



# Do plants need resilience too?

**BIOLOGY**



## SCIENCE LEARNING STATEMENTS

Area of Learning	Skills and Knowledge
<b>Scientific Enquiry and applying knowledge in context</b>	I can explore the world around me and raise my own simple questions. I can share my ideas with others.
	I can experience different types of science enquiries, including practical activities.
	I can begin to recognise different ways in which to answer scientific questions.
	I can carry out simple tests using some basic equipment.
	I can use simple features to compare objects, minerals, materials and living things. With help, I can decide how to sort and group them.
	I can ask people questions and use simple secondary resources, select my own, reliable secondary sources.
	I can observe closely using simple equipment to help. I can observe changes over time.
	I can with guidance, begin to notice patterns and relationships.
	I can use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data.
	I can record simple data using at least two different methods.
	I can use my observations and ideas to suggest answers to questions. I can talk about what I found out and how I found it out and offer my own opinions.
I can with help, record and communicate my findings in a range of ways and begin to use scientific language.	

### Overview and rationale:

Resilience is one of our core school values and is more important than ever in this moment in history. This science topic draws on the context built in the geography topic comparing the UK and Malawi in looking at what plants, fruit and vegetables need in order to grow healthily and that, in many cases, they need a great deal of resilience too in order to survive. Trips to Urmston Meadows and local allotments bring some real life experiences in to the children's learning, as do video links to our friends in Blantyre, who describe to us the different types of food that they grow in Malawi due to a tropical climate in Sub-Saharan Africa that differs greatly to our own temperate one in Europe. The children begin to see that different plants grow in different conditions and draw on the experiences of others as well as doing some enquiry of their own when investigating and experimenting what conditions are needed for their own plants to grow!

## GEOGRAPHY LEARNING STATEMENTS

<b>Fieldwork</b>	I use first hand observation to investigate places – the school grounds, the streets around and the local area. I can recognise and record different types of land use, buildings and environments.
<b>Map work skills</b>	I can use locational and directional language (e.g. near and far; left and right) to describe the location of features and routes on a map. I can use simple compass directions (NSEW). I can follow simple direction (NSEW).
<b>Human and physical: enquiry skills and communication</b>	I can use observational skills and ask and respond to questions. I can identify seasonal and daily UK weather patterns.
<b>Geographical concepts and tier 2 vocabulary</b>	Place: changed, developed Space: weather, climate, biomes, vegetation Interconnections: interdependent Environmental impact and sustainability: interaction – human and natural, responsible, natural resources, Earth, future, habitats, climate change

## KEY VOCABULARY

*As for year 1 plus –  
light, shade, sun,  
warm, cool, water,  
grow, healthy*

## NATIONAL CURRICULUM OBJECTIVES

- observe and describe how seeds and bulbs grow into mature plants.
- find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

**Possible Enrichment activities (including trips/visitors, etc)**

Trip to allotments and Urmston Meadows  
Now Press Play experience

KNOWLEDGE (substantive)	
'Core'	'Additional'
1) I know that plants need water, light and a suitable temperature to grow and stay healthy. <b>DO: Observe and measure: COMPARING PLANT GROWTH</b>	a) I know that plants get their food from light and without it they can't grow. b) I know that water helps to move nutrients from the soil to the plants. c) I know that a seed will not produce a plant if it is too cold.
2) I can describe how, over time, seeds and bulbs grow into mature plants through seed – sprout – seedling – adult.	a) I know that germination is when a seed sprouts to form a seedling. b) I know that a plant is an adult when it is ready to produce fruit or flowers. c) I know that reproduction means to create more and that adult plants have special ways to do this like birds, insects and wind carrying the seeds.
3) I can explain the differences between the weather and tropical climate in Malawi and the temperate climate in the UK. I know that this means different plants can grow.	a) I know that maize grows in Malawi and that people make nsima from it which most Malawians eat as (but only if there is a good rainy season!). b) I know that soil must be fertile for plants and crops to grow and there needs to be lots of rain. I know that drought can stop plants from growing. c) I know that some plants can grow with very little water and are super resilient!

Possible 'higher order' questioning	
<b>Remember</b>	What do plants need to grow?
<b>Understand</b>	Would it be possible for plants to grow without these things? When and under what conditions?
<b>Apply</b>	Why do plants need the sun to grow? How does it work?
<b>Analyse</b>	What is it that causes plants to die?
<b>Evaluate</b>	What is the effect on a growing plant if you take away the sunlight? Why do you think that would that be?
<b>Create</b>	Can you plan an experiment to test what plants need to grow?

ART AND DESIGN			
Exploring and Developing			
Exploring and developing ideas	Begin to record and explore ideas from first hand observation, experience and imagination. Explore the differences and similarities within the work of artists, craftspeople and designers working in different times and cultures.		
Evaluating and developing work	Review what they and others have done and say what they think and feel about it. Identify what they might change in their current work or develop in their future work.		
3d Form			
National Curriculum	Additional Skills	Knowledge	Key Vocabulary
<i>Manipulate clay for a variety of purposes, inc. thumb pots, simple coil pots and models.</i>  <i>Understand the safety and basic care of materials.</i>	-Use tools and everyday objects to add texture to clay. -Use a variety of reclaimed objects to create a sculpture of an identified object using observation. -Strengthen models by adding newspaper to boxes.	-Know that when clay dries out its form cannot be changed. -Know how to use tools and everyday objects to add texture to clay. -Know how to use a variety of reclaimed objects to create a sculpture of an identified object using observation.	Form, tools and names, texture, reclaimed, structure, sculpture, object, strengthen, strong, weak, arrange
Artist/Style/Activities			
<i>Clay plant pots in the style of Freya Bramble Carter</i>			

School Value	Topic relevance: How/when/where/why is it needed?
<b>Resilience</b>	Humans need water, food and shelter to survive. Just like humans, plants need essential things too and no small amount of resilience too - if the conditions aren't right, it is very difficult (although not impossible) for them to thrive.
<b>Respect</b>	We must respect what is needed for our plant life to grow and should be aware of what happens if we don't allow this. Humans and the whole world need trees and plants to grow, perhaps more than they need us!
<b>Responsibility</b>	We have a responsibility to look after our environment and our green spaces as they are so important to life on Planet Earth.
<b>Happiness</b>	Spending time in nature brings us great happiness and the respect that we have for all life on Earth should help us to realise our responsibility in looking after it too!
<b>Kindness</b>	Every living thing deserves our kindness, and that includes humans, animals, plants and every living organism.
<b>Pride</b>	We should be proud of our beautiful world, but not too proud to see that it needs our help to survive.

## MUSIC

### *Controlling sounds through Singing*

National Curriculum	Additional Skills	Knowledge	Key Vocabulary
<ul style="list-style-type: none"> <li>- Pupils should be taught to use their voices expressively and creatively by singing songs and speaking chants and rhymes</li> <li>- Sing or clap increasing and decreasing tempo</li> </ul>	<ul style="list-style-type: none"> <li>- Learn about voices, singing notes of different pitches (high low).</li> <li>- Learn to find a comfortable singing position</li> <li>- Sing with clarity of diction (clear words) appropriate to age</li> </ul>	<ul style="list-style-type: none"> <li>- Perform songs to an audience.</li> <li>- Confidently know and sing 5 songs from memory in unison (across the KS)</li> <li>- Know when everyone singing at the same time.</li> <li>- Know how to sing simple songs loudly and softly with control</li> <li>- Know when to breathe when singing (phrasing)</li> </ul>	Rhythm, past, chanting, clap, rest, follow a leader, start, stop

### *Controlling sounds by Playing (and Performing)*

National Curriculum	Additional Skills	Knowledge	Key Vocabulary
<ul style="list-style-type: none"> <li>- Play simple rhythmic patterns using body percussion and instruments</li> </ul>	<ul style="list-style-type: none"> <li>- keep in time with the steady pulse.</li> <li>- Choose a song they have learnt and perform it.</li> <li>- Add their ideas to the performance.</li> <li>- Record the performance and say how they were feeling about it.</li> <li>- Follow instructions on how and when to sing/play an instrument.</li> </ul>	<ul style="list-style-type: none"> <li>- Know that a performance is sharing music with an audience.</li> <li>- Know that a performance can be a special occasion and involve a class, a year group or a whole school.</li> <li>- Know that an audience can include your parents and friends.</li> </ul>	Patterns, rhythm, being played, leader, performance, audience, small group, unison. Name a range of percussion instruments

### *Creating and developing musical ideas (Improvisation and Composing)*

National Curriculum	Additional Skills	Knowledge	Key Vocabulary
<ul style="list-style-type: none"> <li>- Experiment with, create, select, and combine sounds</li> <li>- Order groups to create an effect (structure - beginning, middle and an end).</li> </ul>	<ul style="list-style-type: none"> <li>- Carefully choose sounds to achieve an effect</li> <li>- Create short musical patterns.</li> <li>- Create sequences of long and short sounds - rhythmic patterns (duration).</li> </ul>		Patterns, rhythm, , beginning, middle, end, small group, choir, noises, voices,  tap a beat, singing, speaking voice, thinking voice, rhythm, tap a rhythm

### *Responding and reviewing (Appraising)*

National Curriculum	Additional Skills	Knowledge	Key Vocabulary
<ul style="list-style-type: none"> <li>- Listen with improved concentration and understanding to a range of high-quality and recorded music</li> </ul>	<ul style="list-style-type: none"> <li>- Identify the pulse in music</li> <li>- Recognise change dynamics (loud and quiet), tempo (fast and slow) and pitch (high and low)</li> </ul>	<ul style="list-style-type: none"> <li>- Know that songs have a musical style.</li> </ul>	musical style, dynamics, loud, quiet, tempo (fast and slow) and pitch (high and low), conductor, beginning, middle, end,

### *Listening and applying knowledge and understanding (Theory)*

National Curriculum	Additional Skills	Knowledge	Key Vocabulary
<ul style="list-style-type: none"> <li>- Increase self-confidence, creativity and sense of achievement</li> <li>- Listen carefully and recall (perform) short rhythmic and melodic patterns.</li> </ul>	<ul style="list-style-type: none"> <li>- Change sounds to suit a situation.</li> </ul>	<ul style="list-style-type: none"> <li>- Know that music has a steady pulse, like a heartbeat.</li> <li>- Know that we can create rhythms from words</li> <li>- Know that rhythms are different from the steady pulse.</li> <li>- Know music can be played or listened to for a variety of purposes (in history/different cultures).</li> </ul>	Tempo, Pitch, Orchestra, family, Genre, repeated, ostinato, parts, syncopated, jazz,

### *Stimulus - Composers/Musicians/Artists/Styles*

**'We need plants!' (Sing Up)**

**Genre of the half term – Classical**