live to different ages.  Puberty is something we all go through, a process which prepares our bodies for being adults, and reproduction. Hormones control these changes; which can be physical and/or emotional. |  |  |
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| **SEQUENCE OF LESSONS** |  | **Animals including humans**  **Explorify - https://explorify.uk/en/activities/the-big-question/what-food-helps-to-keep-us-healthy**  1. To identify that animals and humans need the right types and amounts of nutrition.  2. To identify that animals and humans cannot make their own food; they get nutrition from what they eat.  3. To identify that some animals and humans have skeletons for support, protection and movement. |  | **States of matter**  1. To explain the particle structure and properties of a solid, liquid and gas.  2. To practically investigate gas.  3. To explain how materials change state when they are heated or cooled.  4. To practically explain the process of evaporation.  5. To explain the process of the water cycle. |  | **Animals including humans**  What if the average human lifespan was 200 years?  1. To create a timeline of a human life.  2. To study the development from foetus to birth.  3. To work scientifically to investigate gestational periods.  4. To learn about the changes experienced in puberty. |  |  |
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| **OUTCOME / COMPOSITE** |  | Animals including humans  Pupils will work with a local Vets to investigate skeletons. |  | States of matter  Pupils will practically investigate the different states of matter. By the end of the topic, they will make their own ‘Water cycle in a bag’ to be shared with parents/carers. |  | Animals including humans  Pupils will produce their own human timeline. |  |  |