ALL SAINTS' SCIENCE KNOWLEDGE GEMS

YEAR 3 - EMERALD CLASS

PLANTS – fair testing & research enquiry

SPRING 2	INVESTIGATE	RESEARCH	RECORD
	- I can investigate and describe what plants need to grow (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. - I can investigate and explain the way in which water is transported within plants.	- I can describe the functions of different parts of flowering plants: roots (absorbs water from the soil), stem (transports water and nutrients to the leaves), leaves (makes food for the plant) and flowers (makes the seeds for new plants and attract pollinators). - I can describe the life cycle of flowering plants; germination, growing and flowering, pollination, fertilisation and seed formation and seed dispersal.	-I can make predictions for a fair test I have set up and use my scientific knowledge to explain my hypothesis. - I can record my results and use what I have found to draw a conclusion based on my scientific knowledge about plants.

ANIMALS including Humans (skeletons & muscles) – pattern seeking & research enquiry

SUMMER 1	INVESTIGATE	RESEARCH	RECORD
	- I can investigate and explain whether males humans have larger skulls than female humans. - I can identify and group living things based on whether they have a spine (vertebrates/invertebrates).	- I know that animals, including humans, cannot make their own food and they get nutrition from what they eat. They need the right types and amounts of nutrition to be healthy. - I know that humans and some other animals have skeletons and muscles for support, protection and movement.	- I can take measurements and use tables to record my results. - I can identify patterns in my results to draw conclusions and raise further questions based on my scientific knowledge.

ROCKS – identifying and classifying enquiry

SUMMER 2	INVESTIGATE	RESEARCH	RECORD
	- I can investigate and explain what happens when rocks are rubbed together (rock abrasion). - I can investigate and sort rocks based on their properties (permeable and impermeable).	- I can describe how fossils are formed when things that have lived are trapped in rock. - I know that soils are made from rocks and organic matter.	- I can use an identification key to name different types of rocks (igneous, sedimentary, metamorphic rocks). - I can use a microscope to help identify the types of rocks based on whether they have grains or crystals.

Big Ideas links: Investigate – Creativity, Research – People and Record - Language

ALL SAINTS' SCIENCE KNOWLEDGE GEMS

YEAR 3 - EMERALD CLASS

LIGHT – observation over time enquiry

	INVESTIGATE	RESEARCH	RECORD
	- I can investigate and find patterns in the way that the size of shadows change. - I can investigate and explain how light is reflected from different surfaces.	- I know that we need light in order to see things and that dark is the absence of light. - I know that light from the sun can be dangerous and that there are ways to protect their eyes. - I know that shadows are formed when the light from a light source is blocked by an opaque object.	-I can draw and label diagrams to explain how light travels and how shadows are formed. - I can record my observations and identify patterns in how shadows change when the distance of the light source changes.

FORCES & MAGNETS – fair testing & research enquiry

	INVESTIGATE	RESEARCH	RECORD
	- I can investigate and describe how things move on different surfaces. - I can investigate and explain how magnets attract or repel each other and attract some materials and not others using different types of magnets.	- I can describe that some forces need contact between two objects, but magnetic forces can act at a distance. - I know that magnets have two poles.	- I can use Venn diagrams/bar charts/tally charts to record magnetic and non-magnetic materials. - I can predict whether two magnets will attract or repel each other, depending on which poles are facings.

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