PATHWAY MAP – Science Year 3					
KEY KNOWLEDGE	**Animals including humans** **Need for the right amount of nutrition, skeletons and muscles**	**Light** **Need for light to see, how shadows are formed, size**	**Rocks** **Grouping rocks, how they are formed, fossils**	**Forces and magnets** **Compare different surfaces, magnets**	**Plants** **functions, including water transportation, life cycle of plants**
KEY VOCABULARY	Healthy, balanced diet, food groups, protein, carbohydrates, fats, sugars, exercise	Light source, transparent, translucent, opaque, shadow, reflect, block, transmit	Rocks, minerals, organic, inorganic, particles, texture, igneous, sedimentary, molten, lava, surface, crust	Magnet, force, attract, repel, in contact, at a distance, push, pull	Plant, root, leaf, leaves, stem, trunk, transport, flower, petal, soil, nutrients, reproduce, disperse, life cycle
PRE-ASSESSMENT TASK	Ask children to create a 'balanced meal' and explain why they have chosen the foods. Children should add any vocabulary they are familiar with.	Children to make a list of all known sources of light and explain choices.	Children to look at a rock and write down in a mind map everything the see and know.	Children to experiment with a range of materials (or around school) and a magnet. Children's observations and comments to be noted.	Ask children to draw and label the different parts of a plant.
END ASSESSMENT TASK	Repeat task for post-learning. GD: Can they explain how the muscular and skeletal systems work together to create movement?	Mind Map end of topic knowledge of light. GD: Can they explain why their shadow changes when the distance of the light source changes?	Children to edit their mind map in a different colour. GD: Can they relate the properties of rocks to the uses to which they are put?	Children to write in their own words the uses of magnets. GD: Can they investigate the strengths of magnets and find fair ways to compare them?	Children to write a story based on the life of a seed. GD: Can they classify a range of living things according to different criteria e.g. environment, size, climate GD: Can they explain how certain living things depend on each other to survive?
KEY SKILLS	• Know the importance of a nutritionally balanced diet • Describe how nutrients, water and oxygen are transported within animals and humans • Identify animals (including humans) who can't make their own food and explain how they get nutrition • Describe and explain the skeletal system of a human • **Describe what they have found using scientific language**	• Recognise that we need light in order to see things • Know that dark is the absence of light • Know that light is reflected from surfaces • Be aware that the sun can be dangerous and ways of protecting eyes • Recognise how shadows are formed • Find a relationship in the way that the size of a shadow changes • **Plan and set up a simple fair test and make comparisons from results** • **Use a range of equipment in a simple test**	• Group and compare rocks on the basis of appearance and physical properties • Describe how rocks can be useful to humans • Know the difference between igneous and sedimentary rocks and relate this to formation • Explain in simple terms how fossils are formed • Recognise that soil is made from rocks and organic matter	• Observe how magnetic force can be transmitted without direct contact • Observe magnets attracting and repelling • Classify/group materials based on magnetic attraction • Recognise that some forces require contact and others work at a distance • Identify some magnetic materials • Describe 2 magnetic poles N and S • Predict whether magnets will attract or repel based on poles • **Make and record a prediction before testing** • **Record measurements/ results in different ways e.g. labelled diagram, charts**	• Identify and describe the functions of parts of a plant • Identify that air, light, water, nutrients from soil and room to grow are required for plant life • Explain how these vary from plant to plant • **Explain why they need to collect information to answer a question** • Investigate the way water is transported in plants • Explore the role of the flower in the life cycle of a flowering plant e.g. pollination, seed formation and seed dispersal
RESOURCES AVAILABLE	Outstanding science- unit 3B	Outstanding science- unit 3D	Outstanding science- unit 3C	Outstanding science- unit 3E	Outstanding science- unit 3A