

Preparing to plant & charting your seed's growth

Teacher's notes

The big question

What is the significance of the Poppy?

Level

First, Second

Experiences and outcomes

First level

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. **SCN 1-03a**

I can communicate clearly when engaging with others within and beyond my place of learning, using selected resources as required. **LIT 1-10a**

Second level

Having investigated where, why and how scale is used and expressed, I can apply my understanding to interpret simple models, maps and plans. **MTH 2-17d**

I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns. **MTH 2-19a**

I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology. **MTH 2-21a**

I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure. **MNU 2-11a**

Learning in the sciences will enable me to develop curiosity and understanding of the environment and my place in the living, material and physical world. **SCN OA**

Additional resources

Poppy seeds can be ordered for free from our Poppyscotland Learning website via this link: <http://learning.poppyscotland.org.uk/resources/order-education-pack/>

Task 1: preparing the planting area

Discuss with the children what the poppy seeds need in order to grow and then clarify that water and sunlight are the most important. Before marking out the planting area take the children outside to your school garden and let them choose where to plant the seeds. Discuss with them whether it would meet the requirements for plant growth. They should choose an area which gets plenty of sunlight.

Having worked out an appropriate scale for your school's garden, the children can then be involved in marking out the planting area using symmetrical designs. Use 'Poppy seeds resource 1' below to help mark out your planting area.

Preparing to plant & charting your seed's growth

To mark out the outline of the poppy shape attach a length of string to something which can be pushed into the ground, e.g. a metal tent peg. Then attach a peg/pen/pair of closed scissors to the other end of the string and mark out the petal circle shape by dragging the peg/pen/scissors along the grass.

To show where the markings are ask a pupil to follow the person making the markings with sawdust (this can be bought from pet shops).

Then the children will need to lift the turf and dig over the soil in order to let the air into the ground.

Task 2: planting challenge (Science)

Before the children are involved in the following activities, they should share and discuss their knowledge of the poppy. Along with children's prior knowledge the following should be discussed:

The Poppy is:

- It is a flower which grows wild outside.
- It grows from a seed and produces a red flower.
- It is used to remember people who have been in war or conflicts.
- Plastic replicas are sold in November to raise money for ex-service personnel and their families.
- It became a symbol for Remembrance and hope after it grew in a place called Flanders Fields in Belgium and France during the First World War.
- It symbolises new life.

Then let the children prepare the ground by turning it over, so that the soil gets air into it. Then scatter the seeds and rake in lightly. When large enough to handle, remove any seedlings which are too close together and replant so that they are 15-30cm apart.

So that they children can watch their own seed grow, get them to write their name on a lollipop stick and place into the ground where their seed is.

Task 3: charting your poppy seed's growth

Once the seeds in the garden begin to sprout the children should record their seed's growth in their poppy seed diaries (poppy seed resource 2) below. They could enhance their poppy seed diaries with additional photographs they have taken, written descriptions and measurements.

Preparing to plant & charting your seed's growth

Your challenge

Task 1: preparing the planting area

Your class has been selected to prepare the planting area within the school garden in order to sow their poppy seeds. The chosen poppy design and scale have been selected and marked out (see poppy seed resource 1).

Discuss with your teacher what the poppy seeds need in order to grow and where the best place in your school garden would be to plant your poppy seeds. Does it meet the requirements for plant growth? Somewhere with plenty of sunlight is best.

Now as a class you have to decide how best to organise the planting of the seeds. It has been decided that you will be sowing your seeds within the petals of a poppy flower shape and, therefore, you need to organise how many poppy outlines to mark out and prepare and decide where you will plant your seeds.

Learning intention

- I am learning how to plan and organise an area to make it ready for planting

Success criteria

- Work collaboratively in groups to:
- calculate how many poppy planting areas will be needed;
- draw a layout of the garden with the correct number of planting areas and label where each member of the class will plant their seeds.

Follow up task

In your groups you will now be responsible for marking out the individual planting areas in the poppy shape using the techniques demonstrated by your class teacher.

Success criteria

- Work collaboratively in groups to:
- mark out the individual poppy planting area

Task 2: planting your seeds

Prepare your soil for planting by turning it over, so that air gets into it. Then scatter your poppy seeds and rake in lightly. When large enough to handle, remove any seedlings which are too close together and replant so that they are 15-30cm apart.

So that you can watch your own poppy seed grow, write your name on a lollipop stick and place it into the ground where you have planted your seed.

Task 3: chart your poppy seeds growth

You have now successfully planted your own poppy seed in the school garden and it is your responsibility to look after it and track its progress. Therefore, you will be issued with your individual poppy seed diary (poppy seed resource 2) below and once there are signs of growth you will record your findings in your diary.

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Learning intention

- I am learning about the life cycle of a plant and about how it changes and grows as it develops.

Success criteria

Individually you will:

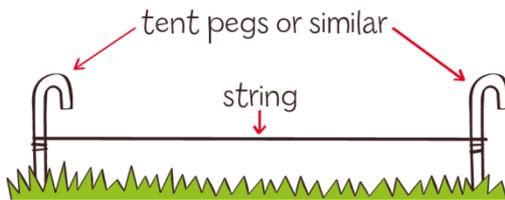
- Take photographs of each development in your poppy seed.
- Take accurate measurements of the poppy's growth using an appropriate scale.
- Record your photographs and measurements in your diary along with detailed descriptions of the poppy's developments.

Preparing to plant & charting your seed's growth

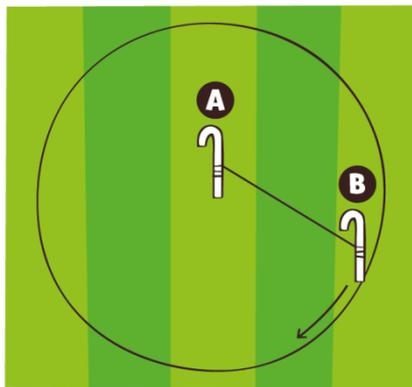
Poppy seed resource 1



1 The length of the string represents the circle petal's radius.

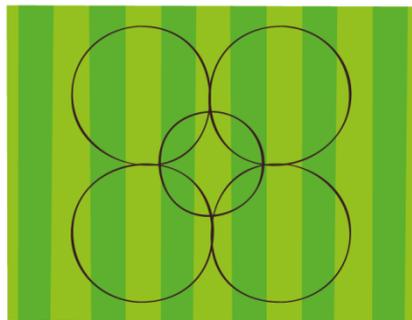


2 Attach the string to two tent pegs or something that will hold it in place in the ground and make a visual marking on the grass.

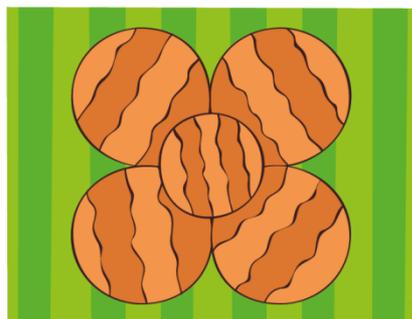


3 The peg marked "A" is stuck in the ground and does not move.

Drag the peg marked "B" around the grass with the other peg holding the centre of the circle in place in the ground.



4 This is how the design outline may look.



5 The shaded circles should have the turf removed and then turn the soil over before sowing the poppy seeds.

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Poppy seed resource 2

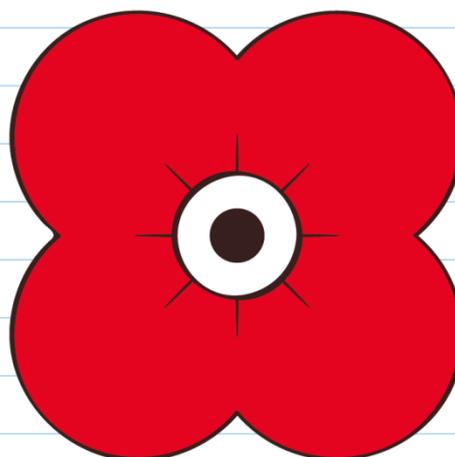
How do flowers reproduce?

Lined writing area for the question "How do flowers reproduce?".



My poppy seed diary

Lined writing area for the "My poppy seed diary" section.



Investigated by:

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Week 1

Poppy seed photograph
inserted here



Draw a cross section of a poppy flower
here and label it.



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Week 3

Poppy seed photograph
inserted here



How did you plant the poppy seed?



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What do plants need in order to grow?

Lined writing area for the question.



Week 4

Poppy seed photograph inserted here

Lined writing area for the week 4 entry.



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Peer marking exercise / self-assessment

■ ■ ■ Traffic light the following statements.

Experiences and outcomes

- I understand what seeds need to grow. **SCN 1-03a**
- I worked as part of a team to prepare the soil so the seeds would grow. **SCN 1-03a**
- I know more about the life cycle of a plant and about how it changes and grows as it develops. **SCN 1-03a**
- I know how to use scale drawings when planning an area. **MTH 2-17d**
- I used my scale drawings to help me to mark out a planting area. **MTH 2-17d**
- I applied my understanding of symmetry by using symmetrical designs to help mark out a planting area. **MTH 2-19a**
- I took accurate measurements of a flower's growth using an appropriate scale. **MNU 2-11a**
- I recorded a flower's growth development using photographs, measurements and detailed descriptions. **MTH 2-21a**

What I did best:

I am still working on: