

## Growing plants in the classroom: techniques

### ➔ Teacher Guidance

## Growing plants in film pots

Many different plants can be grown using these techniques. The rapid-cycling Brassica, for example, produces flowers and seeds in 15 to 35 days, while radishes can be harvested after 20 to 30 days. Taller plants, like sugar snap peas, may be started in film pots but then transplanted to larger containers such as flower pots. Comparison of different sorts of germination and early growth in plants can be readily investigated by sowing a variety of seeds in different pots at the same time.

The rapid-cycling Brassica needs to grow under a light bank. Most other plants also grow faster and it is easier to control growing conditions with a light bank so the use of a light bank is strongly recommended. See pages 42 to 43 for more information on film pots, capillary matting and soil mix, and page 14 for information on the light bank.

### Resources

- plastic containers with lids for making water boxes (e.g. 2 litre square or rectangular margarine or ice cream tubs will hold 10 film pots. Plastic take-away containers can also be used).
- water
- fertiliser pellets
- soil mix
- sticky labels
- seeds
- capillary matting for water boxes and wicks
- black film pots (allow 1 film pot for each child)
- light bank

### Preparation for the activity

1. Make a 2 mm hole in the base of each film pot (using, for example, a sharp awl).
2. Cut wicks out of capillary matting. Push a wick into the hole at the base of each pot, carefully pulling it through with blunt forceps.
3. Prepare a water box as follows:
  - Make sure that the plastic container is clean.
  - Cut a slit in one end of the plastic lid.
  - Cut out a piece of capillary matting to fit the lid and with a slightly narrower tail. This should reach three-quarters of the way into the plastic container when pushed through the slit in the lid.
  - Fill the container three-quarters full with water.

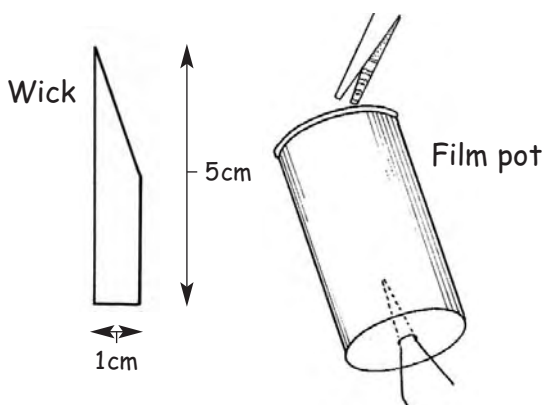


Figure 9. Preparing the wick for a film pot.

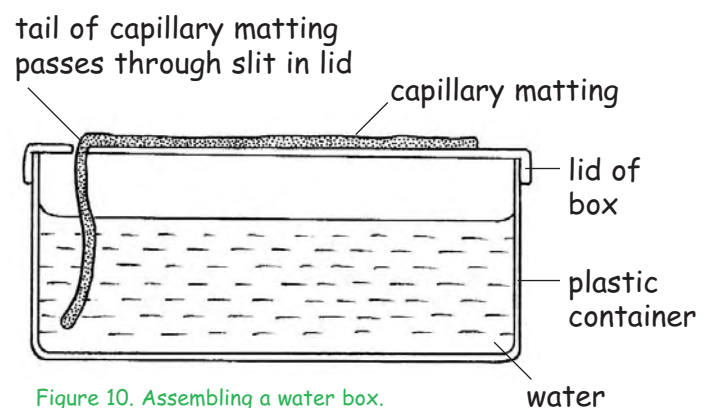


Figure 10. Assembling a water box.

## *Planting*

We suggest that the children work in small groups. Each child has a film pot and sows seeds in it as described in the Pupil Sheet on page 13. It is important that the soil mix in the film pots is not compressed. It should be pressed down very gently or the bottom of the pot can be tapped while it is being filled.

After planting, the film pots from each group are best held together with Scotch™ 'Magic Tape' to make them more stable on the water box. Rubber bands are useful for holding the pots together while the Scotch™ 'Magic Tape' is being secured but are likely to perish under the light bank. An alternative method is to cut out rings from 2 litre plastic lemonade bottles and to use the rings to hold the film pots together (see SAPS website, *OSMOSIS 11*).

The film pots (and later the plants) should be approximately 10 cm away from the light source in the light bank.

A Pupil Sheet using this technique is given on page 13. This Pupil Sheet shows the essential steps when working with film pots and can be adapted for the particular activity you are doing.

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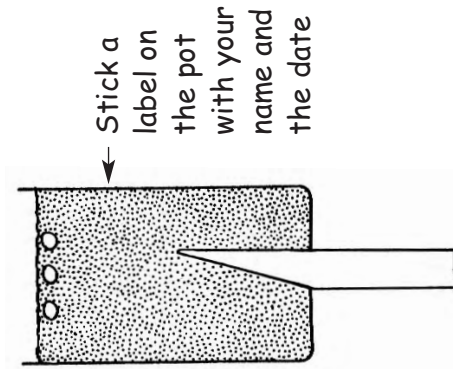
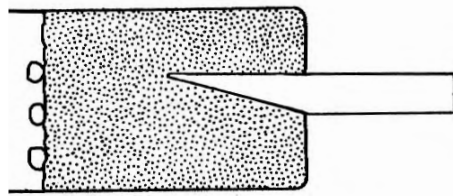
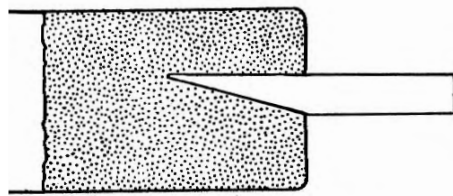
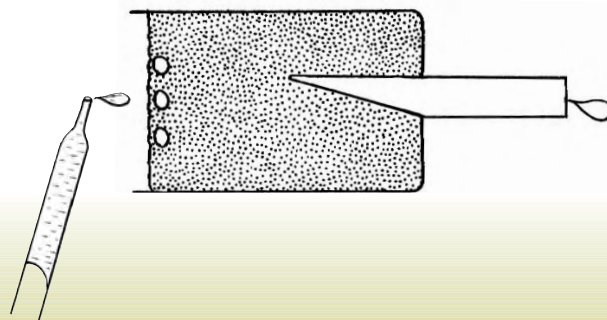
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## ↓ Pupil Sheet

# Growing plants in a film pot

### You need:

- a black film pot with a wick
- some soil mix
- a plastic teaspoon
- seeds
- water and a dropper
- sticky label and pencil



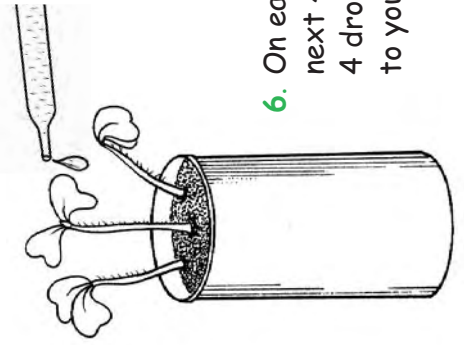
**1.** Use the plastic spoon and fill your film pot with soil mix

**2.** Add 3 seeds

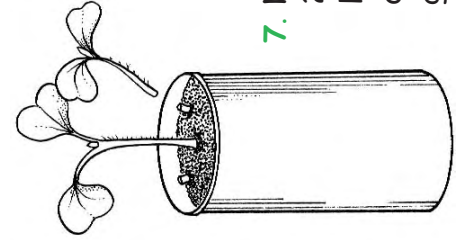
**3.** Just cover the seeds with soil mix and gently press the soil down with your finger



**5.** Ask your teacher to put the film pot on a water box under the light bank



**6.** On each of the next 4 days, add 4 drops of water to your film pot



**7.** Now cut off 2 seedlings and leave the strongest one to go on growing