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Whole School Science Overview — Lache Primary School

NC Key Stage 1:
- Observe and experience phenomena, looking more closely at the natural and humanely constructed world around them.
- Develop scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information.
- Begin to use simple scientific language

NC Key Stage 2:
-Broaden and deepen their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena.
-They should ask their own questions about what they observe and make some decisions about which scientific enquiry are likely to be the best ways of answering them.
-Draw simple conclusions and use some scientific language

Additional Opportunities:
- Parental involvement groups
- Science homework- 1 per term
- Enrichment days—P4L, STEM
- Outside visitors
- Community projects
- Trips—Beeston, Delamere, Chester Zoo, Liverpool Museum, Ménai
- Themed Science weeks/days
- STEM workshops

EYFS Framework:	Explore the natural world around them, making observations and drawing pictures of animals and plants. Know some similarities and differences between the natural world around them and contrasting environments, drawing experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants: -Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. -Identify and describe the basic structure of a variety of common flowering plants, including trees. **Animals (including humans):** -Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. -Identify and name a variety of common animals that are carnivores, herbivores and omnivores -Describe and compare the structure of a variety of common animals -Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. **Everyday Materials:** -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. **Seasonal Changes:** -Observe changes across the four seasons -Observe and describe weather associated with the seasons and how day length varies.	**Living Things & Their Habitats:** -Explore and compare the differences between things that are living, dead and things that have never been alive -Identify that most living things live in habitats to which they are suited, describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other -Identify and name a variety of plants and animals in their habitats, including micro-habitats -Describe how animals obtain their food from plants and other animals using the idea of a simple food chain. **Plants:** -Observe and describe how seeds and bulbs grow into mature plants -Find out and describe how plants need water, light and a suitable temperature to grow **Animals (including humans):** -Notice that animals, including humans have offspring -Find out about and describe the basic needs of animals including humans, for survival -Describe the importance for humans of exercise, different types of food and hygiene **Uses of Everyday Materials:** -Identify and compare the suitability of a variety of everyday materials for particular uses -Find out how the shapes of solid objects can be changed by squashing, bending, twisting and stretching.	**Plants:** -Identify and describe the functions of different parts of flowering plants -Explore the requirements of plants for life and growth and how they vary from plant to plant -Investigate the way in which water is transported within plants -Explore the part that flowers play in the life cycle of flowering pants **Animals (including humans):** -Identify that animals, including humans, need the right types and amount of nutrition, and they get nutrition from what they eat -Identify that humans and some other animals have skeletons and muscles for support, protection and movement **Rocks:** -Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties -Describe how fossils are formed -Recognise that soils are made from rocks and organic matter **Light:** -Recognise that light is needed in order to see things and that dark is the absence of light -Notice that light is reflected from surfaces -Recognise that light from the sun can be dangerous -Recognise how shadows are formed -Find patterns in the way that the size of shadows change **Forces and Magnets:** -Compare how things move on different surfaces	**Living Things & Their Habitats:** -Recognise that living things can be grouped in a variety of ways -Explore and use classification keys to help group, identify and name a variety of living things in their local and wide environment -Recognise that environments can change and that this can sometimes pose dangers to living things **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 -Construct and interpret a variety of food chains and identify producers, predators and prey **States of Matter:** -Compare and group materials together according to whether they are solids, liquids or gases -Observe that some materials change state when they are heated, cooled and measured -Identify the part played by evaporation and condensation in the water cycle **Sound:** -Identify how sounds are made -recognise that vibrations from sounds travel through a medium to the ear -Find patterns between the pitch of a sound and features of the object that produced it -Find patterns between the volume of a sound and the strength of the vibrations that produced it _recognize that sounds get fainter as the distance increases **Electricity:** -Identify common appliances that run off	**Living Things & Their Habitats** -Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird -Describe the life process of reproduction in some plants and animals. **Animals (including humans)** - Describe the changes as humans develop to old age **Properties & Changes of Materials** - Compare and group together everyday materials on the basis of their properties (hardness, solubility, transparency, conductivity) -Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution -Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. -Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials - Demonstrate that dissolving, mixing and changes of state are reversible - Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible **Earth & Space:** -Describe the movement of the Earth, and other planets, relative to the Sun in the solar system -Describe the movement of the Moon relative to the Earth -Describe the Sun, Earth and Moon as approximately spherical bodies -Use the idea of the Earth's rotation to	**Living Things &Their Habitats** -Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals -Give reasons for classifying plants and animals based on specific characteristics **Animals (including humans)** -Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood -Recognise the impact of diet, exercise, drugs and lifestyle -Describe the ways in which nutrients and water are transported within animals **Evolution & Inheritance** -Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago -Recognise that living things produce offspring of the same kind, but normally offspring vary -identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution **Light** -Recognise that light appears to travel in straight lines -Recognise that objects are seen because they give out or reflect light into the eye -Explain that we see things because light