

NC Science – 'Plants'

Pupils should be taught to:

- 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.

TAFS:

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



I can investigate how to grow healthy plants from seeds. TAF 2

Produce results

Children will observe and record changes in their bulbs – discuss observations: consider 3 locations, growth, light exposure, possible temperature differences. Interpret impact, these have had on a bulb.

Pose a question: What do seeds need to grow healthy plants? What do chn already know? How can we find out for definite. The knowledge we have already how can this help us set up an investigation. (What if we deprive plants of what they need?)

Plan an investigation how could we find out? Give chn opportunity to discuss they could prepare an investigation to explore this. Give a choice of resources to use. How could they be used? Use plan to plan out investigation.

Variables: Discuss a range of conditions to grow the seed in discuss and why we should keep some the same and change others? What will this help us to find out?

Predict which location will grow the healthiest plant. How will we know?



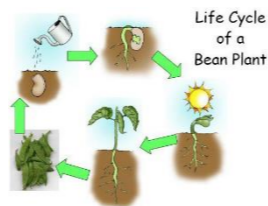
I can investigate what bulbs produce. TAF 1 / 2

Revisit last weeks learning. Do chn know other forms of seeds/ways plants grow? Pass bulbs and seeds around for chn to identify and name differences. Children will be observing changes in planted bulbs and observing how they grow, develop and change over time.

Pose a question: What do bulbs produce? **Plan an investigation** how could we find out? Discuss how to plant bulbs – what's needed? Take photos of stages of planting bulb. **Variables:** Place one in sun, shade and greenhouse. Chn discuss and **predict an outcome** what might grow from a bulb.

Produce results – in a table. Chn to draw observations across the forthcoming weeks and record changes they observe. They can measure and record the height of the plants as they grow comparing each one in their different location.

Provide a conclusion from results. What do the results tell us about the best growing conditions for a bulb? ppt



I can label the parts of a seed. I can order and explain the life cycle of a seed. TAF 1

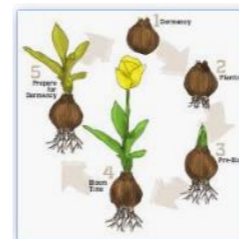
Begin the lesson observing bulbs/seeds planted last week: **Produce results** – chn make observations of changes in bulbs/seeds – record on tracker chart. Size, shape, development.

Explore seeds and bulbs cut in half = children observe seeds and a bulb and compare parts – similarities/differences. Will they produce different plants? How would they describe each? Introduce parts and function of a bulb. **Chn to label the parts of a seed.**

Revisit vocab re lifecycles. Can chn apply learning of plants from last term to seed lifecycles? Move on to use this learning to consider what would the life cycle of a seed be? Watch time lapse video for the lifecycle of seed.

Chn to identify the stages of the lifecycle of a seed in pairs using fact sheets. Chn label and explain each stage of the lifecycle. Relate to the seasons, warmth etc. Encourage accurate use of scientific vocabulary e.g. germination etc.

Can chn identify the part of the lifecycle that the seeds they have planted have been through, where they are now and what will come next? Record as a short paragraph below their lifecycle to apply to real life context.



I can label the parts of a bulb. I can order and explain the life cycle of a bulb. TAF 1

Begin the lesson observing bulbs/seeds planted last week: **Produce results** – chn make observations of changes in bulbs/seeds – record on tracker chart. Size, shape, development.

Explore seeds and bulbs cut in half = children observe seeds and a bulb and compare parts – similarities/differences. Will they produce different plants? How would they describe each? Introduce parts and function of a bulb.

Chn to label the parts of a bulb. Revisit vocab re lifecycles. Can chn apply learning of seeds lifecycle last week to the bulb? What would the life cycle of a bulb be? Watch time lapse video for the lifecycle of bulb. What is the similarities/ differences?

Chn to identify the stages of the lifecycle of a bulb in pairs using fact sheets. Chn label and explain each stage of the lifecycle. Relate to the seasons, warmth etc. Encourage accurate use of scientific vocabulary.

Can chn identify the part of the lifecycle that the bulbs they have planted have been through, where they are now and what will come next? Record as a short paragraph below their lifecycle to apply to real life context.



I can explain how different seeds disperse. TAF

Provide a range of seeds (flower heads, fruits, grapes/sunflower/orange /avocado/pumpkin/apple): chn can use magnifying glasses to sketch/discuss what they observe and feedback. Can chn sort them into flowers/fruits/seeds? What's important about these seeds/kernels/pips in fruits? What's their job? What happens if you plant these? What do we already know about seeds and how they grow into plants? Discuss importance of pollen being dispersed by bees and insects – pollination, bear fruits, produces seeds. Can you think of different ways that a plant could get its seeds dispersed? (animals eat and excrete them, sticking to animal fur, blown by the wind, floated off in water, burst open) Watch video – link on ppt. (Blowing/Eating/Exploding/Floating /Falling/Sticking (BEEFFS) Using images chn sort seeds into the category of how they're dispersed. Consider seed shape. Why is it important that plants have seeds that can travel and don't just drop to the ground in a heap? (avoids overcrowding and competing) Consider the dandelion and maple seed – how does their design help them to disperse? Chn record under heading examples of seeds and their method of dispersal and explain Chn to make paper helicopter to explore how a seed disperses on the wind. Predict how the seed will move, (go onto pirate ship to release them?) What makes it good at moving?

Complete final observations of cress and bulbs.

Chn to discuss in groups what they think the results tell them about the growth of plants. What signs tell us that it is a healthy plant? What are the similarities and differences between plants grown in different locations? What is a good environment for plants to grow in? What do they need in addition to soil? Observe changes in cress seeds and final obs on bulbs. Why do plants need water, light and warmth?

Children to be given scenarios to give advice for – (Gardeners question time):

1. Plant has brown, dry drooping leaves that are falling off, no blooms, it's placed in the sun on a windowsill.
2. Plant has pale, green leaves and has 'leggy' growth, it is in a shady spot of the house.

Children will demonstrate understanding of the needs of a plant by describing how to get the plants into better health. They will demonstrate knowledge of how they grow healthily and mature if they have access to light, warmth and water but will perish if not given the right care and attention.

I can explain what a healthy plant needs to grow. TAF 2

NC Working Scientifically (KS1)

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: Statutory requirements:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.



