

Orton Wistow Primary School – Curriculum Plan

Subject : Science - Electricity

Year : 4

Term : Autumn



Vocabulary

Knowledge What children will know

Understanding What children will understand

Skills What children will be able to do

Define the word and include etymology if useful.

Learning	Teaching	Assessment
Remembering	Telling	Testing

Learning	Teaching	Assessment
Practising	Coaching	Observing

Learning	Teaching	Assessment
Reflecting	Facilitating	Evaluating

Components – objects that can be added to an electrical circuit. E.g. bulb, battery, switch, buzzer, motor.
Cells - An electrical cell is a device used to generate electricity, or to make chemical reactions by applying electricity.
Battery - A battery is one or more cells, connected.
Brightness - the quality or state of giving out or reflecting light.
Volume – quantity or power of sound; degree of loudness.
Switch - a device for making and breaking the connection in an electric circuit.
Buzzer - an electrical device that makes a buzzing noise and is used for signalling.
Bulb – an object that emits light.
Motor - a machine that supplies motive power for a vehicle or for another device with moving parts.

Identify common appliances that run on electricity.

 What precautions need to be taken when working with electricity.

 Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers

Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery

 Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit

 Recognise some common conductors and insulators, and associate metals with being good conductors.

Draw circuits (these can be a pictorial representation – conventional circuit symbols are introduced in Year 6.)

Observe patterns – for example that metals tend to be conductors of electricity, or that bulb get brighter as more cells are added.

Working Scientifically
 Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions

 Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions





 Use straightforward scientific evidence to answer questions or to support their findings.

Orton Wistow Primary School – Curriculum Plan

Subject : Science - Sound

Year : 4

Term : Autumn

																					
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<p>Vibration - Vibration or oscillation means quick-moving back and forth (or up and down) about a point of equilibrium.</p> <p>Pitch - The pitch of a sound is how high or low the sound is. (A squeaky sound is a high-pitched sound; A deep sound is a low-pitched sound)</p> <p>Volume - quantity or power of sound; the degree of loudness</p>	<p>Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>Find patterns between the pitch of a sound and features of the object that produced it</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p>	<p>Use what they have learnt about pitch and volume to make their own instruments.</p> <p>Use what they have learned about insulating sound to design a product such as ears muffs that help to reduce the volume of sound reaching the ear.</p> <p>Working Scientifically</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>																		







Orton Wistow Primary School – Curriculum Plan

Subject : Science – Animals including humans.

Year : 4

Term : Spring

																					
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<p>Food chain - a series of organisms each dependent on the next as a source of food.</p> <p>Producer - organisms who make (or produce) their own food</p> <p>Predator - A predator is an animal that hunts and eats other animals.</p> <p>Prey - is the animal that gets eaten by the predator.</p> <p>Carnivore - an organism that eats mostly meat. From the Latin <i>carn</i> which means flesh.</p> <p>Herbivore - an animal that feeds on plants. From the Latin <i>herba</i> – which means plant.</p> <p>Omnivore - an animal or person that eats a variety of food of both plant and animal origin.</p>	<p>Describe the simple functions of the basic parts of the digestive system in humans</p> <p>Identify the different types of teeth in humans and their simple functions</p>	<p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p>Pupils should be introduced to the main body parts associated with the digestive system (mouth, tongue, teeth, oesophagus, stomach, small and large intestine) and should explore questions that help them to understand their special functions.</p>	<p>Working Scientifically Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p>																		



Orton Wistow Primary School – Curriculum Plan

Subject : Science – States of matter

Year : 4

Term : Spring



Vocabulary

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Understanding What children will understand

Skills What children will be able to do

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Solid - A solid can hold its shape (for example, water in solid form is ice).

Liquid - A liquid like water forms a pool: it flows or runs but it can't be stretched or squeezed.

Gas - A gas can flow, expand and be squeezed; if it is in an unsealed container it escapes (water in gas form is steam).

Temperature – degree or intensity of heat.

Evaporation - the process of turning from liquid into vapour.

Condensation - the conversion of a vapour or gas to a liquid.

Melt – when a solid is heated and changes into a liquid.

Compare and group materials together, according to whether they are solids, liquids or gases.

Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)

Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Working Scientifically

Set up simple practical enquiries, comparative and fair tests

Gather, record, classify and present data in a variety of ways to help in answering questions

Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables







Orton Wistow Primary School – Curriculum Plan

Subject : Science – Living Things & their habitats

Year : 4

Term : Summer

																					
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<p>Plant – a living organism typified by growing in a permanent site, that absorbs water and inorganic matter through its roots and uses photosynthesis through its leaves.</p> <p>Animal – living organism that feeds or organic matter, typically having specialised sense organs and nervous system and being able to respond rapidly to stimuli.</p> <p>Invertebrate – animals that don't have a backbone.</p> <p>Vertebrate - an animal of a large group distinguished by the possession of a backbone or spinal column.</p> <p>Classify - arrange (a group of people or things) in classes or categories according to shared qualities or characteristics. <i>From the Latin classis – which means division.</i></p> <p>Characteristics a feature or quality belonging typically to a person, place, or thing and serving to identify them.</p> <p>Mammal – a warm-blooded vertebrate animal that has hair or fur typically gives birth to live young and includes females that secrete milk for</p>	<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Explore examples of human impact (both positive and negative) on environments. (e.g. the positive effects of nature reserves, or garden ponds and the negative effects of population and development, litter or deforestation.</p> <p>Use the local environment to raise and answer questions that help them to identify and study plants and animals in their habitat.</p>	<p>Group a wide selection of living things that include animals and flowering plants and non-flowering plants.</p> <p>Use and make simple guides or keys to explore and identify local plants and animals.</p> <p>Working Scientifically</p> <p>Ask relevant questions and using different types of scientific enquiries to answer them</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p>																		



the nourishment of their young. *From the Latin – mamma – which means breast.*

Amphibian – cold- blooded animal, they are born in water and breath with gills. As the larva grows into an adult form they develop the ability to breathe air and they are able to live on land as well as in water.

Insect – animals that have 3 major body parts (head, thorax and abdomen), 3 pairs of legs and typically 1 or two pairs of wings. *From the Latin in which means into and secare which means to cut.*

Bird – warm-blooded, egg laying animal with feathers, wings and a beak and typically able to fly.

