



EASTRY C OF E PRIMARY SCHOOL KNOWLEDGE ORGANISERS



YEAR GROUP	4
SUBJECT	Science
KEY VOCABULARY	<p><u>Animals including humans</u></p> <ul style="list-style-type: none">• Digestive system – oesophagus, stomach, acid, small intestine• Protein, vitamin, mineral, carbohydrate, fats, energy, growth, repair. Saliva• Teeth – Incisors, canines, premolars, molars• Function• Foodchain – producer, consumer, predator, prey <p><u>Living things and their habitat</u></p> <ul style="list-style-type: none">• Habitat, micro habitat• Pond, meadow, log pile, woodland, river, lake, beach, cliff• Organism – plant, animal• Trees - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine, holly, etc• Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow.• Garden plants – crocus, daffodil, bluebells, etc• Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs• Invertebrates – snail, slug, woodlouse, spider, beetle, fly, etc• Pond animals – pond skater, water slater, ramshorn snail, pond snail, leech, common frog, smooth newt, etc <p><u>Sound</u></p> <ul style="list-style-type: none">• Ways to create sound – bang, blow, shake, and pluck



EASTRY C OF E PRIMARY SCHOOL KNOWLEDGE ORGANISERS

- **Loudness** – quiet, quieter, quietest, loud, louder and loudest
- **Pitch** - low, lower, lowest, high, higher, and highest
- Vibrations
- Source

Electricity

- **Appliances:** fridge, freezer, TV, computer, iron, kettle, etc
- Series circuit
- **Components:** battery, bulb (lamp), bulb (lamp) holder, buzzer, crocodile clip, leads, wires, switch
- **Describing words:** brighter, duller, slow, fast, quiet, loud
- Conductor, insulator
- **Effects of electricity:** Light, sound, movement, heat
- **Switches** – open, close

END POINTS KNOWLEDGE

Animals including humans

- I can describe the simple functions of the basic parts of the digestive system in humans
- I can identify the different types of teeth in humans and their simple functions
- I can construct and interpret a variety of food chains, identifying producers, predators and prey.

Living things and their habitat

- I can recognise that living things can be grouped in a variety of ways
- I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- I can recognise that environments can change and that this can sometimes pose dangers to living things

Materials

- I can compare and group materials together, according to whether they are solids, liquids or gases
- I can 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)



EASTRY C OF E PRIMARY SCHOOL KNOWLEDGE ORGANISERS



- I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Sound

- I can identify how sounds are made, associating some of them with something vibrating
- I can recognise that vibrations from a sound travel through a medium to the ear.
- I can find patterns between the pitch of a sound and features of the object that produced it
- I can find patterns between the volume of a sound and the strength of the vibrations that produced it.
- I can recognise that sounds get fainter as the distance from the sound source increases.

Electricity

- I can identify common appliances that run on electricity
- I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- I can 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
- I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- I can recognise some common conductors and insulators, and associate metals with being good conductors



EASTRY C OF E PRIMARY SCHOOL KNOWLEDGE ORGANISERS



Investigative skills end point

Asking questions

- **Raising Questions:** I know how to raise questions about the world around me based on scientific experiences
- **Choosing a suitable scientific enquiry.** I can begin to make my own decisions about the most appropriate type of scientific enquiry I may use to answer questions

Monitoring and recording

- **Observations.** I can help to make decisions about what systematic and careful observations to make and how long to make them for.
- **Fair testing.** I know when a simple fair test is necessary.
- **Sorting and classifying.** I can talk about the criteria for grouping, sorting and classifying and use simple keys.
- **Secondary sources.** I can recognise when and how secondary sources might help me to answer questions that cannot be answered through practical investigations.
- **Choosing equipment.** I can make decisions about the type of simple equipment that might be used and how it should be used appropriately. (data loggers and thermometers).
- **Collecting data.** I can collect data from my own observations and measurements.
- **Measuring.** I can use standard units.
- **Recording.** I can make decisions as to how to record. I can record in notes, drawings, labelled diagrams, bar charts and simple tables Using relevant scientific language to discuss my ideas and communicate my findings in ways that are appropriate for different audiences.

Concluding

Analysing data. I should make decisions how to analyse data. I can look for patterns and decide what data to collect to identify them. With help, I can look for changes, patterns, similarities and differences in my data in order and draw simple conclusions and answer questions. With help, I can identify new questions arising from the data, making predictions for new values within or beyond the data I have collected.

Evaluating

- **Making improvements.** I can find ways of improving what they have already done.



EASTRY C OF E PRIMARY SCHOOL KNOWLEDGE ORGANISERS

IT HELPS IF I ALREADY KNOW

Animals including humans (year 3)

I know how to identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat

I know how to identify that humans and some animals have skeletons and muscles for support, protection and movement.

Rocks and Soils (year 3)

I know how to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties

- o Describe in simple terms how fossils are formed when things that have lived are trapped within rock
- o Recognise that soils are made from rocks and organic matter.

LIVING THINGS IN THEIR HABITATS (year 2)

I know some things are living some were once living but now dead and some things never lived.

I know there is variation between living things.

I know different animals and plants live in different places.

I know living things are adapted to survive in different habitats.

I know environmental change can affect plants and animals that live there.

Investigative skills I already know