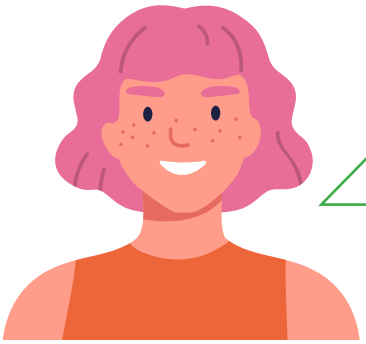

Before we build bridges, tunnels, tracks and stations, the largest archaeology programme ever undertaken in the UK is taking place along the route of HS2. Finding out about the past involves more than just finding objects; we use pollen analysis to discover how habitats have changed over time. This is how we make history!

Neda, Archaeologist

Challenge 1: Using Pollen Analysis

Habitats change naturally over time towards a stable end-point that is decided by the climate. We call this process habitat succession. To find out how habitats have changed over time, Archaeologists examine the types of pollen grains found in the soil.

The diagram below shows the pollen varieties found at Woden Hill, a site in UK, in each layer of the soil.

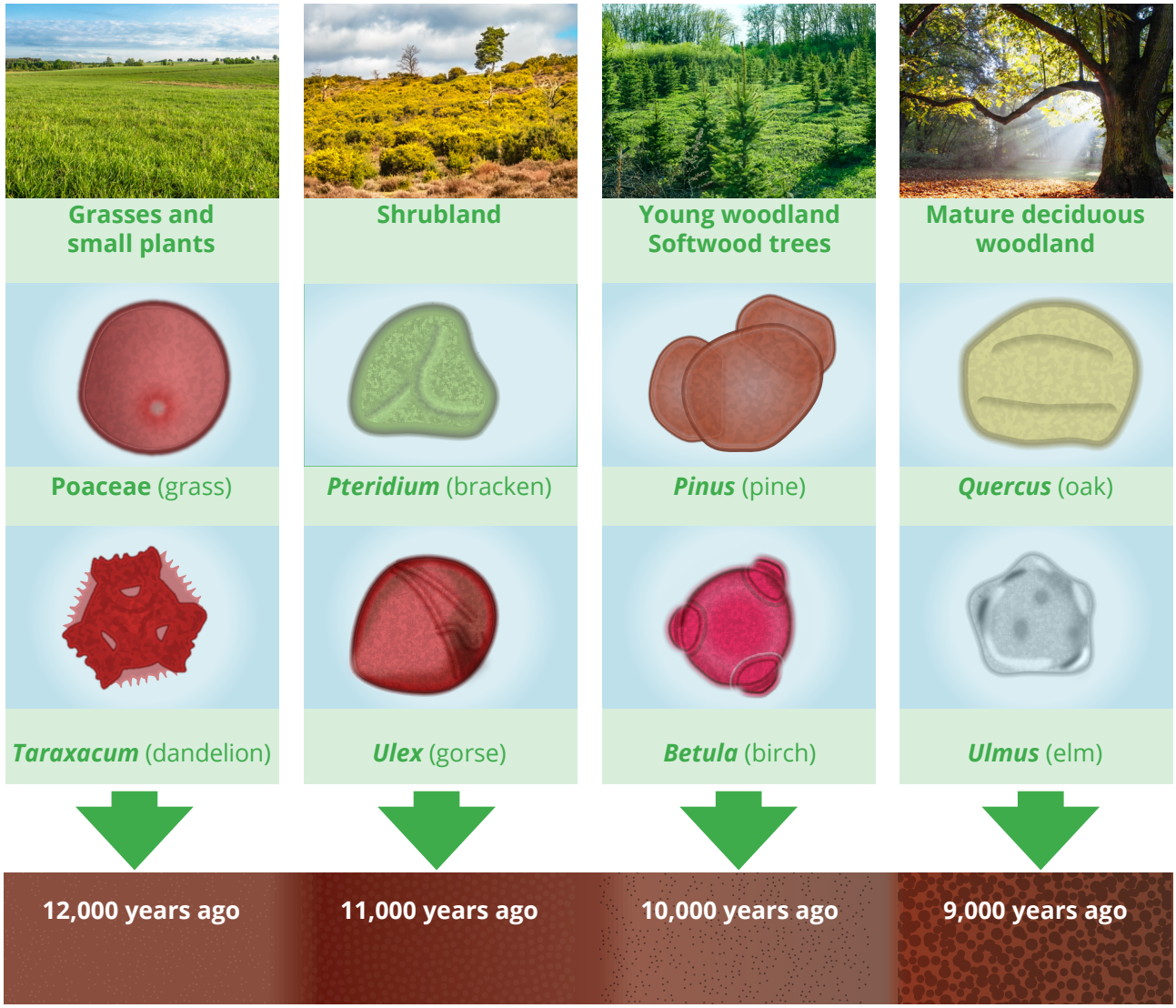

Fig 1. Soil diagram showing pollen varieties at Woden Hill.

a) Using Fig. 1, describe how the how the habitat and species at Woden Hill has changed over time.

b) Taraxacum (dandelions) were the earliest species of plant to be found at the site. These first arrivals are called pioneer species. Suggest a reason why taraxacum might be an effective pioneer species.

Challenge 2: Making History

Human activity can also have an impact on habitats.

The diagram below shows a pollen analysis of soil from Thurmere Farm, another site in the UK. The shaded areas represent the number of pollen grains found in the soil.

Several artefacts were found at the site, photographed below.

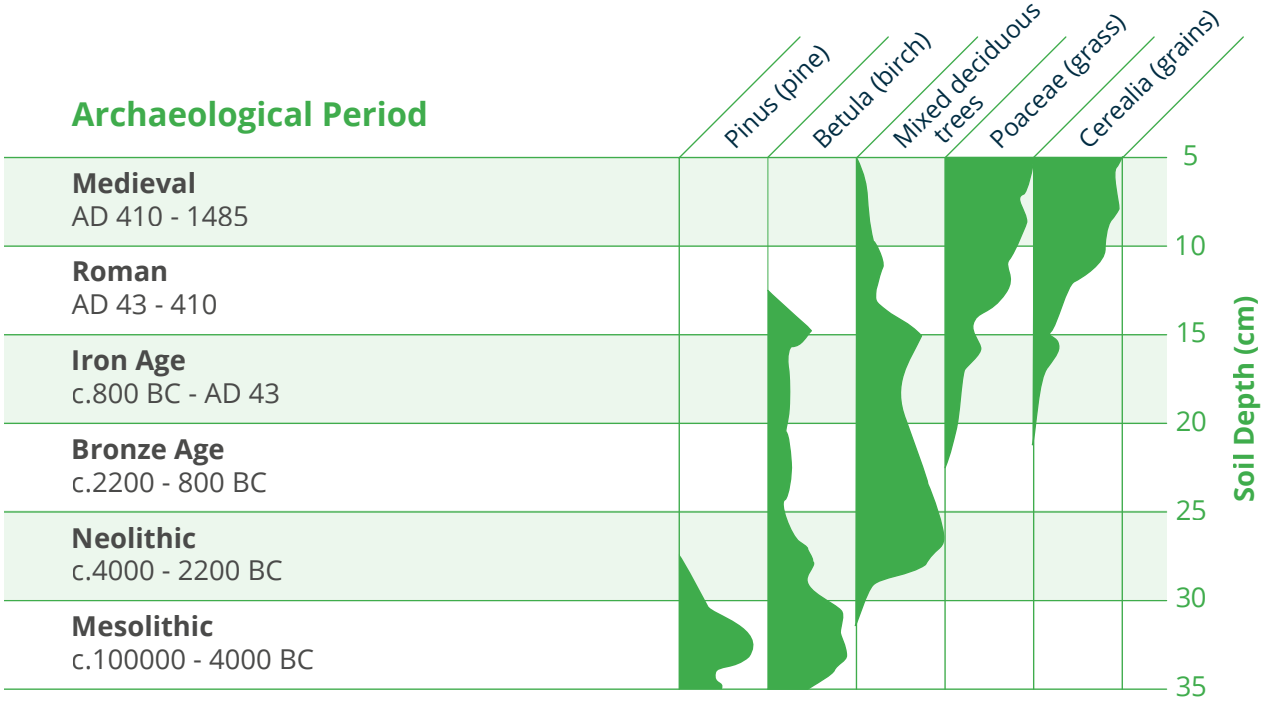

Fig 2. Pollen Analysis at Thurmere

Beehive Quern
This quern stone is shaped like a beehive and is a heavy tool for grinding grain into flour to make bread. It was a valuable item.
It was found 17cm below the surface.

Quartz Macehead
This macehead is made from quartzite, a sparkly pink rock. Maceheads were ordinarily used as weapons, but this one is likely to have been a special ceremonial object, symbolic of the status and power of its owner. Its unusual colour would have made it stand out, and it would have been treasured and admired as a precious item.
It was found 23cm below the surface.

Bone Weaving Shuttle
This weaving shuttle is made from bone. It was used to weave wool into fabric.
It was found 8cm below the surface.

Flint Blade
This flint blade would have been attached to a wooden handle to form an axe. Axes at this time were used for many different purposes, from preparing animal skins to farming and clearing woodland.
It was found 26cm below the surface.

a) Match the item to its archaeological period.

Beehive Quern	**Late Neolithic**
Quartz Macehead	**Medieval**
Bone Weaving Shuttle	**Iron Age**
Flint Blade	**Early Bronze Age**

b) Using the evidence in Fig. 2, when do you think humans first settled at Thermere Farm? Justify your answer.

c) Using the evidence, what can you tell about the status of the people who lived at Thermere Farm during the Bronze Age?

d) Using the evidence, what can you tell about farming practises at Thermere Farm during the Iron Age?

e) Using the evidence, what can you tell about farming practises at Thermere Farm during the Medieval Period?

f) Suggest a reason for the decline of *Pinus* and *Betula* at Thermere Farm during the Mesolithic and Neolithic periods.