

SCIENCE YEARLY PLANNER

Year group: 3 Renoir

Term	Topic	Statutory requirements	Time	Content
Autumn 1	Plants Light	<ul style="list-style-type: none"> Variations between plants Explore the patterns/the size of shadows and how they change 	1 week 1 week	<ul style="list-style-type: none"> ❖ Explore plants in the school grounds. ❖ Make observations about changes in the appearance and role of the environment. ❖ Learn about how plants adapt across the seasons ❖ Explore the concept of shadows in the window/movement of sun/size of shadows
	Rocks	<ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rocks. 	6 weeks	<ul style="list-style-type: none"> ➤ Pupils should identify some rocks eg marble, granite, slate and explain why they are used for a particular purpose eg slate for a roof. ➤ Pupils should group rocks according to differences in texture and record and justify the groupings. Use results of their tests

		<ul style="list-style-type: none"> Recognise that soils are made from rocks and organic matter. 		<p>to rank rocks in order of ease of wearing away and/or permeability.</p> <ul style="list-style-type: none"> ➤ Relate the use of particular rocks to their characteristics and explain why they are used eg that granite is often used for steps to buildings because it doesn't wear away easily, that marble. ➤ To explore how a fossil is formed. ➤ To explore how fossilisation occurs and how fossils are an important source of information about the past. ➤ Describe how the soils differ from those in the local environment ➤ Separate particles using the equipment provided. ➤ To explore different kinds of rocks and soils included in the local environment (non-statutory)
Autumn 2	Forces and Magnets	<ul style="list-style-type: none"> Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract and repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on 	6 weeks	<ul style="list-style-type: none"> ❖ To know that forces are pushes or pulls and are measured in Newtons (N). ❖ To understand balanced and unbalanced forces. ❖ Pupils should be given a magnet of unfamiliar shape, or with unlabelled ends, demonstrate how it is attracted to, or repelled by, another magnet ❖ Pupils should be able to generalise about what happens when magnets are put near one another or together, using scientific terms

		<p>the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <ul style="list-style-type: none"> • Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing. 		<p><i>eg attract, repel</i></p> <ul style="list-style-type: none"> ❖ Pupils should be able to classify a range of materials, including metals <i>eg gold, copper, aluminium</i>, as magnetic or non-magnetic and explain how their work enabled them to do this ❖ Pupils should make a generalisation about magnetic behaviour <i>eg iron is magnetic but other metals aren't, materials that aren't metals aren't magnetic, only some metals are magnetic</i> ❖ Describe and explain how magnets can be used <i>eg in recycling, you can sort iron from other things because it is magnetic</i>
<p>Spring 1 and 2</p>	<p>Animals, including humans</p> <p>Plants</p>	<ul style="list-style-type: none"> • Identify that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food; they get nutrition from what they eat. • Identify that humans and some other animals have skeletons and muscles for support, protection and movement. • The function of body parts 	<p>10 weeks</p>	<ul style="list-style-type: none"> ➤ Pupils know that all animals, including humans, need to feed that animals need to feed to grow and to be active. ➤ Group foods into broad categories <i>eg meat and fish, fats, starches and sugars, vegetables, fruit</i>. Introduce the concept of groups of foods for particular purposes <i>eg some foods, particularly meat, fish, cheese, lentils, beans, supply what we need for growth; fats, sugars and starches provide what we need to be active</i>. ➤ Pupils recognise that a broad and varied diet keeps us healthy-produce healthy plate. ➤ Pupils describe a varied and balanced diet suggesting some

- Variation in plants

foods that are needed for growth and some that enable us to be active.

- Understand that different animals have different diets-to raise questions about the diet of different pets.
- To turn ideas about the diet of animals into a form that can be investigated and to decide how many animals should be investigated and the range of foods to be considered.
- To present evidence about the foods eaten by animals in a suitable bar chart or pictogram.
- Identify similar parts of the skeleton in some other species
- To list similarities *eg they all have spines (or backbones) and skulls*, and differences *eg the cat's bones are much smaller than the human bone.*
- Describe the characteristics of bones as materials *eg the bones are hard, strong* and identify differences between bones from different animals *eg the fishbones are much smaller and easier to break*
- Locate and name some bones *eg ribs, spine, skull.*
- State that their skeleton grows from birth to adulthood.
- Functions of different body parts and their purpose.
- Explain that all bodies need support,

				<p>but that not all animals have an internal skeleton to do this.</p> <p>➤ Give descriptions showing they understand that their muscles work harder during exercise than when they are sitting still.</p> <ul style="list-style-type: none"> ❖ Explore plants in the school grounds. ❖ Make observations about changes in the appearance and role of the environment. ❖ Learn about how plants adapt across the seasons
Summer 1	Light	<ul style="list-style-type: none"> • Recognise that they need light 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 and that there are ways to protect their eyes. • Recognise that shadows are formed when the light from a light source is blocked by a solid object. • Find patterns in the way that 		<ul style="list-style-type: none"> ❖ Pupils investigate man-made and natural light sources. ❖ Pupil understand the difference between light and dark. ❖ Pupils learn why we have darkness. ❖ Pupils recognise that light can be blocked by objects and shadows are formed. ❖ Pupils recognise that when light from sources other than the Sun is blocked shadows are formed. ❖ Pupils learn about the implications of looking directly at the sun. ❖ Identify <i>eg in drawings</i> that the shape of the shadow is like the shape of the object and is

		the size of shadows change.		<p>different at different times of day.</p> <ul style="list-style-type: none"> ❖ Explain that the light has been blocked by the object and this is what causes the shadow. ❖ Describe what happens to the shadow of the stick during the course of the day <i>eg it gets shorter and then longer again</i> and predict <i>eg by drawing</i> what the shadow will be like at an intermediate time. ❖ Describe how the position of the Sun appears to change in relation to their classroom (or room at home) during the day.
Summer 2	Plants	<ul style="list-style-type: none"> • To identify and describe the functions of different parts of flowering plants: roots, stem, trunk, leaves and flowers. • Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) 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 plants, including pollination, seed formation and seed dispersal. 	5 weeks	<ul style="list-style-type: none"> ➤ Demonstrate they understand the importance of plants growing well <i>eg by saying that plants provide food</i>. ➤ To understand the purpose of different parts of the plant. Investigate the purpose of each part. ➤ Make accurate measurements of the height of the plant ➤ Explain how to make measurements which can be compared with others <i>eg I put the end of the ruler next to the stem and just on the soil. I measured where the top of the plant came to, this was how we all did it</i> ➤ Describe differences in the way the plants grew ➤ Relate differences in the way the

plants grew to differences in the leaves.

- Pupils will learn that water is transported through the stem to other parts of the plant
- Pupils will be able to make careful observations and present these using drawings and to explain observations.
- Explain why seeds need to be dispersed *eg to have the best chance of growing into a new plant*
- Explain that seeds are dispersed by water, wind, explosion and animals *eg coconuts are dispersed by seawater and dandelions have parachutes and are dispersed by wind.*
- Identify by observation how an unfamiliar seed might be dispersed .
- Suggest reasons why some seeds may not grow into plants.