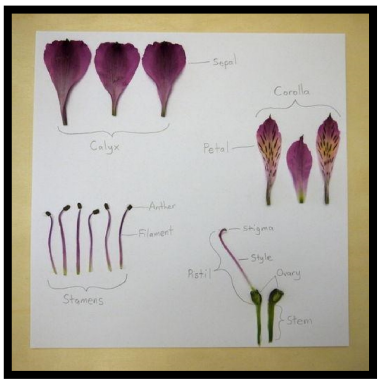
Guidance for flower dissection

N.B. please check for any pollen allergies before starting

Gladiolus or sweet peas are good (cheap) options for the main simple flower as they have multiple flower heads on one stem. Y6 should also dissect a more unusual or complex flower for comparison, such as a dahlia or chrysanthemum – see what is available that looks more unusual.



Equipment:

- Flower
- Tweezers
- Knife
- Plain A4 paper
- Double-sided tape

Dissection instructions:

1. Secure the flower stalk with Blu-Tack or Plasticine and explore the flower with a magnifying glass.
2. Start at the base, and remove the sepals (using fingers or tweezers) and place on your piece of paper.
3. Remove the petals, and try to identify your plant as either a monocot or a dicot. Monocotyledons have petals in multiples of three and the leaf veins are parallel, while dicotyledons have petals in multiples of four or five and the leaf veins are branching.
4. Next remove the stamens, and examine the pollen using the magnifying glass and note its shape.
5. Now remove the carpels or pistil and cut it in half lengthwise (be careful to keep your fingers out of the way), and use your magnifying glass to examine the inside of it. You should be able identify the style and might be able to see tiny eggs, or ovules, in the pistil's ovary.
6. Arrange the flower structures on double-sided sticky tape, on the piece of paper, either in the form of an 'exploding' flower, or arranged in lines or 'clumps'.
7. Once completed, label each part (***Y6 – include an overview of the function of each structure in terms of sexual reproduction and note any features that might promote pollination, such as colour, in your labels***).
8. Cover the dissected flower with sticky-backed plastic to protect it.
9. ***Y6: now investigate some more unusual flowers, dissecting them to identify their reproductive structures.***

Virtual Dissection

You can also dissect flowers online:

- Simple: https://www.youtube.com/watch?v=yLl7iEpqxZA
- Complex: Interactive virtual plant dissection lab, Chinese University of Hong Kong: http://www.cuhk.edu.hk/bio/IVPDL/