Plants (ages 4-7)

Explorify planning support

Curriculum statements	Explorify activities	Suggested use / taking it further
NATURAL ENVIRONMENTS		
Explore the natural world around them, making observations and drawing pictures of animals and plants. **Know some similarities and differences between the natural world around them and contrasting environments**. *England*	**Similarities and differences** Spring flowers **WGO** Shooting sprouts **WGO** Rich pickings **WGO**	Use these videos to get the children talking before they go out and explore.
	Hello spring **ZIZO** Winter wonder **ZIZO** Healthy skin **ZIZO** Green pattern **ZIZO** Brown scales **ZIZO** Curious crown **ZIZO**	The Zoom In Zoom Out activities will encourage the children to look closely. They could then make drawings of the real objects in the classroom, and collect others outside.
	Night time antics **LWCYH**	

IDENTIFYING PLANTS

identify and name a variety of common wild and garden plants, including deciduous and evergreen trees **The variety of living things in the world and how we can take care of them** *(Northern Ireland)*	**Common plants** Have you ever spotted a flower you really liked? **HYE**	This Have You Ever will get the children talking about the flowers they have seen and give you a chance to spot quiet children who have something to say.
	Types of Leaves **OOO** Autumn Leaves **OOO** Lovely leaves **OOO** Mellow yellow **OOO** Curious crown **OOO** Three weeds **OOO** Do you like butter? **ZIZO** Spectacular spheres **ZIZO**	Use before going out to look at flowers/trees/leaves, or before comparing different flowers/leaves in the classroom. Useful spotter sheets Tick sheets - Woodland Trust (treetoolsforschools.org.uk) spotter-sheets_walmer-castle-outdoor-learning-kit_ks1-3.pdf (english-heritage.org.uk) Flowering Weeds Spotter / RHS Campaign for School Gardening Spring Flower Spotter / RHS Campaign for School Gardening Tree leaf spotter guide / RHS Campaign for School Gardening
	Evergreen **OOO** Green Texture **OOO** Three seasons **OOO**	Use before going on a winter walk. Children can make a tally chart to count the number of deciduous and evergreen trees. Back in the classroom, they could make a pictogram or bar graph of the results. You could take photographs of the class standing in front of deciduous and evergreen trees at different times of the year.

GROWTH		
Observe and describe how seeds and bulbs grow into mature plants **I have helped to grow plants and can name their basic parts. I can talk about how they grow and what I need to do to look after them** *(Scotland)* **Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.** **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** **I can help to design experiments to find out what plants need in order to grow and develop. I can observe and record my findings and from what I have learned I can grow healthy plants in school.** *(Scotland)*	**How seeds grow** Have you ever grown seeds or plants? **HYE**	This Have You Ever will give you a chance to find out what experience the children have had of growing.
	Seeds of success **MB**	This can be used to provoke debate/raise questions before the class start growing.
	Seeds of life **OOO** Shooting sprouts **WGO** Growing seed **WGO** Spring flowers **WGO** Rich pickings **WGO**	Make sure that the class get opportunities to grow different seeds and bulbs each year, checking with colleagues about what they have grown before.
	Requirements of plants What if winter never ended? **WI**	Use this as a launchpad for discussion about the conditions for growth. Children then can grow seeds and bulbs: without water but with light and warmth; with light and water but in cold conditions; and in the dark with water and warmth.
	Get growing on Mars **PS**	You could use this to brainstorm variables the children could change when investigating.
	Why don't all soils look the same? **PS**	If you have already taught the soil unit, they might be interested in growing seeds in different soils.
	Do you need big seeds to grow big plants? **TBQ**	Children could use research to find the answer to this question, or investigate whether big seeds germinate quicker or slower than small ones.
	Have you ever heard of anyone feeding their plants? **HYE**	You could show children a variety of plant 'foods' and encourage them to read the labels. They could discuss which ones they should use to encourage plants in the school grounds to grow and then set up an investigation. There are suggestions about how to in the Have You Ever.

PARTS OF PLANTS

identify and describe the basic structure of a variety of common flowering plants, including trees. *They should become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).* **I can recognise that plants (and animals) are living things which grow.** *(Wales)* **identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers** **investigate the way in which water is transported within plants**	**Basic plant structure** Craggy surface (bark) **ZIZO**	These three examples help explain unfamiliar vocabulary, or to see something that is either difficult to see outdoors, or not around all the year.
	Pink and white (blossom) **ZIZO**	
	Underground Overground (roots) **OOO** Tall tree trunks **OOO**	Take the class outside and get them to identify tree roots, stems/trunks, different flowers and leaves.
	Functions Brown tubes **ZIZO**	Brown tubes provides a really useful enlarged image of a root.
	Useful parts of plants: bamboo, cinnamon, rubber tree **OOO**	Useful parts of plants: bamboo, cinnamon, rubber tree looks at three stems including bamboo which children might not identify as a stem.
	What if plants could talk? **WI**	What if plants could talk? Or What if we did not plant trees? could be used to provoke discussion after children have learnt about the function of the different parts. It could be a helpful assessment tool.
	What if we did not plant trees? **WI**	
	Water colours **WGO**	Children can then do their own investigation. Tip: use food colouring paste like Wilton as some supermarket food colourings won't work. If you are member, look at the CLEAPPS activity Ink Flowers, which uses the spongy inner tubes of old water based felt tip pens (dark colours).

POLLINATION		
explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	Friends of flowers **OOO** Sharing is caring **LWCYH** Buzzing with life **WGO** What if there were no insects? **WI** Which pollinators visit our school grounds? **TBQ** What if plants could move from one place to another? **WI**	These activities can be a launch for lots of different enquires. Children could act out the pollination of plants; visit gardens and observe which flowers pollinators visit; collect and classify different types of seeds. They could also dissect different flowers to compare the male and female parts of a flower. Be careful if you have children who are allergic to pollen. http://www.saps.org.uk/primary/teaching-resources/1374-primary-booklet-2-reproduction-and-life-cycles-part-1 For CLEAPSS guidance click here.
SEED DISPERSAL		
	Winter seeds **OOO** Types of apples **OOO** Sightseeing seeds **OOO** Brown scales **ZIZO** Wet and shiny **ZIZO** Brown and sticky **ZIZO** Bonkers conkers **WGO**	When exploring seed dispersal, an Odd One Out activity like Brown scales can then develop into classifying seeds by how they are dispersed.

PLANTS AND ANIMALS		
How plants and animals rely on each other in the natural world	Friends of flowers **OOO**	These activities all link to pollination and seed dispersal
	Sharing is caring **LWCYH**	
	Buzzing with life **WGO**	
	Which pollinators visit our school grounds? **TBQ**	
	Plant takeaway **WGO**	Plant takeaway points how much humans rely on plants for our food but also for many other things as well.
LINKING TO ART AND DESIGN		
	Biodegradable plant pots **PS**	Useful background: How to make newspaper pots / RHS Campaign for School Gardening https://letstalkscience.ca/educational-resources/lessons/design-build-irrigation-system Regreen the desert - Practical Action
	Make a plant self watering device **PS**	
	Curious crown **ZIZO**	The artist Georgia O'Keeffe can used as the inspiration for art. https://www.georgiaokeeffe.net/paintings.jsp
CELEBRATING SCIENTISTS		
I have contributed to discussions of current scientific news items to help develop my awareness of science. *(Scotland)*	Who is.. Kiara Nirghin? **WHO**	At 16 years of age, Kiara Nirghin knew that in South Africa where she lived intense droughts meant that farmers were unable to produce enough food for local people. She used her STEM skills to try and help the plants get the water they needed.

ABBREVIATIONS AND DESCRIPTIONS OF THE DIFFERENT EXPLORIFY ACTIVITY TYPES		
ZIZO	Zoom In, Zoom Out	Visually engaging close-up photos
OOO	Odd One Out	Find similarities and differences
WGO	What's Going On?	Short, distraction-free videos
HYE	Have You Ever?	Activities linked to everyday experiences
WI	What If?	Explore ideas in new contexts
TBQ	The Big Question	Plan an investigation
PS	Problem Solvers	Think critically and creatively
MS	Mission Survive	Fun, imaginative hands-on challenges
MB	Mystery Bag	Use senses to work out contents in a bag
LWCYH	Listen What Can You Hear?	Recordings of familiar sounds
SWA	Start With Art	Using artworks to prompt science discussion
WJH	What Just Happened?	Observing changes over time
WHO	Who Is?	Learn about a diverse range of scientists

Other recommended resources to support planning:

PLAN primary science assessment resources (planassessment.com)

Assessment (TAPS) - Curriculum Materials | Primary Science Teaching Trust (pstt.org.uk)

The Great Science Share - see videos on Scientific Enquiry under the tab "Great Science Skills".

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