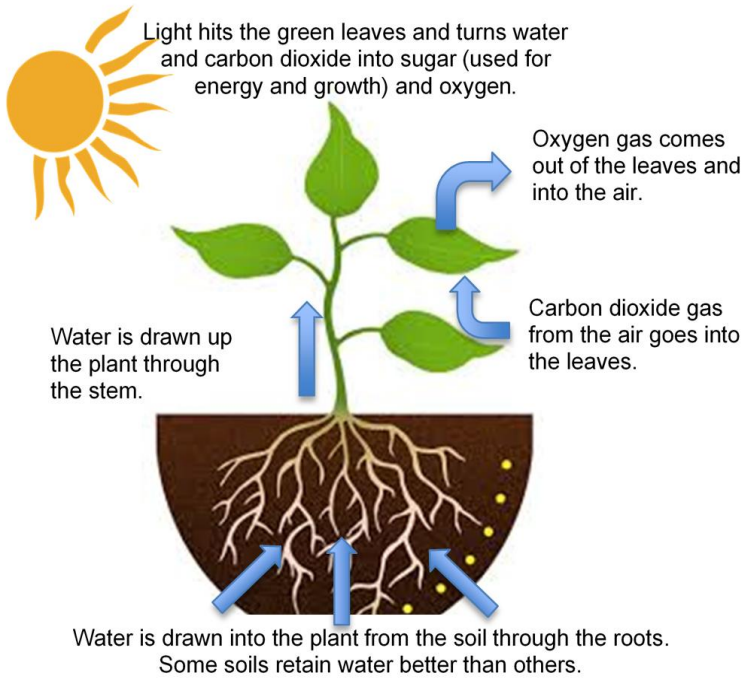
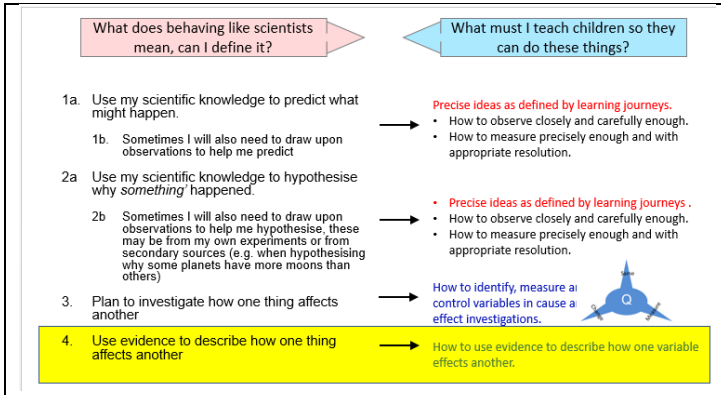
Learning Journey	Science	Plants (How plants make food)	Year 3 Spring 1	

Building on prior learning	Theme overview	Preparing for future learning	Vocabulary
In key stage 1, children learn about how plants grow and will know that plants come from seeds. They will have begun to investigate habitats that plants grow in.	**Chapter 1: Plants don't eat.** •Plants do not eat food so have to make their own. **The model of how plants grow:** Plants turn water from the ground and carbon dioxide from the air into sugar, which is used for energy and making new material to grow. •This food provides them with energy, and materials to grow •To make the food (sugar) plants need water from the ground, carbon dioxide from the air and light from the sun. • The water is taken up through the roots from the soil • The carbon dioxide is taken in through the leaves • As well as food, plants also make oxygen which is given out back into the air through the leaves.	The next linked unit of work is 'How plants reproduce' in Y4. Children learn how flowers are pollinated and make seeds. They learn about seed dispersal and how seeds will only germinate in the right conditions.	• Roots • stem • leaves • branch • twig • nutrients • water • carbon dioxide • oxygen • sunlight • darkness • energy • growth and repair • nutrition • support • fertilizer • sugar

NC coverage and HWJS skills development	Knowledge organisers	
National curriculum coverage for Science • 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 **Notes and guidance (non-statutory):** Pupils should be introduced to the relationship between structure and function: the idea that every part has a job to do. They should explore questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition (and flowers for reproduction but this is Y4). Note: Pupils can be introduced to the idea that plants can make their own food, but at this stage they do not need to understand how this happens. Pupils might work scientifically by: comparing the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser. They might observe how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers. **HWJS skills development**	**Chapter 1: Plants don't eat.** Plants don't eat and so have to make their own food to provide them with energy and material to grow. **Chapter 2 The model of how plants grow** Plants turn water from the ground and carbon dioxide from the air into sugar, which is used for energy and making new material to grow.	



A Model of Progression.

1. Pose problems that require the application of knowledge being taught.
2. Deconstruct the problem to define what a child must understand and be able to do to tackle the problem (including what they need to observe and measure), teach these skills and knowledge ***at that point.***
3. As children progress through the curriculum they will tackle problems using new ideas, and when the problem requires with closer observation and more precise measurement.

Good enough progression is being able to tackle these problems.

Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

Setting up simple practical enquiries, comparative and fair tests – use the Planning Mindmap.

Children gather evidence to describe the relationship between variables (cause and effect) by identifying what must be changed, what measured and what must be kept the same.

Connections / deepening understanding How is the understanding of this area deepened in other areas of the curriculum? What links are there in the other subjects in the curriculum?	**RADE** Are the rights of the child relevant in this area of study - do they get referred to in the work?	**Assessment** By the end of the unit the children will be able to … Details of the objectives that they will have covered within this unit of work:		
English — Note making and report writing.		Plants make their own food providing them with energy to grow	To make food they need carbon dioxide and light which is taken in through the leaves . They make oxygen which they give back to the air	Water is taken in through roots from the soil.

Assessment recording for the unit - checking the level of pitch of the work

Key skill(s)/ knowledge to be assessed by the end of the unit	**Lower attaining**	**Middle attaining**	**Higher attaining**
Details of key skill(s) that this unit will cover: •Plants do not eat food so have to make their own. This food provides then with energy, and materials to grow. •To make the food (sugar), plants need water from the ground, carbon dioxide from the air and light from the sun. The water is taken up through the roots from the soil. The carbon dioxide is taken in through the leaves. •As well as food, plants also make oxygen which is given out back into the air through the leaves.	**Description of the level of ability that the child has to use these skill(s):** • Pupils can describe that plants make their own food in their leaves. • They recognise that light from the sun and carbon dioxide gas in the air is used for this. • They recognise that water is taken into plants through the roots.	**Description of the level of ability that the child has to use these skill(s):** • Pupils can describe that plants make their own food in their leaves. They can describe that this food provides the plant with energy and materials to grow. • They recognise that to make food the plants need water from the ground, carbon dioxide gas from the air and light from the sun. • They recognise that water is taken into plants through the roots. • They recognise that plants also make oxygen which is given back to the air from the leaves.	**Description of the level of ability that the child has to use these skill(s):** • Pupils can describe that plants make their own food in their leaves. They can describe that this food provides the plant with energy and materials to grow. • They recognise that to make food the plants need water from the ground, carbon dioxide gas from the air and light from the sun. They can describe how carbon dioxide is taken in through the leaves and are able to summarise what happens in description or a diagram. • They recognise that water is taken into plants through the roots. • They recognise that plants also make oxygen

NB: The assessments are completed for two reasons – to enable the class teacher and in turn the subject leader to evaluate the pitch of the learning within the unit in order to consider any necessary updates and for the class teacher to report to parents on the attainment of pupils in the end of year