DESIGN TECHNOLOGY learning springboards



Plant dissection - Dandelion

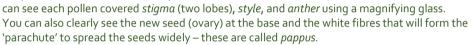
Explore parts of a plant using a scalpel

Aim: Use real plants and *Pappus* Plant ID sheets to identify key parts of a flower.

Resources: dandelion heads, scalpel, tweezers, magnifiers

Dandelions are plentiful and relatively easy to dissect. Observations confirm that the 'head' is composed of a mass of smaller flowers called florets.

When in full flower, cut the dandelion head in half with a scalpel. Tweezers are useful to separate each floret. You



Dissect dandelions at different stages of maturity for comparison purposes.

Plant dissection – Dog Rose

Explore parts of a plant using a scalpel

Aim Use real plants and *Pappus* Plant ID sheets to identify key parts of a dog rose hip.

Resources: rose hips, scalpel, tweezers, magnifiers

Collect two hips from a dog rose. Cut one in half from the black conical disc on the top down to the point where it is attached to the stalk (pedicel). The black disc will



have a tuft of hair-like features, which are the decaying remains of the *stigma* and *filaments* that once supported the *stamen*. Carefully follow each "hair" as it travels downwards to enter a single seed (*ovary*).

Tease each seed and its connecting *style* away from the others. If you can see more than one *style* enter a seed then this will mean that it has more than one *ovary* within it.

Plant based cosmetics

Discuss cosmetics and the use of palm oil

Aim: Raise awareness of the issues around palm oil in cosmetics and food.

- Research the issues around the farming, trade and use of palm oil
- Harvest lavender (ask a neighbour if there is none growing in school) and make lavender bags or bath bombs; instructions can be found online.
- Why have plants traditionally been used in cosmetics and hygiene products? Which ones are still used? Why?

If you have access to a source of Soapwort (saponaria), pupils could experiment with this to compare its efficacy to modern soap powders.



Make avocado lip scrub

Explore a cosmetic use for avocado

Aim: To explore how plants can be used to make cosmetics and facial products

Ingredients:

- 1 teaspoon of crude avocado oil (Persea gratissima oil)
- 1 teaspoon of brown sugar (the finer the sugar the better)

Instructions:

- Mix the sugar and avocado oil in a small bowl until blended.
- Apply the sugar/oil blend to your lips, using your fingertip and a gentle circular motion.
 Wipe the lips with a tissue and enjoy the silky skin feel over your lips. It's as easy as that!
- What did each of the ingredients do, to make your lips feel smooth? Clue: exfoliated and moisturised.

