ROBERT BLAIR SCHOOL

	Explore	Identifying and Classifying	Observation over time	Pattern seeking	Fair Testing	Research
Reception	- Use senses to explore materials, weather, and living things.	- Sort objects by simple criteria (e.g., size, colour, texture).	- Observe seasonal changes (e.g., leaves falling, snow).	- Notice patterns in nature (e.g., day/night, weather changes).	- Not explicitly introduced yet.	- Share stories or facts about animals, plants, and the environment.
Year 1	- Explore materials, plants, and animals using hands-on activities.	- Classify animals (e.g., pets vs. wild animals) and materials (e.g., hard/soft).	- Observe plant growth and seasonal changes.	- Look for patterns in weather or plant growth.	- Begin to compare materials (e.g., which material is waterproof?).	- Find out about animals and their habitats using books or videos.
Year 2	- Explore habitats, plants, and materials in different conditions.	- Classify living things (e.g., mammals, birds, insects) and materials.	- Observe plant growth in light/dark conditions or bulb/seed development.	- Look for patterns in plant growth or animal behaviour.	- Test which materials are best for specific purposes (e.g., building).	- Research habitats and how animals adapt to them.
Year 3	- Explore rocks, fossils, and light through hands-on experiments.	- Classify rocks, soils, and types of skeletons.	- Observe changes in shadows or plant growth over time.	- Look for patterns in fossil distribution or light behaviour.	- Test how light reflects or how different soils retain water.	- Research fossils, dinosaurs, or the impact of food waste.
Year 4	- Explore sound, electricity, and states of matter through experiments.	- Classify living things (e.g., vertebrates/invertebrates) and materials.	- Observe changes in states of matter or sound vibrations.	- Look for patterns in sound pitch or electrical circuits.	- Test which materials conduct electricity or how sound travels.	- Research energy sources, deforestation, or food chains.
Year 5	- Explore forces, space, and materials through hands-on activities.	- Classify materials based on properties (e.g., reversible/irreversible changes).	- Observe changes in materials or life cycles of plants/animals.	- Look for patterns in planetary orbits or material properties.	- Test forces (e.g., friction) or material changes (e.g., melting).	- Research space exploration, global warming, or plastic pollution.
Year 6	- Explore electricity, light, and the human body through experiments.	- Classify living things based on adaptation or variation.	- Observe changes in the human body (e.g., heart rate) or plant growth.	- Look for patterns in adaptation or light behaviour (e.g., reflection).	- Test variables in circuits or light experiments.	- Research fossils, renewable energy, or the impact of diet and lifestyle.

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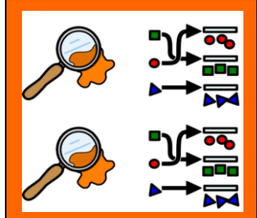
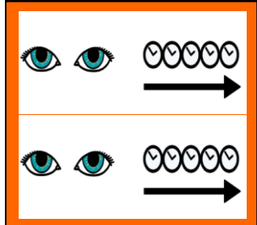
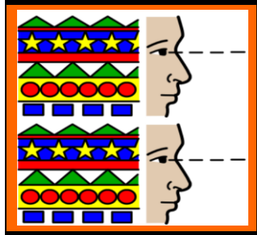
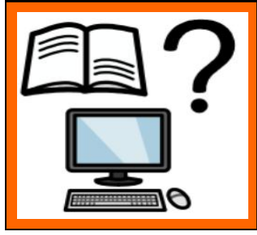
Skills Breakdown

Symbol	Skill	Definition	Progression Statement
	Explore	Explore using all your senses e.g., pouring water through a sieve, changing the shape of clay, shaking objects to hear the sound they make, tasting different types of fruit.	**Explore**: This skill is emphasized in all year groups, with increasing complexity. Reception focuses on sensory exploration, while Year 6 involves more structured experiments.
	Identifying and Classifying	Identifying and classifying involves sorting objects or events into groups. Clear systems (criteria) must be developed and used. Keys are often used as criteria to carry out a classifying process for example, identifying and naming mini-beasts.	**Identifying and Classifying**: This skill progresses from simple sorting in Reception to complex classification systems (e.g., adaptation, materials) in Year 6.
	Observation over Time	This involves the careful observation of something over time, recording changes and taking measurements over time.	**Observation over Time**: This skill develops from observing seasonal changes in Reception to tracking changes in experiments (e.g., plant growth, heart rate) in Year 6.
	Pattern seeking	This involves observing and recording natural events, carrying out experiments where the factors can't easily be controlled or using secondary sources of data. e.g. Distribution of dandelions on the school field, children who regularly eat breakfast have better concentration, taller children have bigger feet.	**Pattern Seeking**: This skill evolves from noticing natural patterns (e.g., day/night) in Reception to analysing scientific patterns (e.g., adaptation, light behaviour) in Year 6.
	Fair Testing	Fair testing finds relationships between factors. One factor is changed while keeping other factors the same. Any differences are said to be the result of the changed factor (or variable).	**Fair Testing**: Introduced in Year 1, this skill becomes more sophisticated, with Year 6 students designing and conducting controlled experiments.
	Research	This involves finding out information that you may not be able to investigate for yourselves.	**Research:** This skill is integrated throughout, starting with simple fact-finding in Reception and progressing to in-depth research on scientific topics in Year 6.