



Activity 5

Cress Cropmarks

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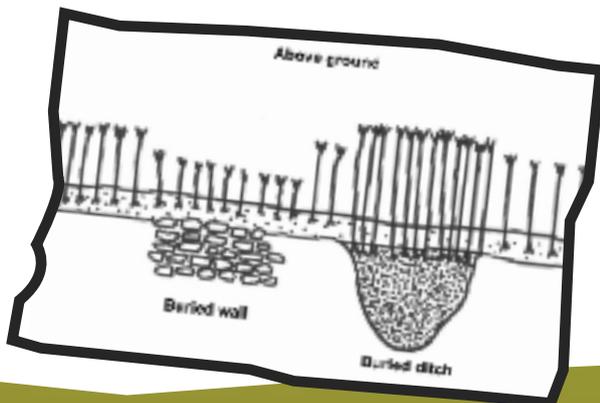
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HISTORY
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Teacher's information

There are many clues that can indicate what and where archaeological features are in a landscape. These features can indicate what is above ground, and also give clues to what might be hiding below the surface. This evidence comes in a number of forms and whilst they are often visible from ground level, seeing a site from above gives the archaeologist a huge advantage.

One of the most fascinating ways of detecting archaeological features is through recognising cropmarks. Cropmarks occur when there are ditches or features buried underneath an area used for growing crops. This affects the way that the crops or grasses grow.

This activity gives participants the opportunity to create their own mini crop marks to gain an understanding of why crop marks occur and how they can be important clues for



Cropmarks – useful information

As crops begin to grow in a field, the evidence of past settlements such as ditches and buried walls affects crop growth. This affects the rate at which the crops **change colour**, the **speed** that they develop, the **height** to which they grow and how **thick** the crop becomes.

By looking at these four clues – colour, speed, height and thickness – archaeologists can see where ditches or walls from the past are hidden beneath the crops.

Crops above a ditch

Crops growing over a buried ditch will result in taller plants that are more dense (lots growing close together). This is because the ditch will have collected more moisture and nutritious organic matter than the ordinary soil around it.

Crops above a wall

The opposite happens when crops grow above a buried old wall. The buried remains get in the way of moisture gathering at the plant roots that are trying to grow. This means that the growing conditions are not good and crops will be smaller and of poor quality.

Preparing the crops

You will need (1 per participant/group)

- Photocopies of the worksheets 1 and 2
- A seed tray or plastic/polystyrene food tray
- Packet of cress seeds
- Small stones/gravel
- Compost/soil
- Sticky label
- Water spray
- Cling film
- Pen



Teachers instructions

- In advance of this activity you may want to prepare a cropmark tray of your own to demonstrate what effects the participants will be looking for once they get their tray home.
- Introduce cropmarks to the group using the background information included in this pack.
- Explain that today the group will be recreating their own cropmarks to find out how the markings are made, and what the clues mean for archaeologists.
- Ask each participant/group to collect their tools (listed above) including their copies of worksheets 1 and 2.
- Allow the group around 30 mins to complete the task.
- Once the group is finished, explain that they will now need to take their crop home and leave it in a warm area for a week or so, checking regularly. They will need to take home both worksheets to remind them how to look after the crop and record what they find out.

- You can ask participants to bring in their own seed/food tray or other elements from the tools required.
- You could also set a date for one or two week's time for participants to bring back their crops to compare what they have found out or create a display.



Worksheet 1 – Cropmarks

Plant your cress

- Build a wall down the middle of the tray using small stones. Fill any gaps with smaller bits of gravel. This is your wall from the past – it may be the remains from the wall of a Norman castle, or a Roman settlement from over a thousand years ago.
- Fill the space around the wall with a thick layer of compost. Sprinkle just a little compost over the top of your wall in a thin layer.
- Scatter cress seeds evenly over the whole tray and spray with water to stick the seeds to the compost.
- Write the date on a label and stick it on the tray to record the date of planting. Complete the first section on your Observation Sheet for Day 1 (the day of planting) including sketching your cress from above.
- Cover the tray with cling film.



Back at home

- Place your tray in a warm area (about 25C), which allows a small amount of light to reach your tray.
- Check after two days and you will see your seeds begin to sprout.
- Uncover and leave your cress in good but not bright light. Water occasionally.
- On day 3, 7 and 14 after you plant your seeds note down any observations you make and draw a sketch of your tray from above, marking out where the cress is growing well and where it isn't growing so well.

What's happened?

Over the next week or so you should notice that there will be very little growth above your wall where the cress has had little soil to grow in – you've made your very own cropmark! This mark is just like the clues archaeologists look out for in crops to find evidence of buildings and settlements from the past.



Worksheet 2 – Cropmarks

Cropmark Observation Sheet

Archaeologist's name:

Day 1 (day of planting)

Notes:

Drawing from above:

Day 3

Notes:

Drawing from above:

Day 7 (One week)

Notes:

Drawing from above:

After day 14 (Two weeks)

Notes:

Drawing from above:

Any other observations?