# Science- Everything Changes
# Lesson 4
## Thursday 3rd February 2022

Overall Objective: I can describe how living things have changed over time and evolved using the basic ideas of inheritance, variation and adaptation.

Learning Outcome: I can give evidence for evolution. I can investigate way in which the environment can affect how plants grow.

Working Scientifically: I ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions, recognising and controlling variables where necessary (i.e. observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests, and finding things out using a wide range of secondary sources).

# Prior Learning

- What is inheritance? Can you give me examples?
- How can characteristics be manufactured through their environment?
- Do all features from each parent present themselves in their offspring?
- What are the requirements for a plant?

# Key Vocabulary

- Variation
- Characteristic
- Environment
- Inherited
- Measurement
- Data
- Compare
- Contrast
- Breeding
- Offspring
- Generation
- Observation
- Population
- Variable

# Explore

Have a go at he plant match activity.

Be prepared to share your matches and explain your ideas.

# Explore

**Match the environmental resource feature to the correct part of the plant.**


Rain


Sunlight


Nutrients


Wind

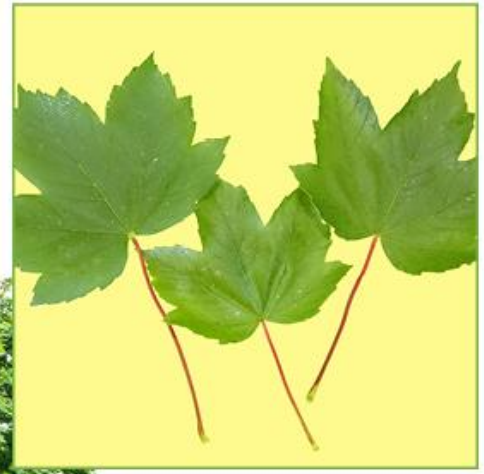

Competing plants

| Stem  | Roots  | Leaf  |
| --- | --- | --- |
| | | |
| | | |
| | | |

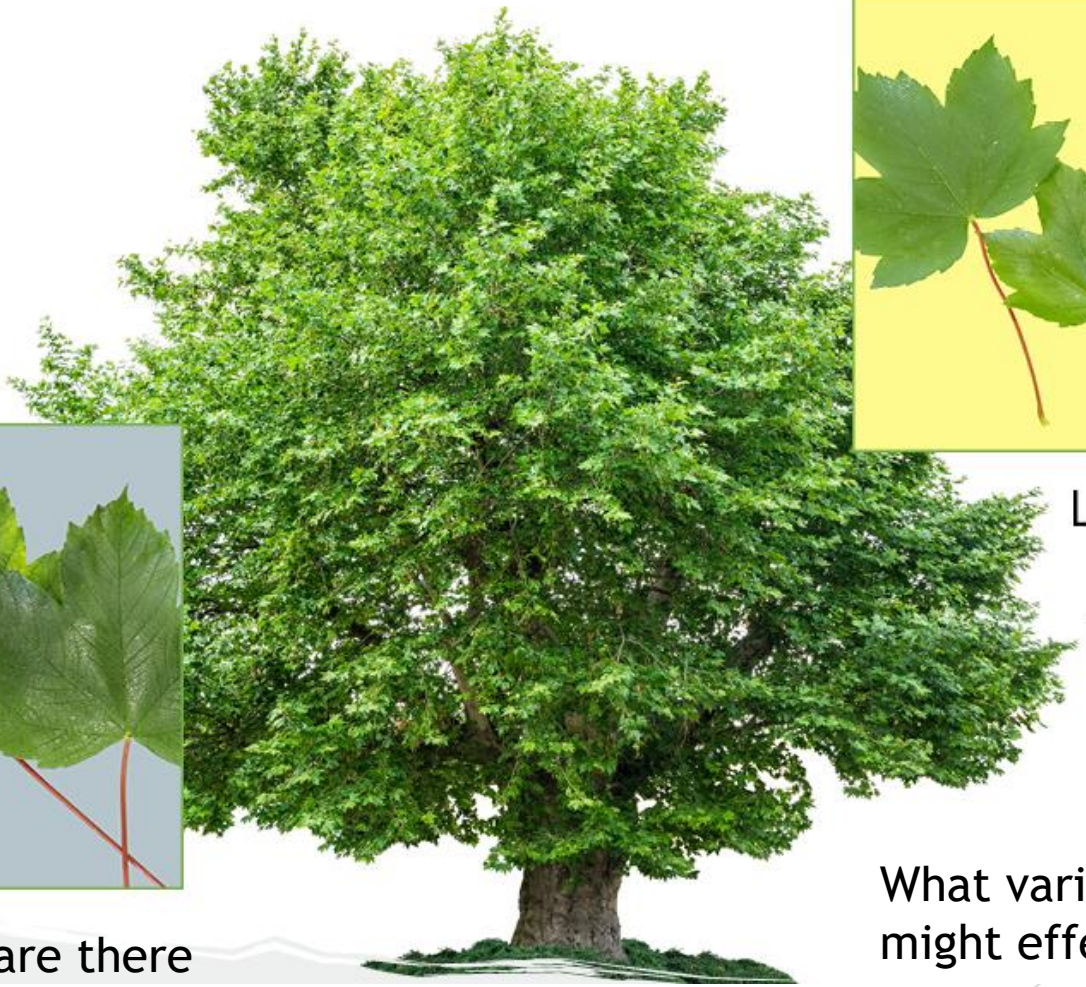
# Explore

## Comparing leaves

Leaves that have been in the shade.



Leaves that have been in the sun.



Why are there differences?

What variables might effect them?

# Enquire

If you were to have a look at plants outside, what would you expect to notice?

What types of differences might we see between individual plants of the same kind?

What do you think might cause these differences?

How many different kinds of features can we see on outdoor plants that are linked to the environment?

# Enquire

We are going to watch a video. Your task is to look for examples of variations in plant populations which could be caused by the environment.

While watching the video I would like you to consider the following information.
How are the plants in the population different?
What kinds of conditions does the video show the plant in, for example, light or dark?
Can you see a link between how the plant looks and the conditions it's growing in?
What effects did you notice that the environment has on the plants on the video?

- Make notes as you watch as we are going to share our observations.

# Enquire

From what you have observed, I would like you to design an investigation to test the effect of an environmental variable on plants.

## MY OBSERVATIONS

What is your title?_____

Which environmental factor are you observing?
Example: *I am observing the effect of sun and shade on one type of plant.*

**METHOD (A STEP-BY-STEP GUIDE)**

**1** The thing I am observing is_____

_____

**2** The thing I am measuring is_____

_____

**3** The things I am keeping the same are_____

_____

Write a step-by-step guide to what you will do.

_____

_____

# Reflect and Review

Describe the features of the plant that interests you from your observations and describe the environmental variable that has caused this effect.