



**National Plant
Monitoring Scheme**

Plant Anatomy

Get to know the parts of a plant



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of Britain & Ireland**



**UK Centre for
Ecology & Hydrology**

Plantlife

Aims

- Learn the basic parts of a plant
- Be able to recognise these parts in some flowers
- Provide a strong foundation for learning more about plant identification

What terminology are we going to learn?

Receptacle

Pedice

Sepal

Calyx/calyces

Petal

Corolla

Regular/irregular or
actinomorphic/zygomorphic

Stamen

Filament

Anthers

Gynaecium

Carpel

Ovary/ovule

Style

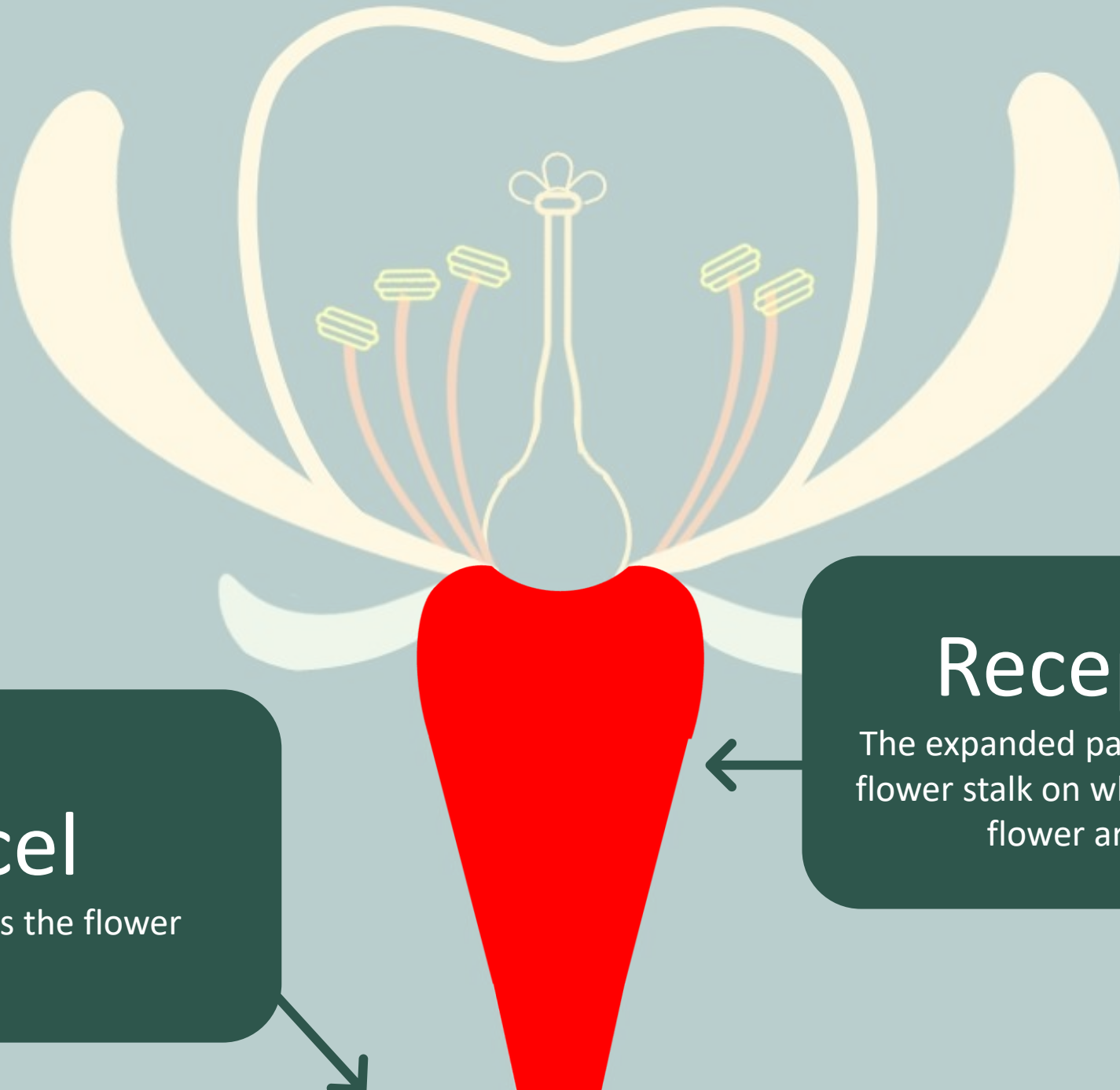
Stigma

Internode/node

Stipules

Petiole





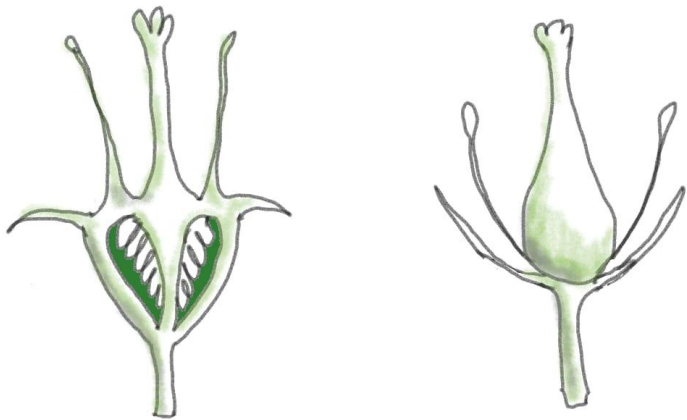
Pedicel

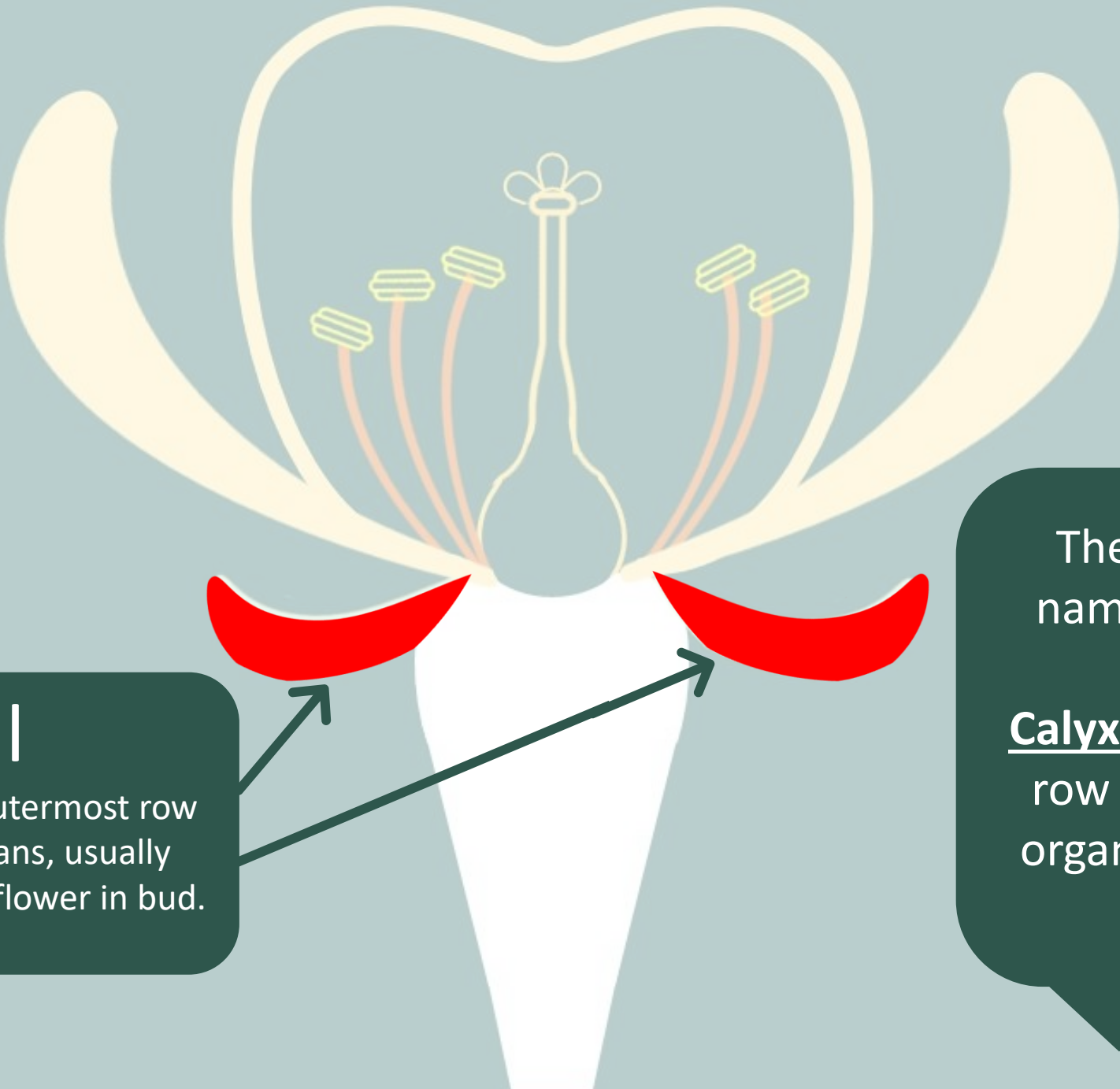
The stem that holds the flower

Receptacle

The expanded part at the end of the flower stalk on which the organs of a flower are inserted.

Examples of Receptacles



A diagram of a flower in cross-section. The outermost layer consists of five red, crescent-shaped sepals. Inside them are five yellow petals. In the center, there are six stamens with yellow anthers and orange filaments, and a central pistil with a yellow stigma and orange style. The base of the flower is a white cone.

Sepal

A single part of the outermost row (whorl) of floral organs, usually green, protecting the flower in bud.

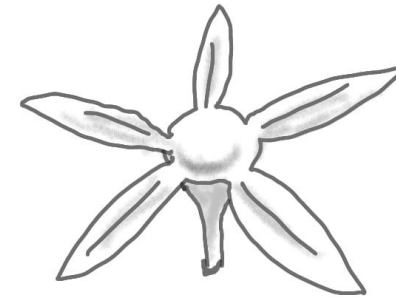
The sepals can be named as a group – the calyx

Calyx – the outermost row (whorl) of floral organs, often divided into sepals

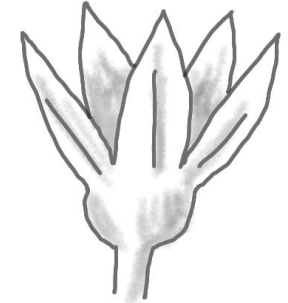
Examples of Sepals and Calyces (Calyx)



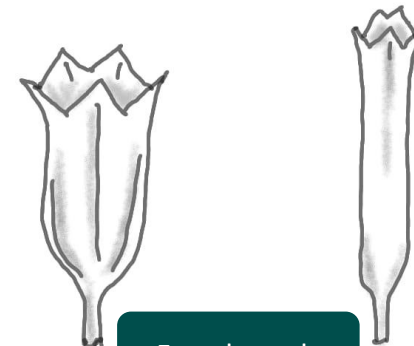
Free sepals

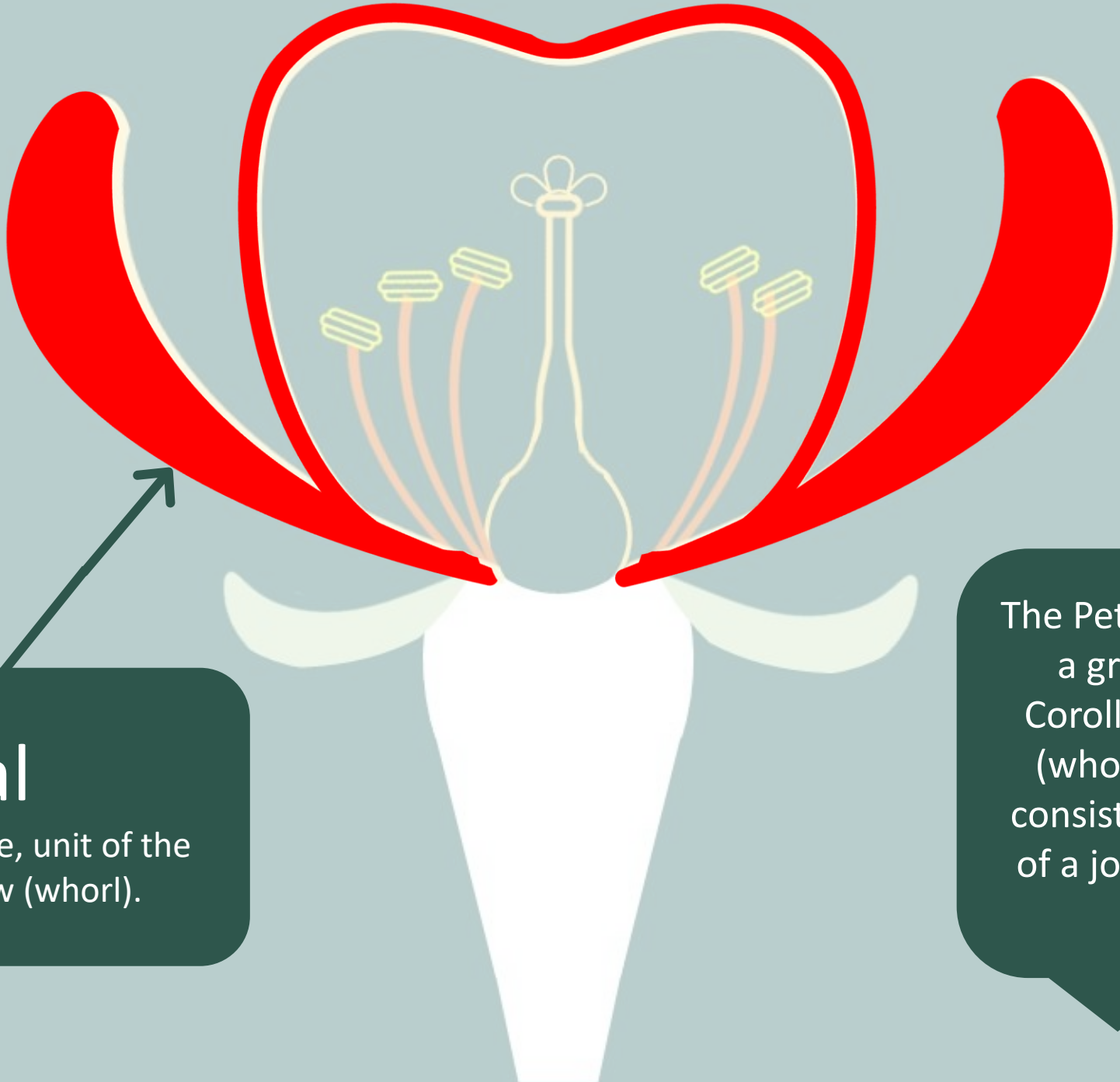


Partly fused



Fused sepals



A diagram of a flower with a white, conical base. Above the base is a row of five light green, crescent-shaped sepals. Above the sepals is a row of five large, red, curved petals. In the center of the flower, there are six stamens with yellow anthers and orange filaments, and a central pistil with a yellow stigma and an orange style. An arrow points from the word 'Petal' in a text box to one of the red petals.

Petal

A single, usually free, unit of the second floral row (whorl).

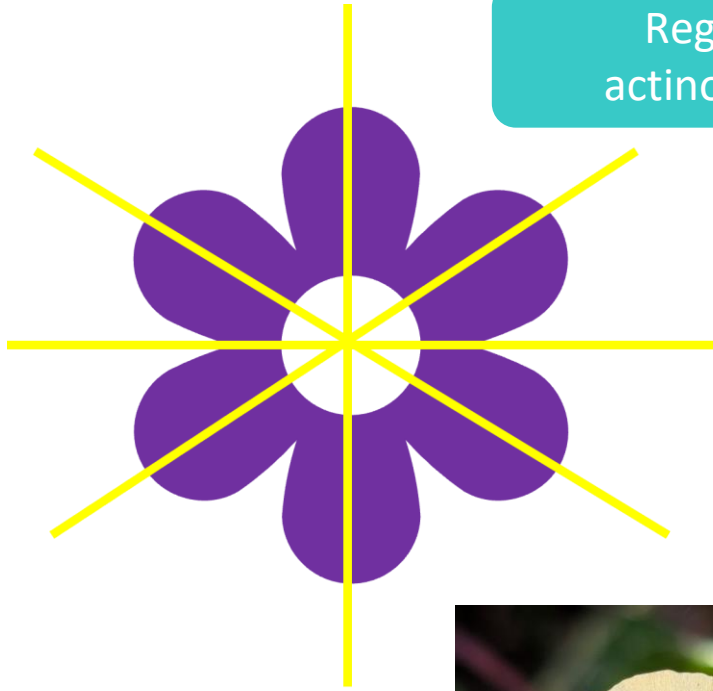
The Petals can be named as a group – the Corolla
Corolla – the second row (whorl) of floral organs, consisting of free petals or of a joined tube and petal lobes.

Examples of Petals

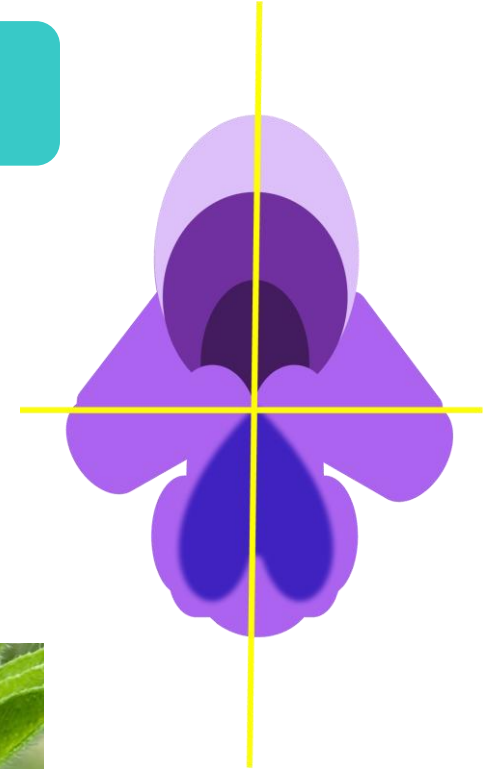


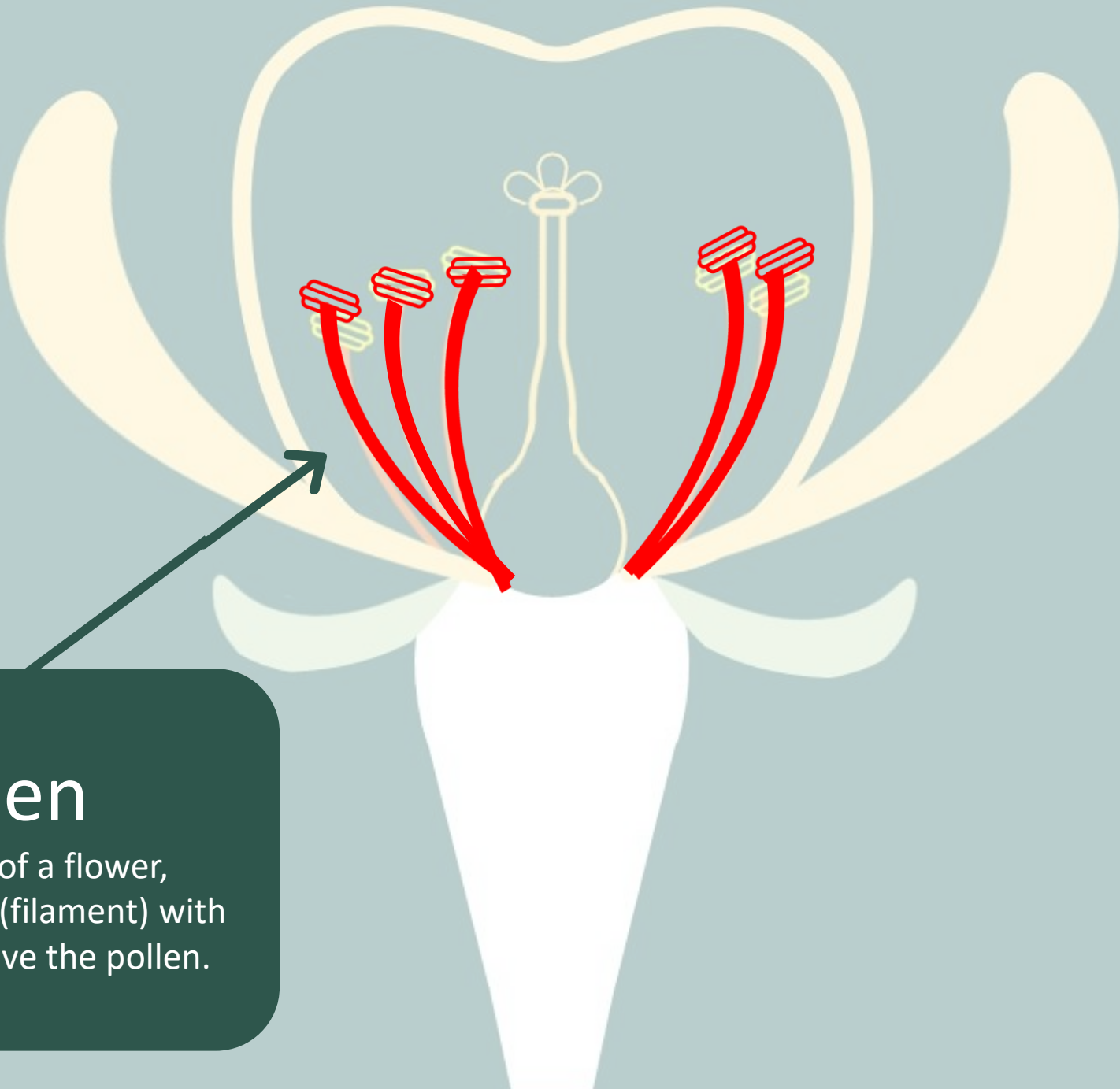
Regular vs irregular flowers

Regular or
actinomorphic



Irregular or
zygomorphic

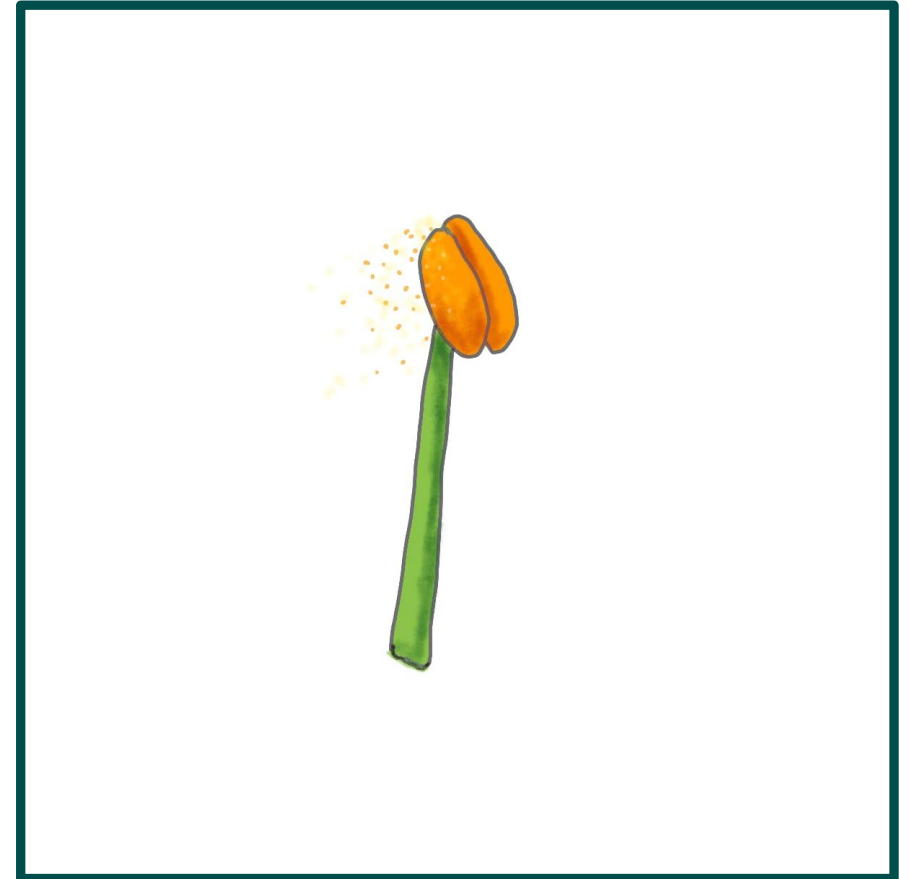


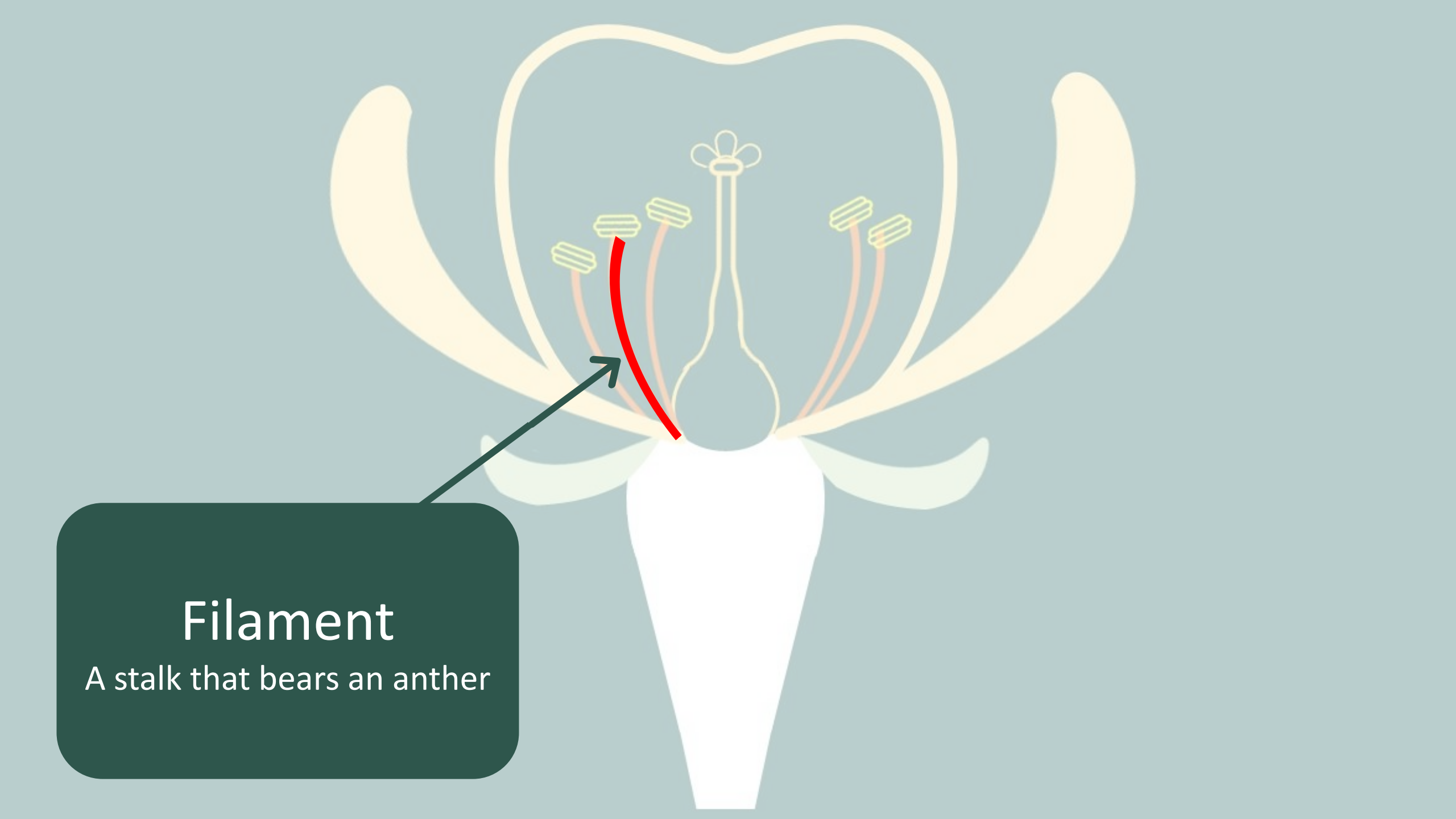
A diagram of a flower with a white base and yellow petals. The stamens are highlighted in red, showing the filament and anther. The pistil is shown in yellow. An arrow points from the text box to one of the stamens.

Stamen

The male organ of a flower, consisting of a stalk (filament) with the anthers that have the pollen.

Examples of Stamen



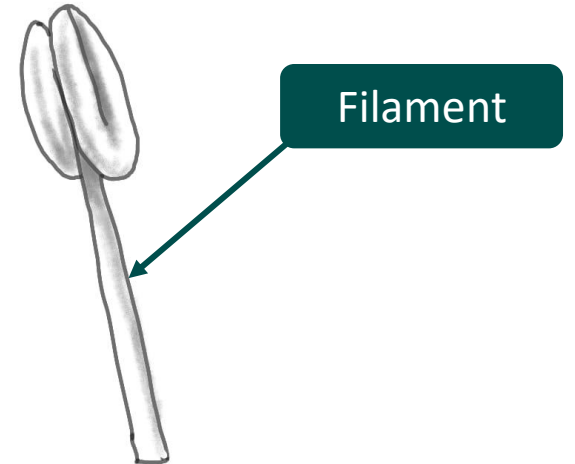
A diagram of a flower with yellow petals and a white ovary. The stamens are shown with red filaments and yellow anthers. A red curved line highlights one filament, and a black arrow points from a text box to it.

Filament

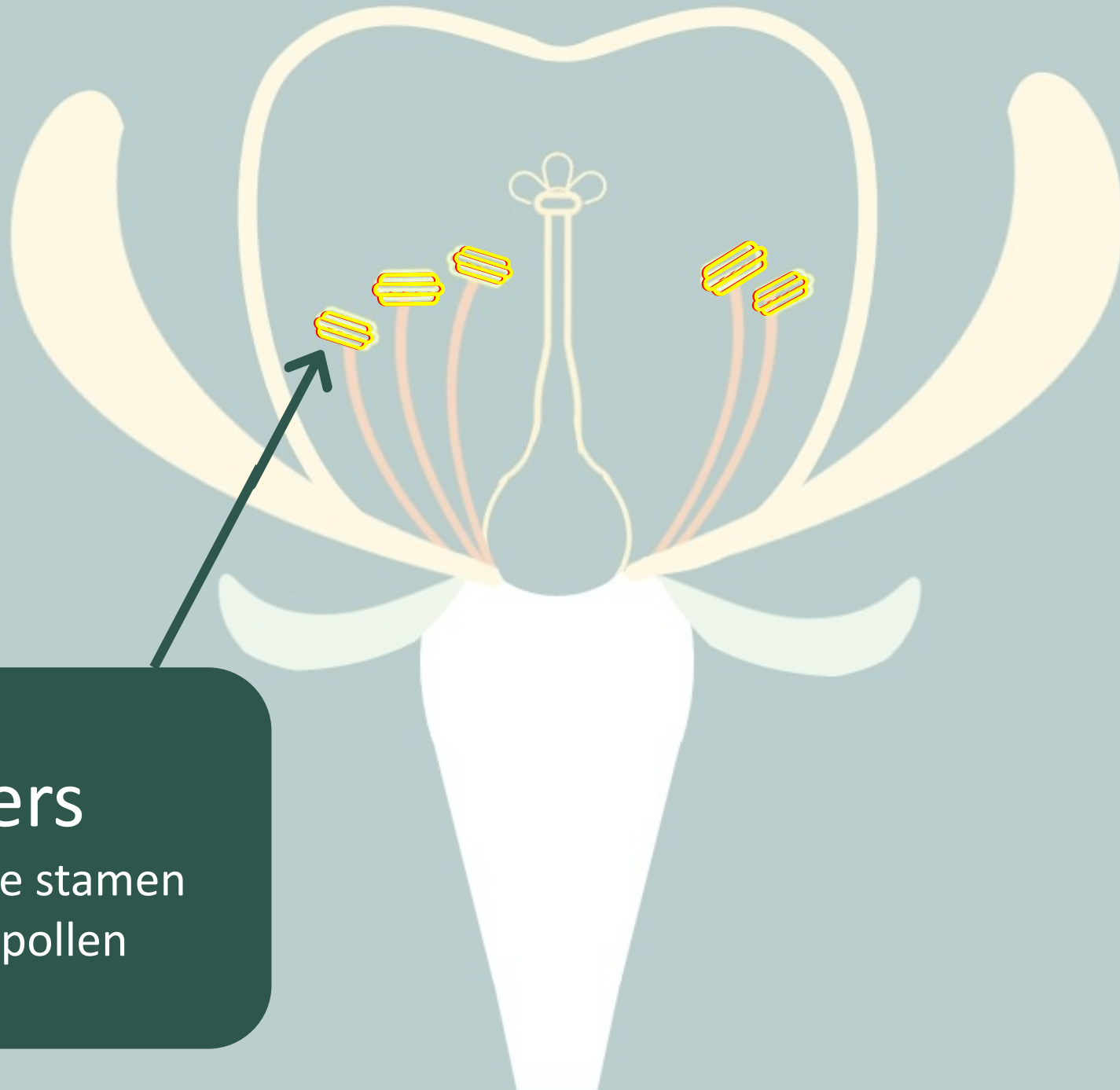
A stalk that bears an anther



Examples of Filament



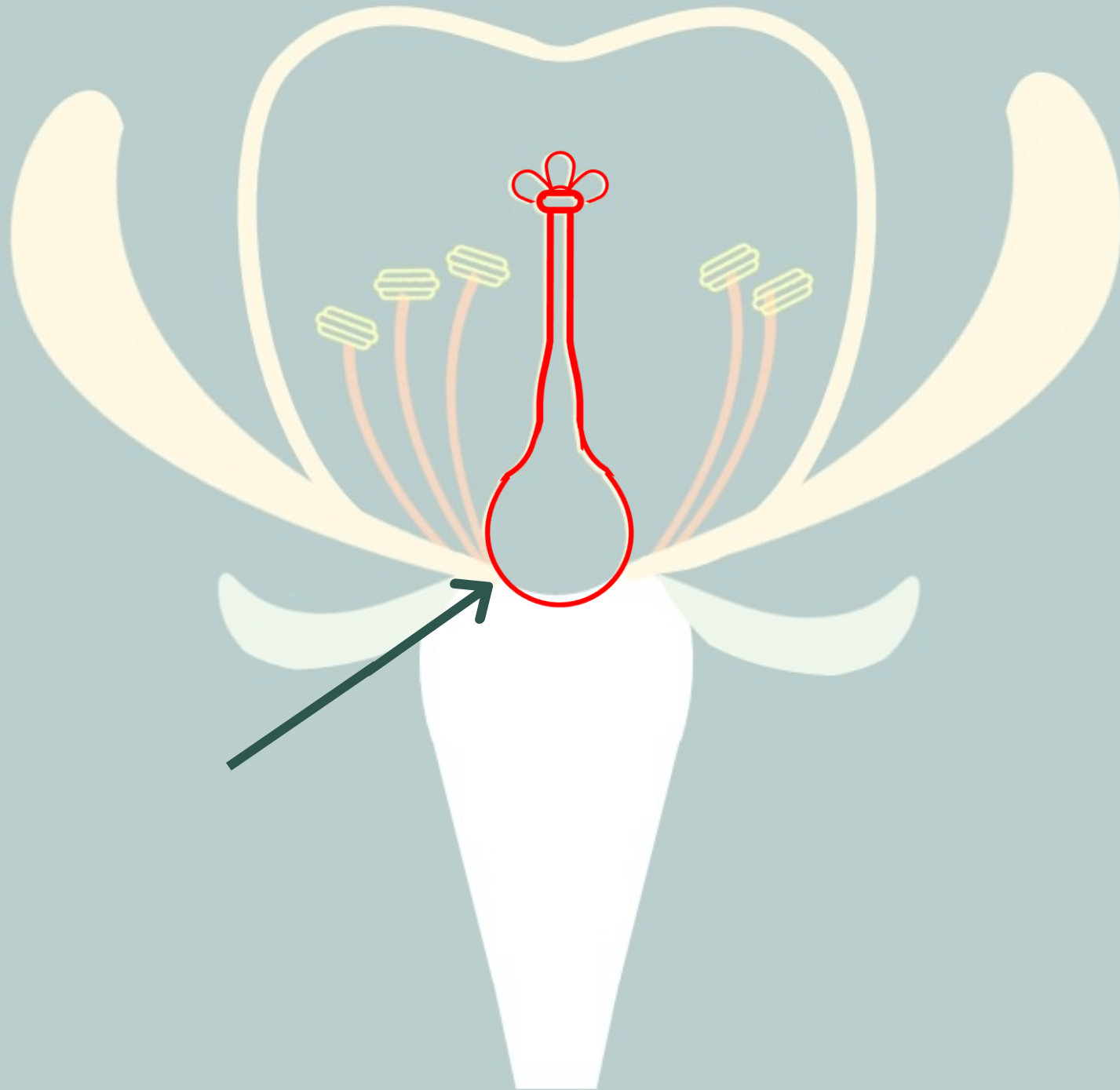
Anthers
The part of the stamen
containing pollen



Examples of Anthers

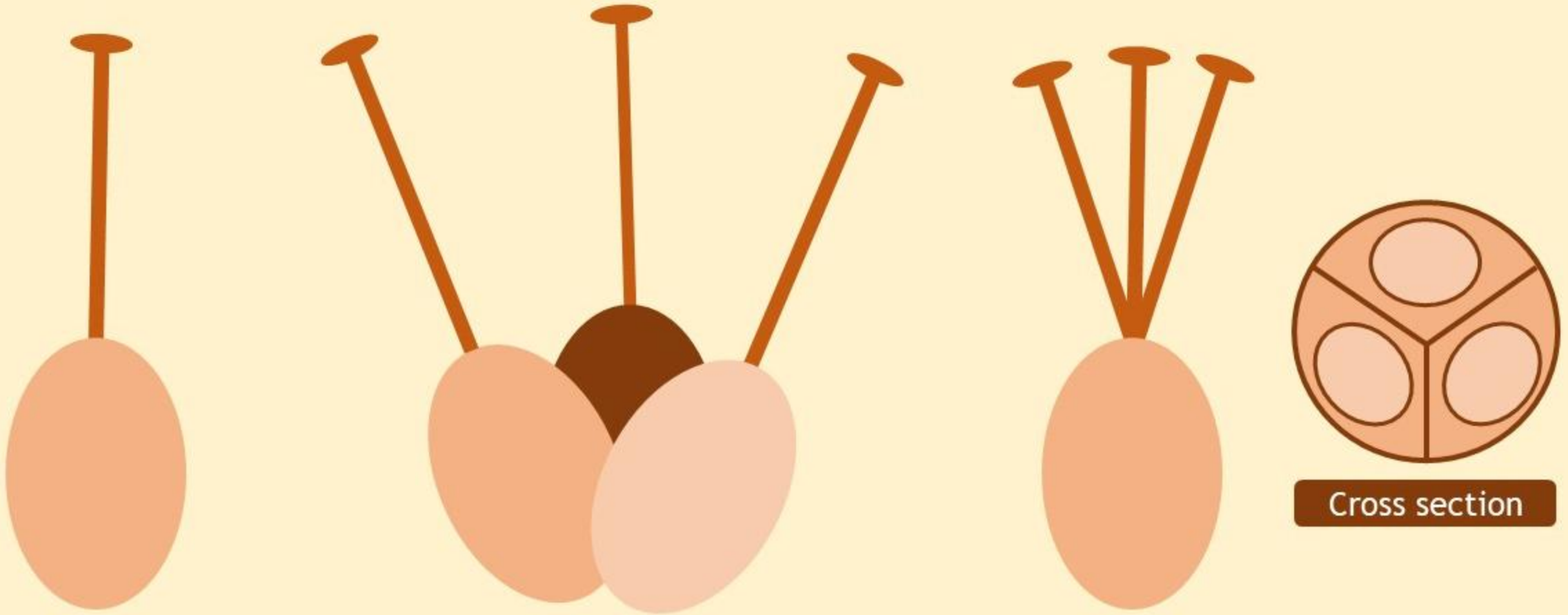


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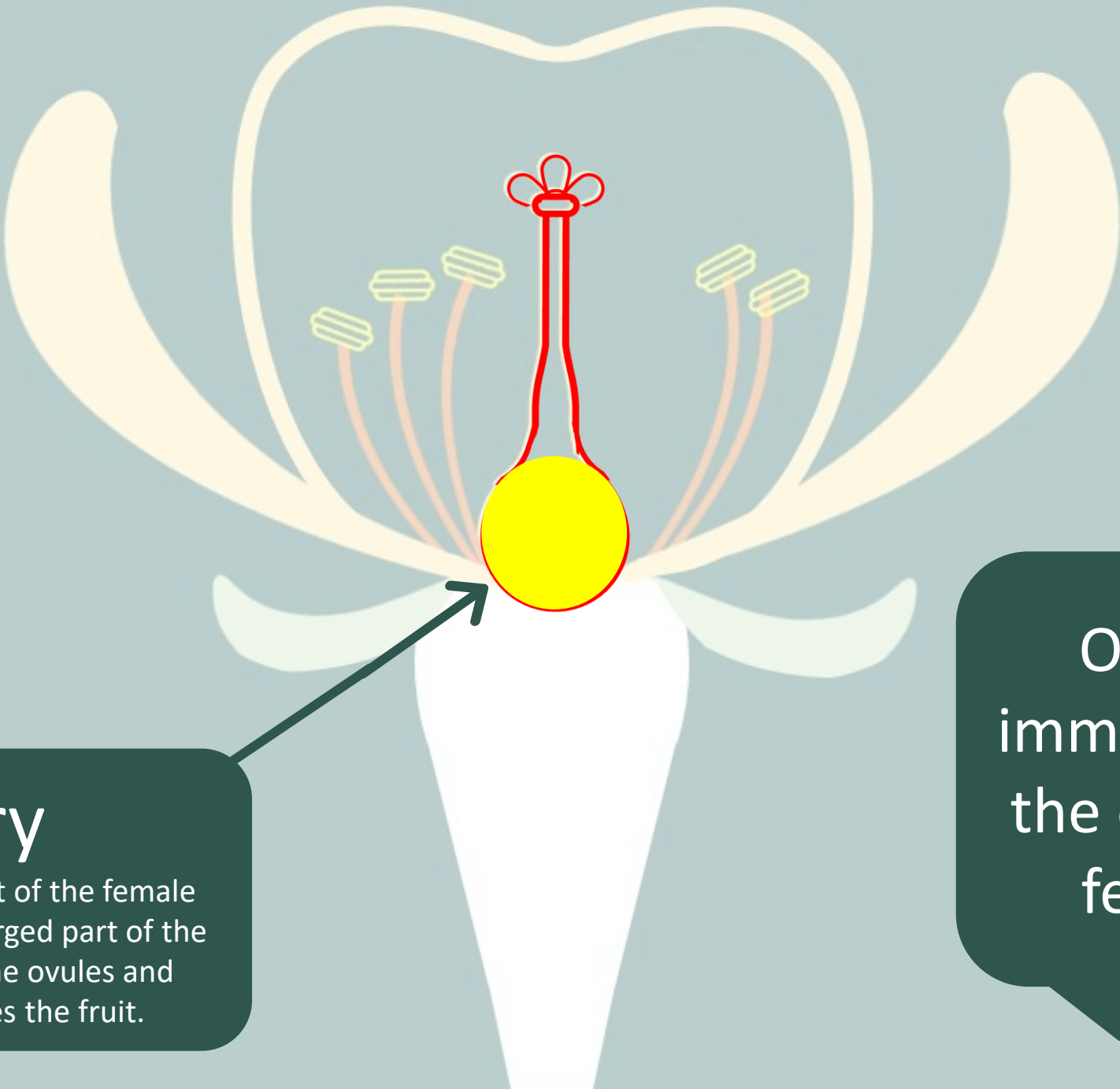
Examples of how the female parts can be arranged



1 Carpel – Simple, individual

3 Carpels – unfused,
separate

3 Carpels - fused

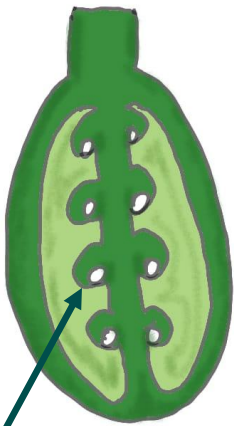
A diagram of a flower with a light blue background. The flower has a white base (pedicel) and a yellow center (ovary). The ovary is a yellow circle with a red outline. A red line (style) extends from the ovary to a red stigma at the top. Several yellow stamens with red anthers are shown around the ovary. A black arrow points from the text box on the left to the yellow ovary.

Ovary

The ovule-bearing part of the female organs, usually an enlarged part of the pistil that contains the ovules and eventually becomes the fruit.

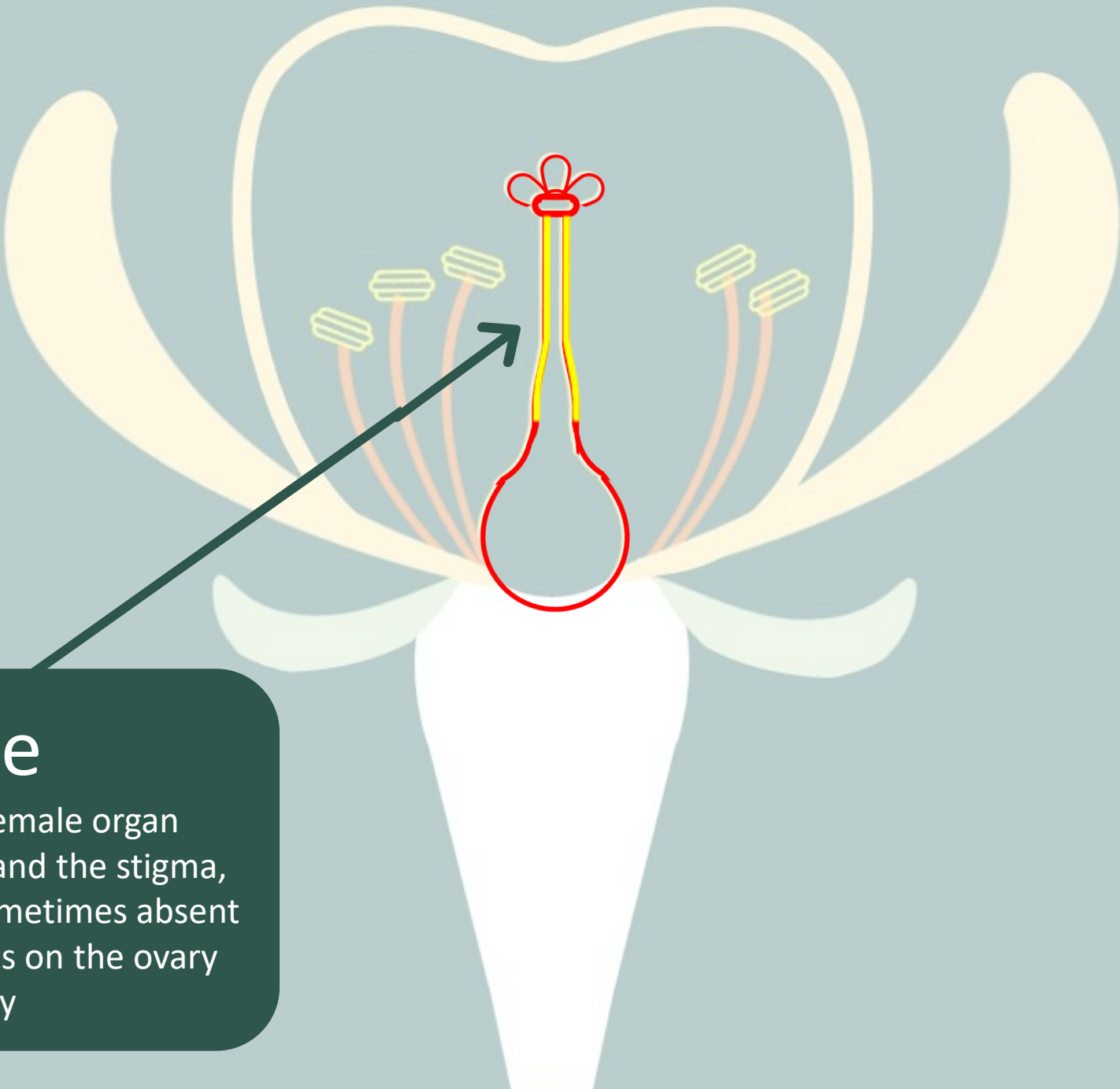
Ovule – the immature seed in the ovary before fertilization

Examples of Ovary



Ovules – immature
seeds

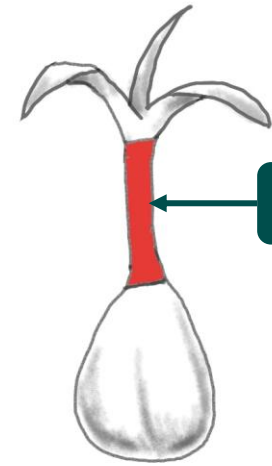
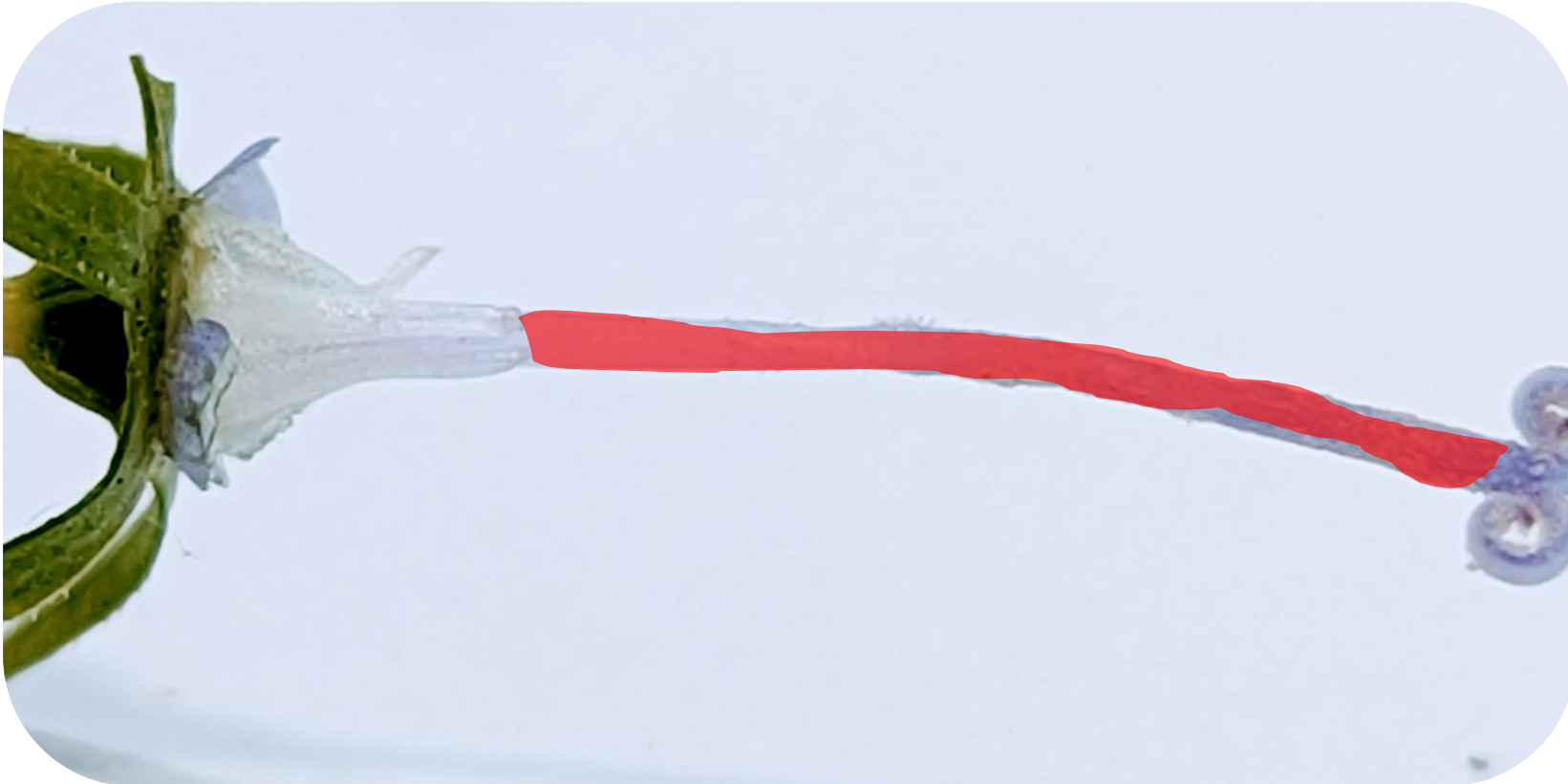




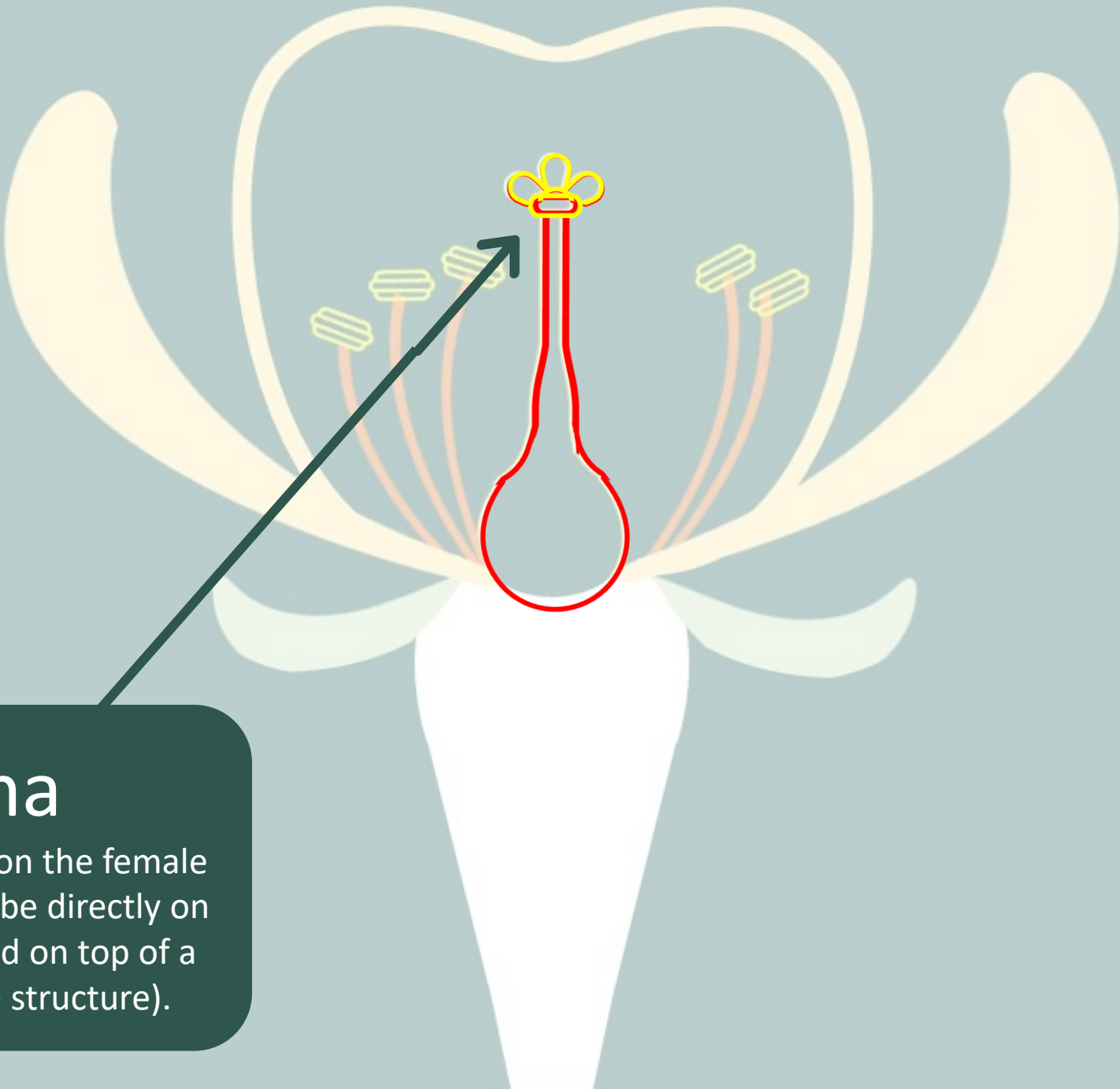
Style

The part of the female organ between the ovary and the stigma, often slender and sometimes absent when the stigma sits on the ovary directly

Examples of a Style



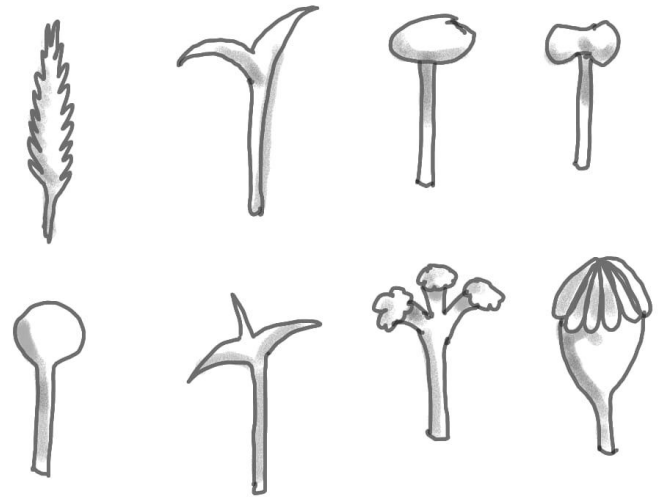
Style



Stigma

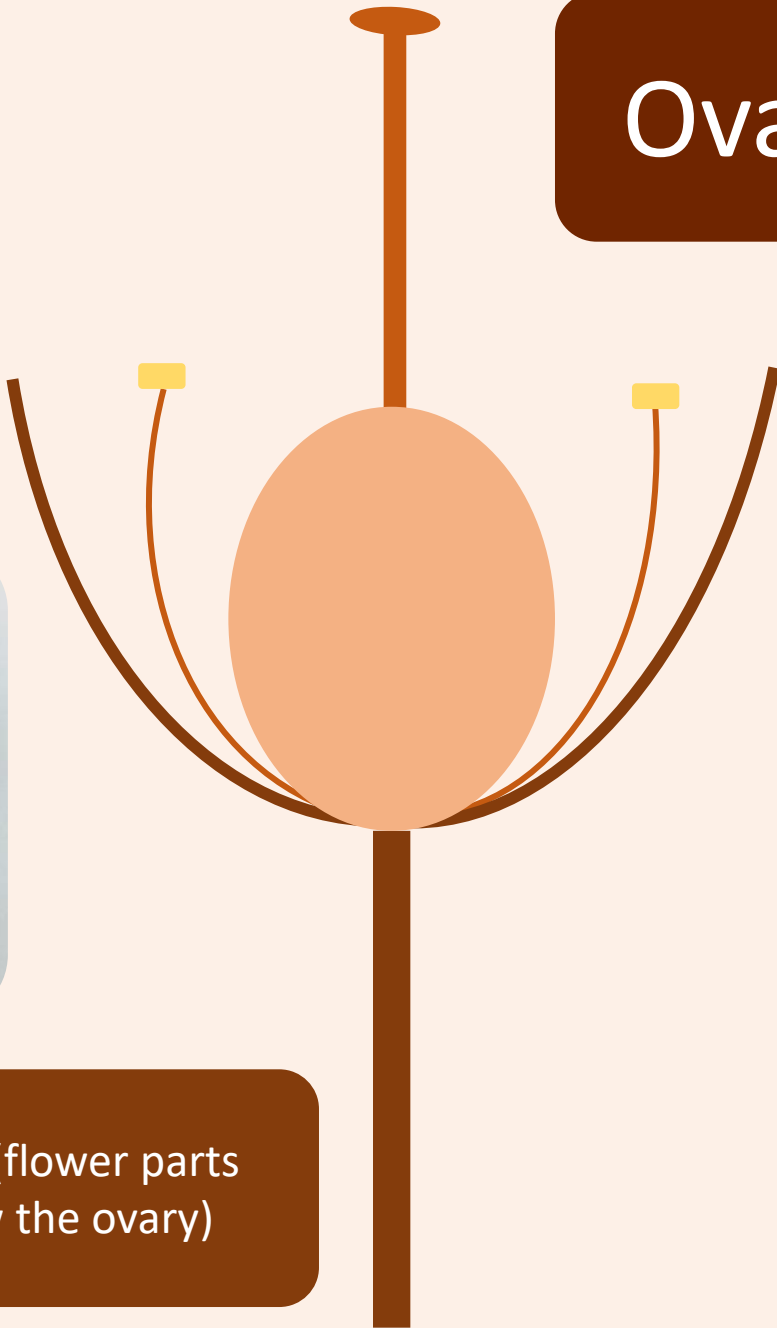
The pollen receptor on the female organs, which might be directly on the ovary or elevated on top of a style (the stalk like structure).

Examples of Stigma

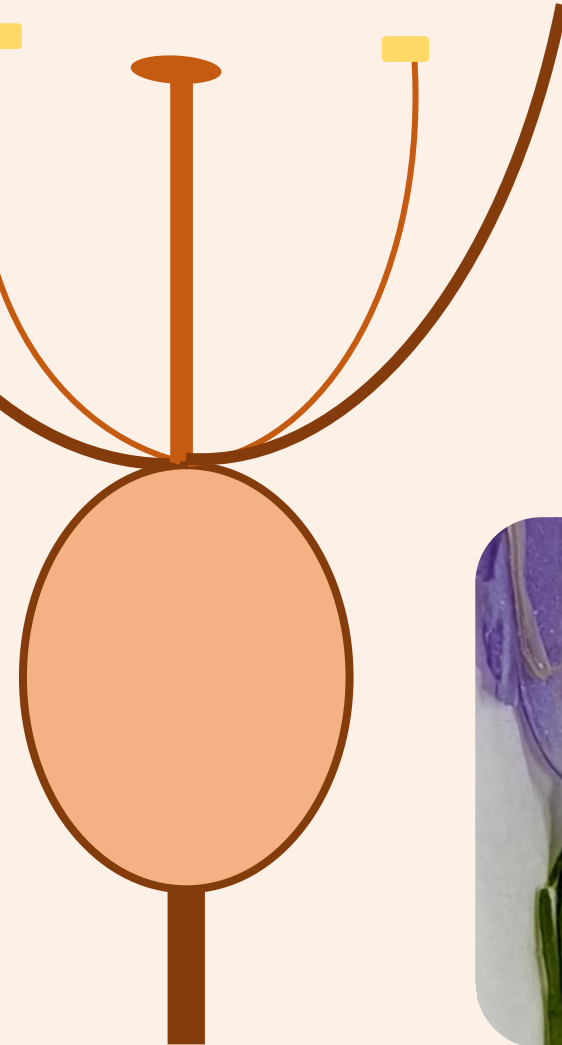


Ovary Position

Inferior Ovary (flower parts inserted at apex of ovary)



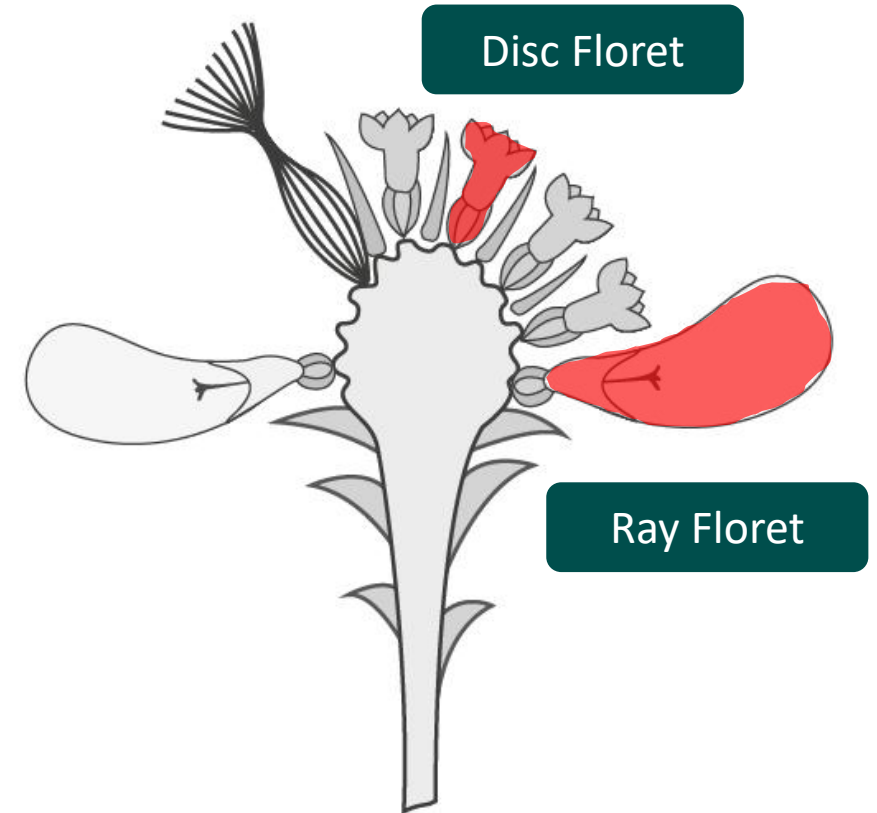
Superior Ovary (flower parts inserted below the ovary)

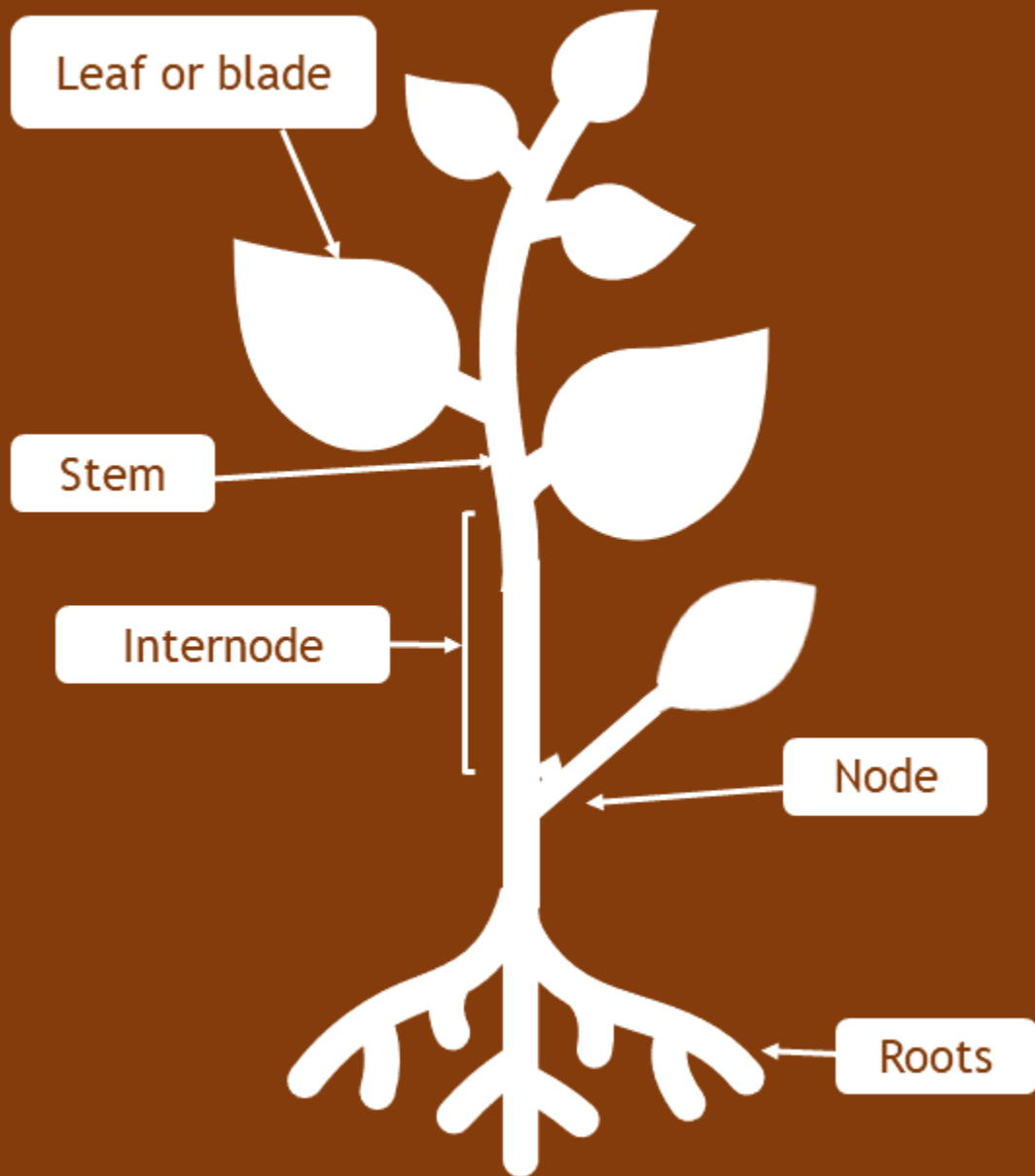


How flowers can look different

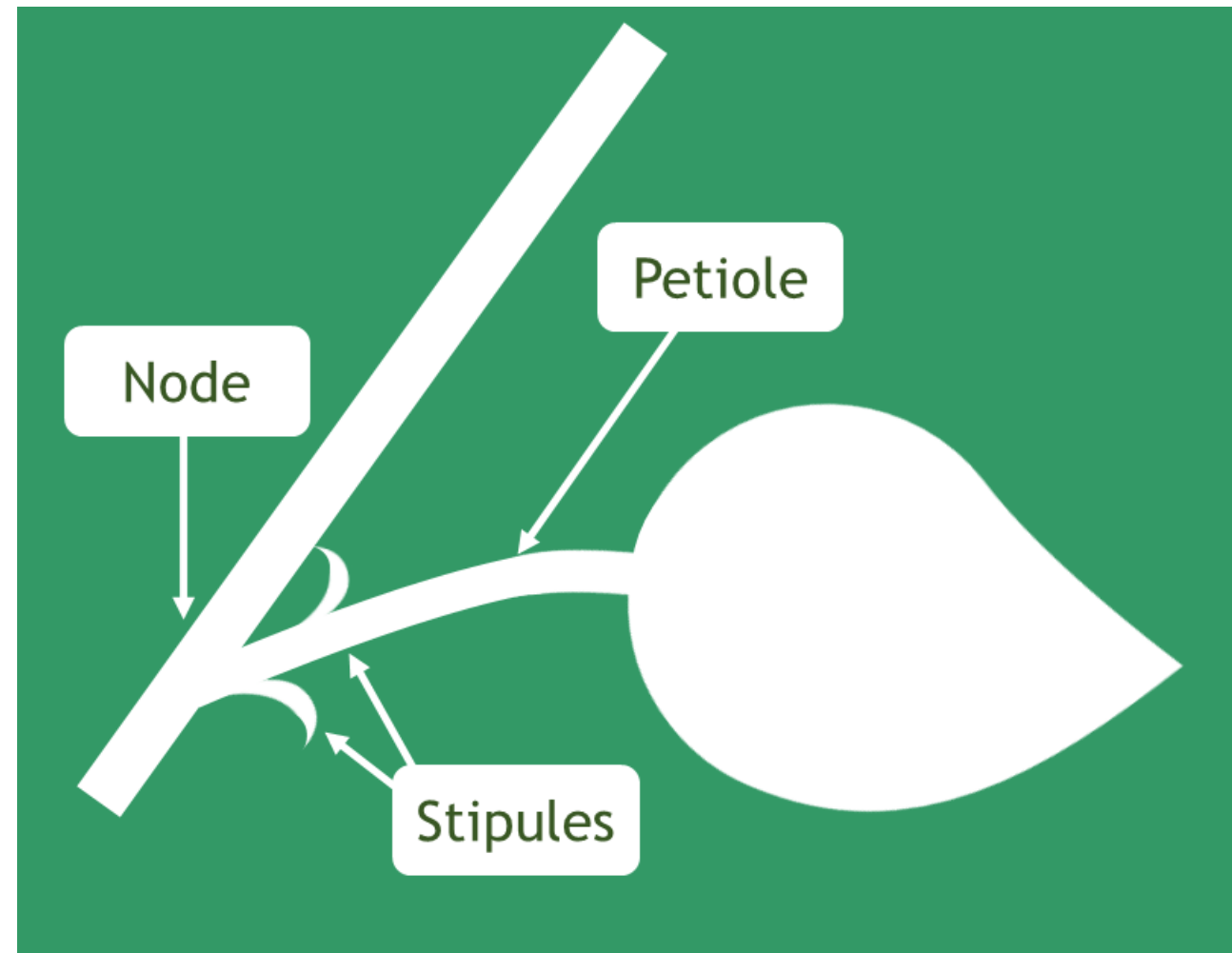


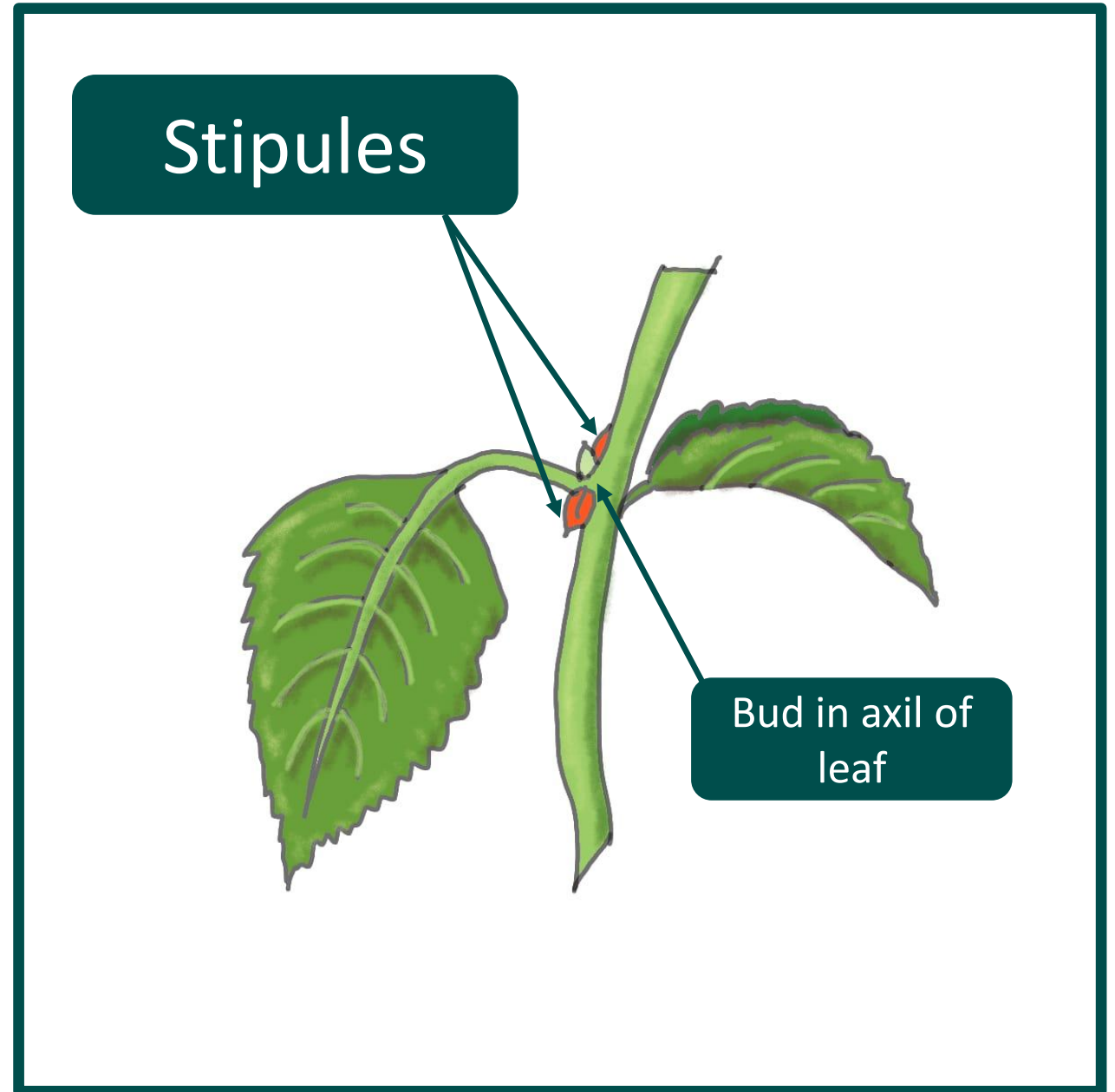
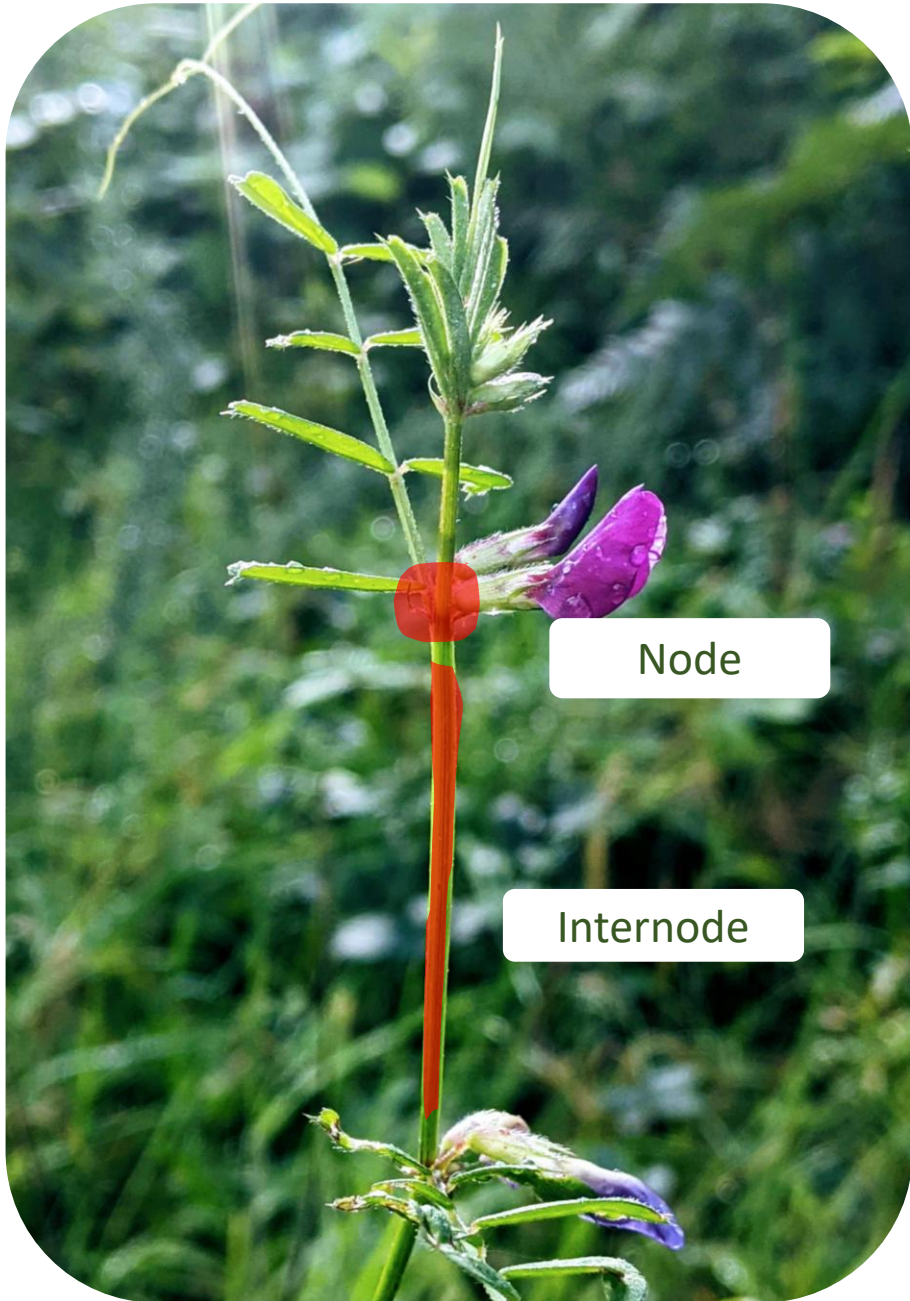
Compound flower

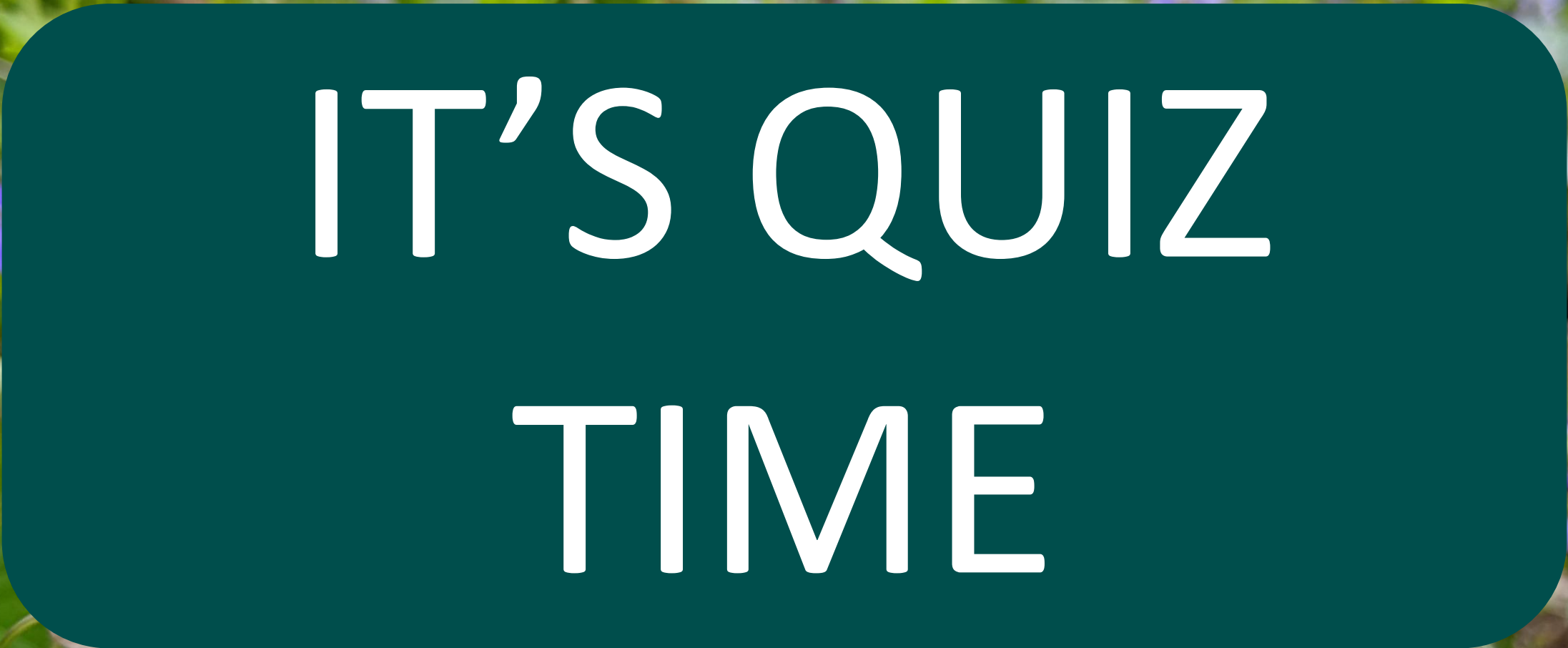




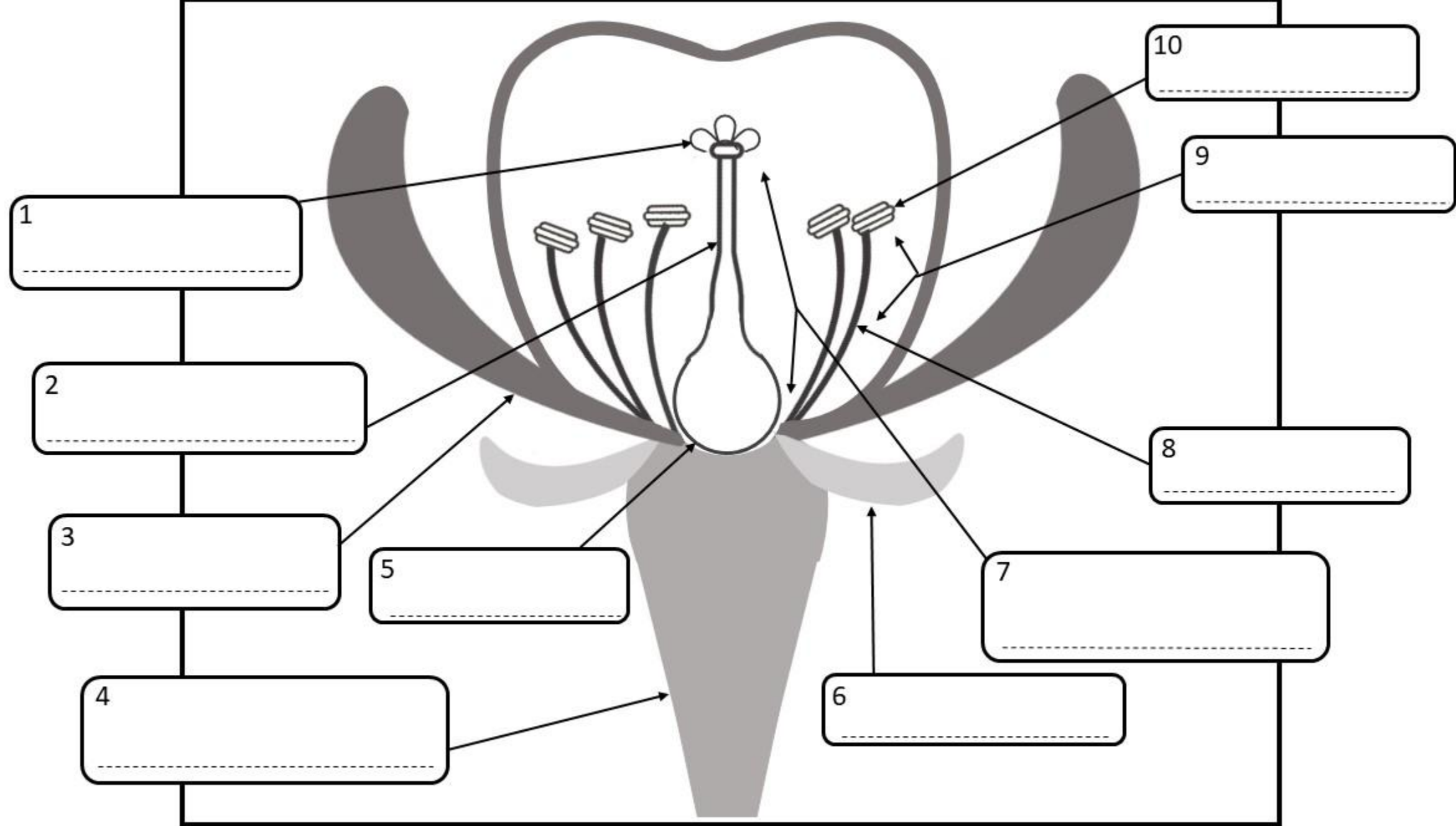
Parts of the plant

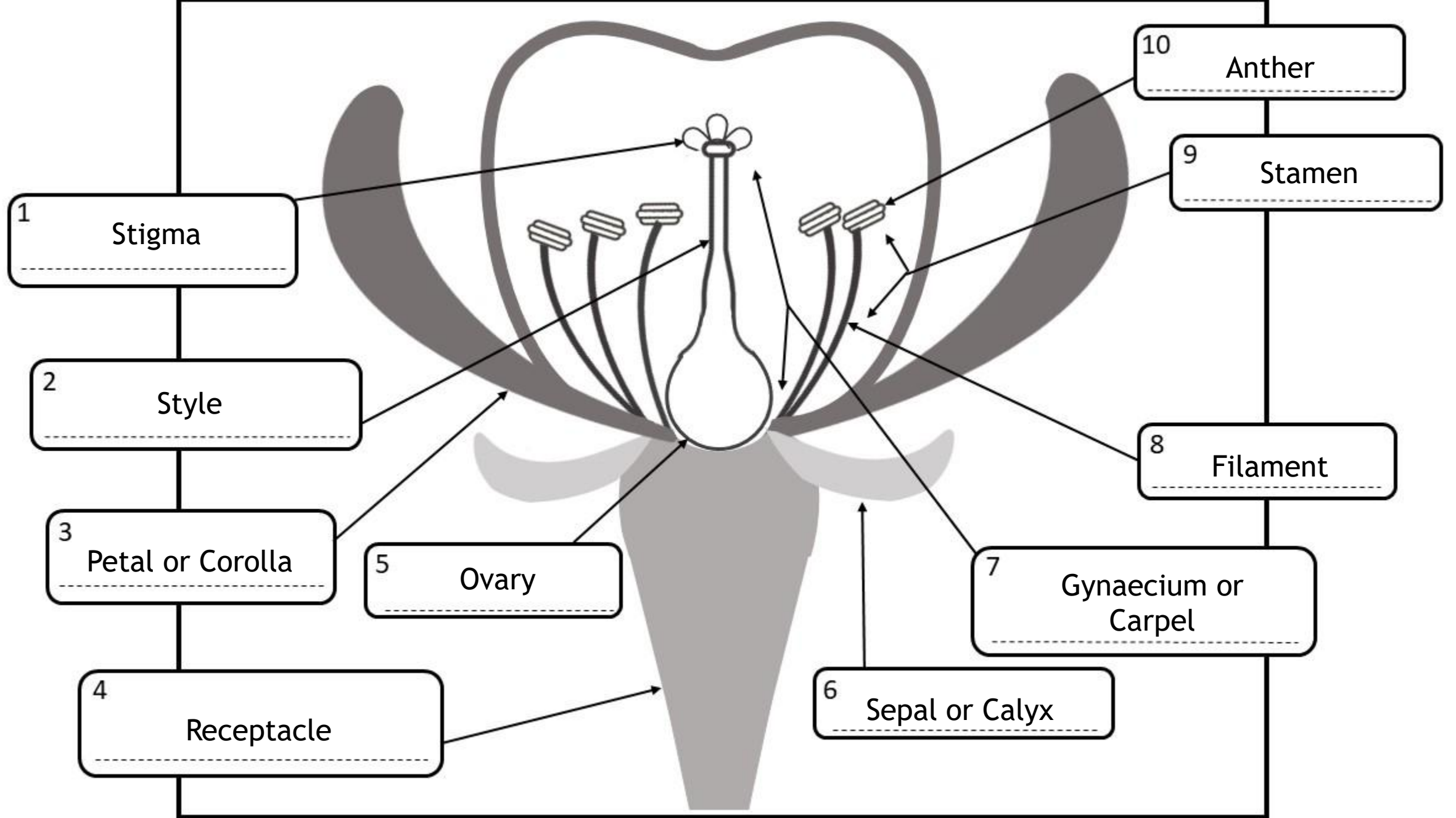


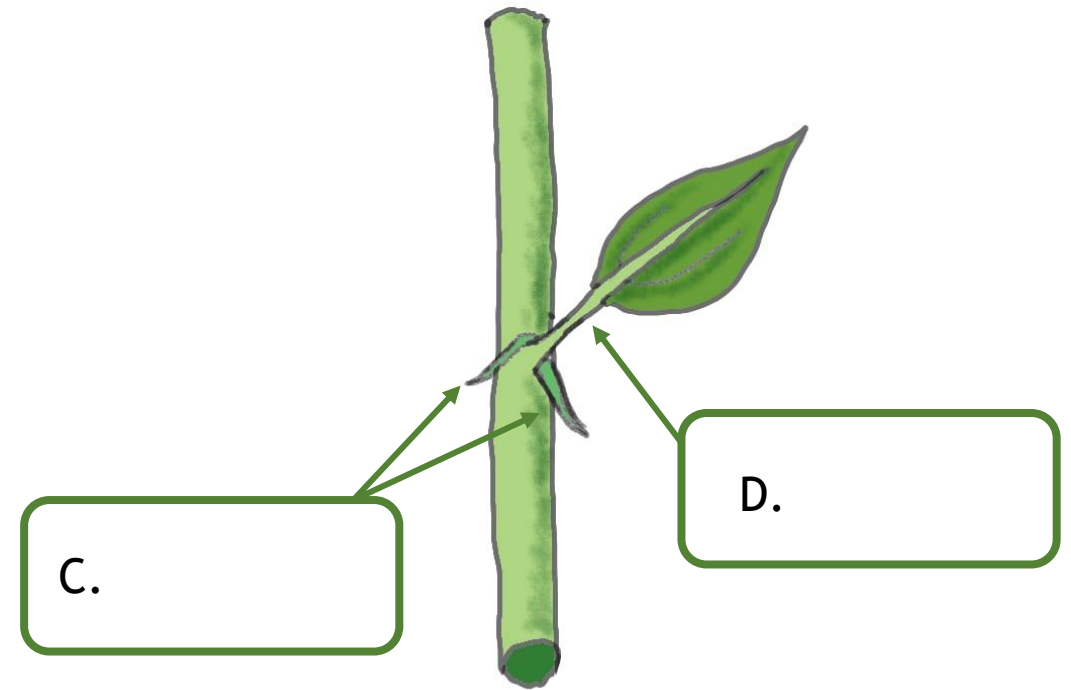
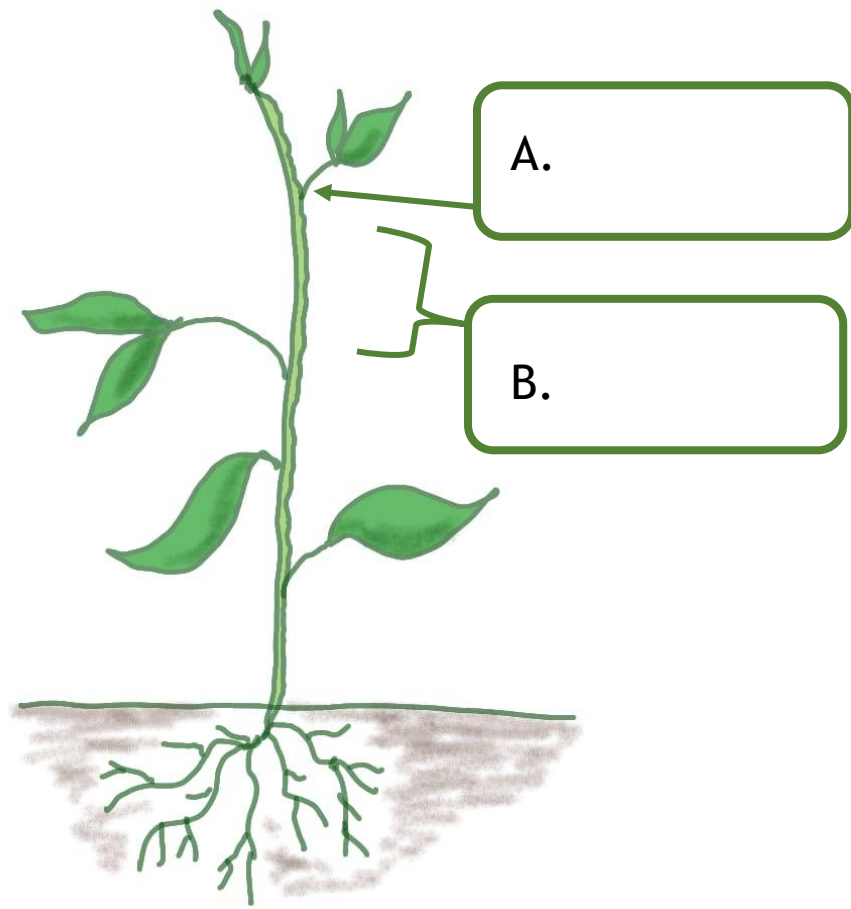


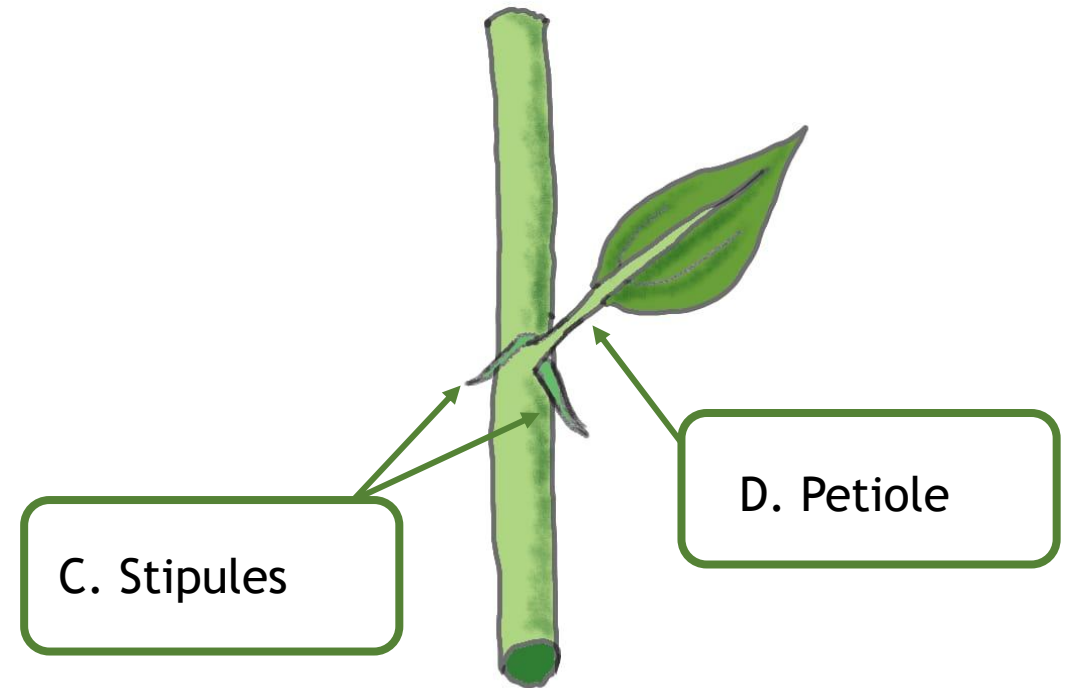
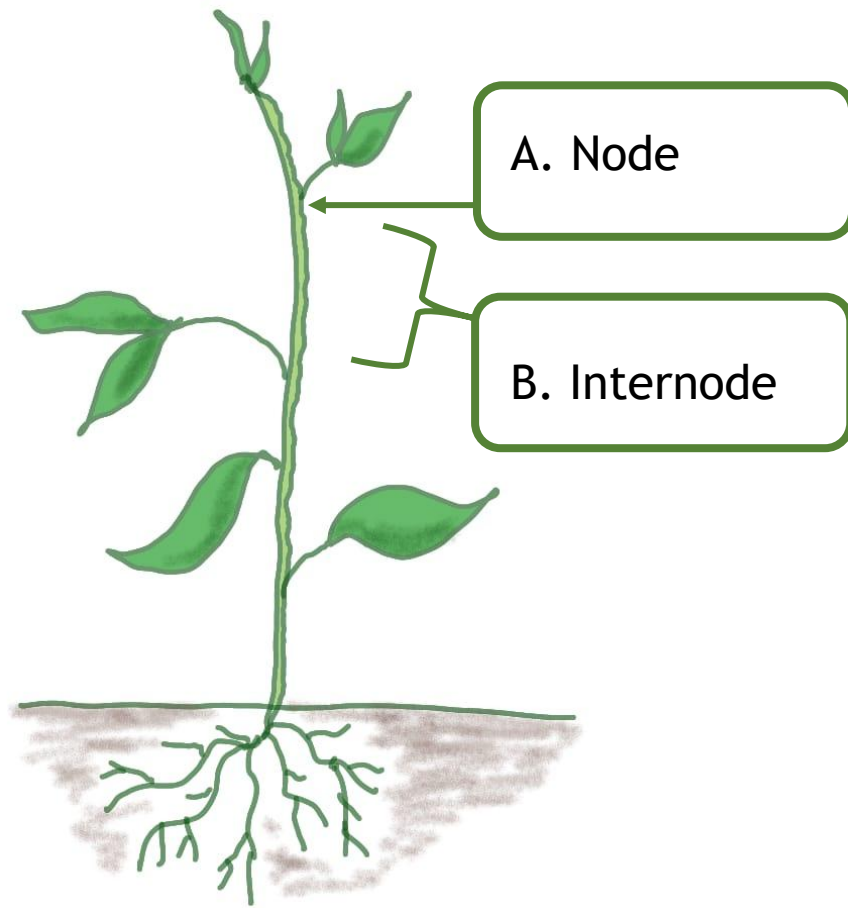
A teal-colored rounded rectangle with a dark green border, serving as a background for the text.

IT'S QUIZ
TIME



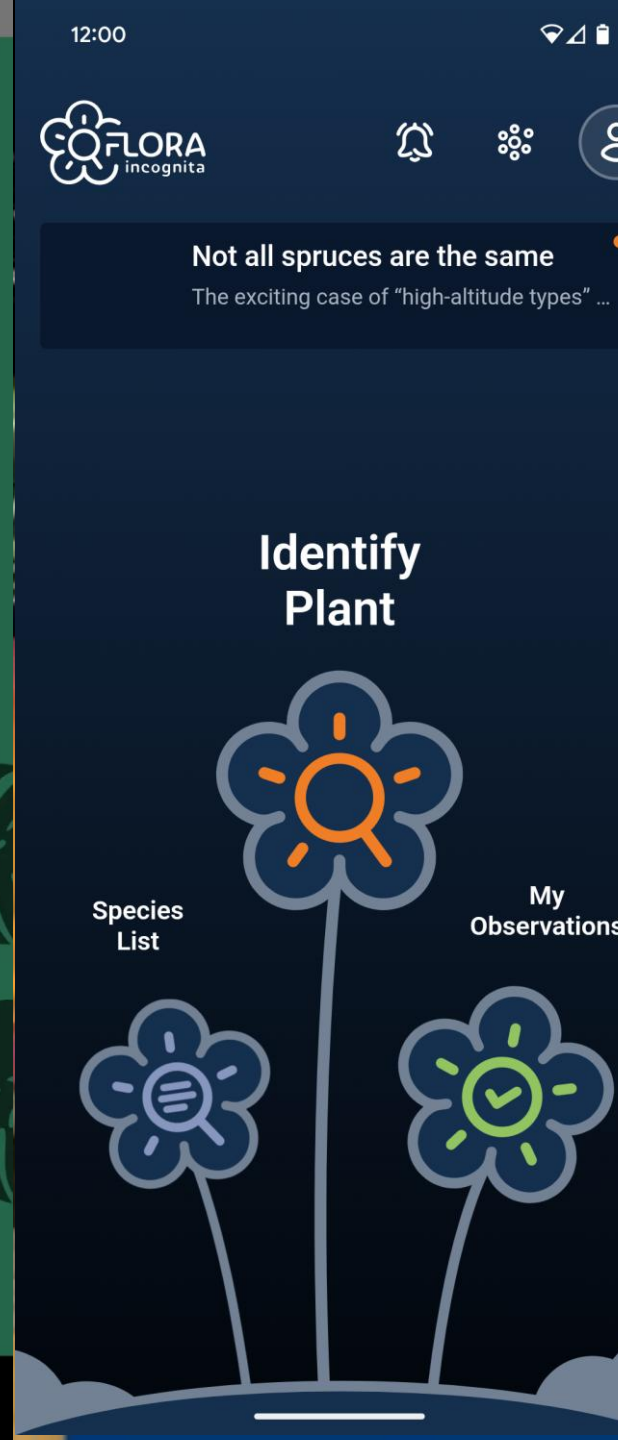
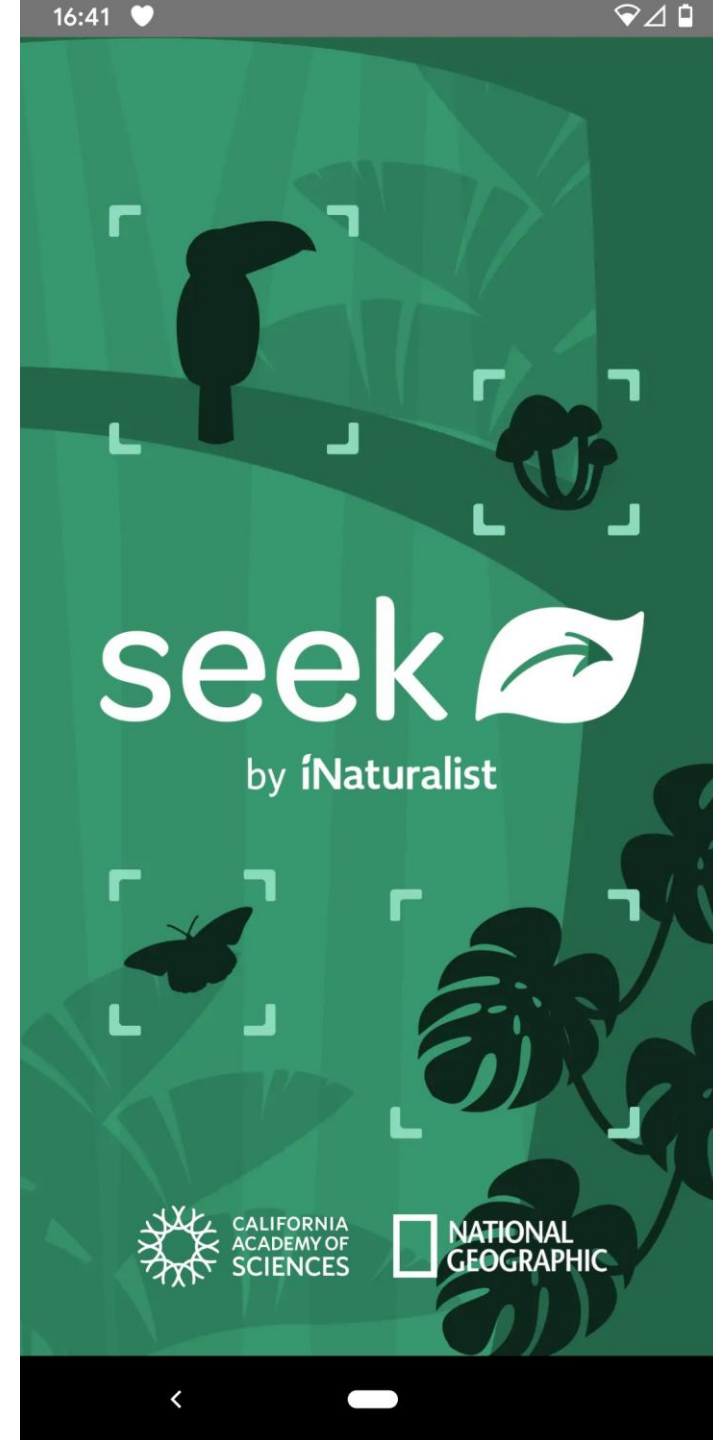




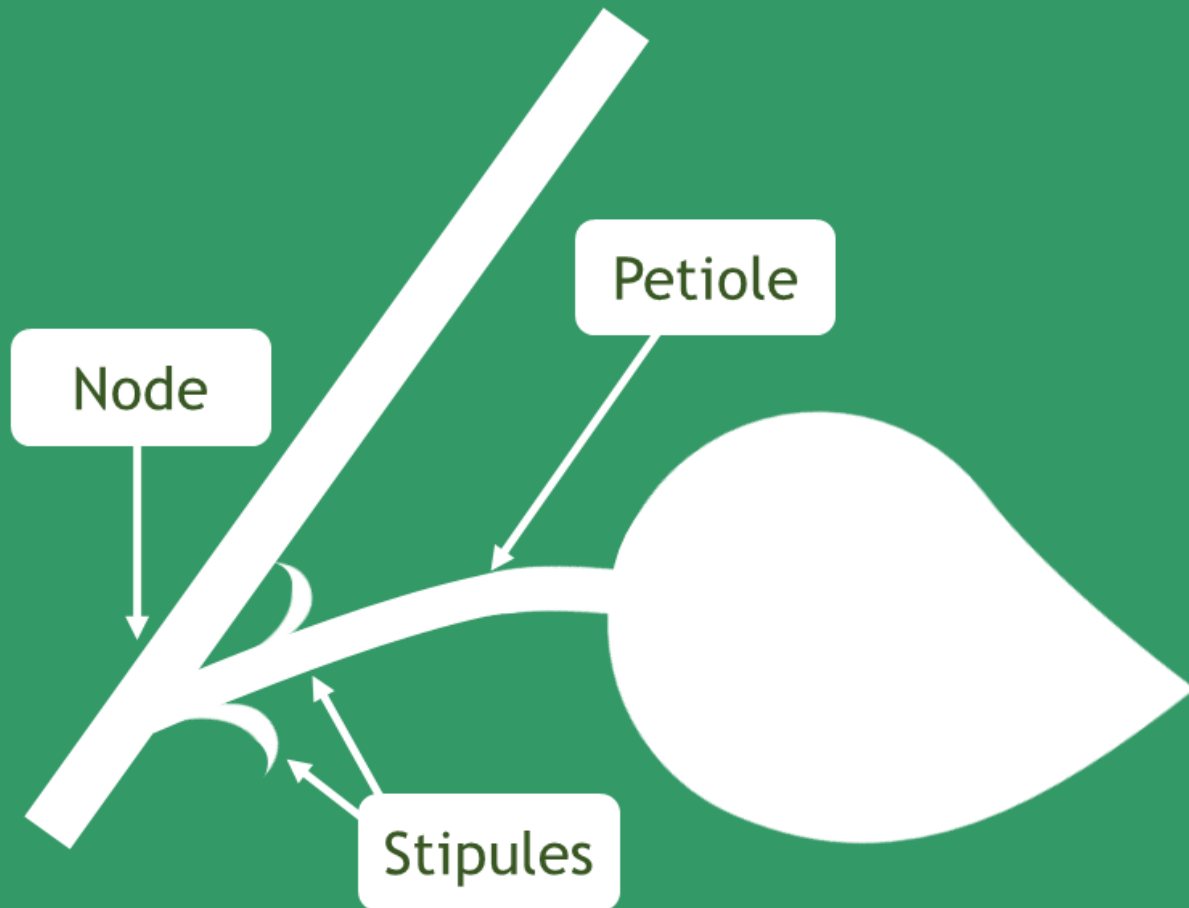


Key Questions

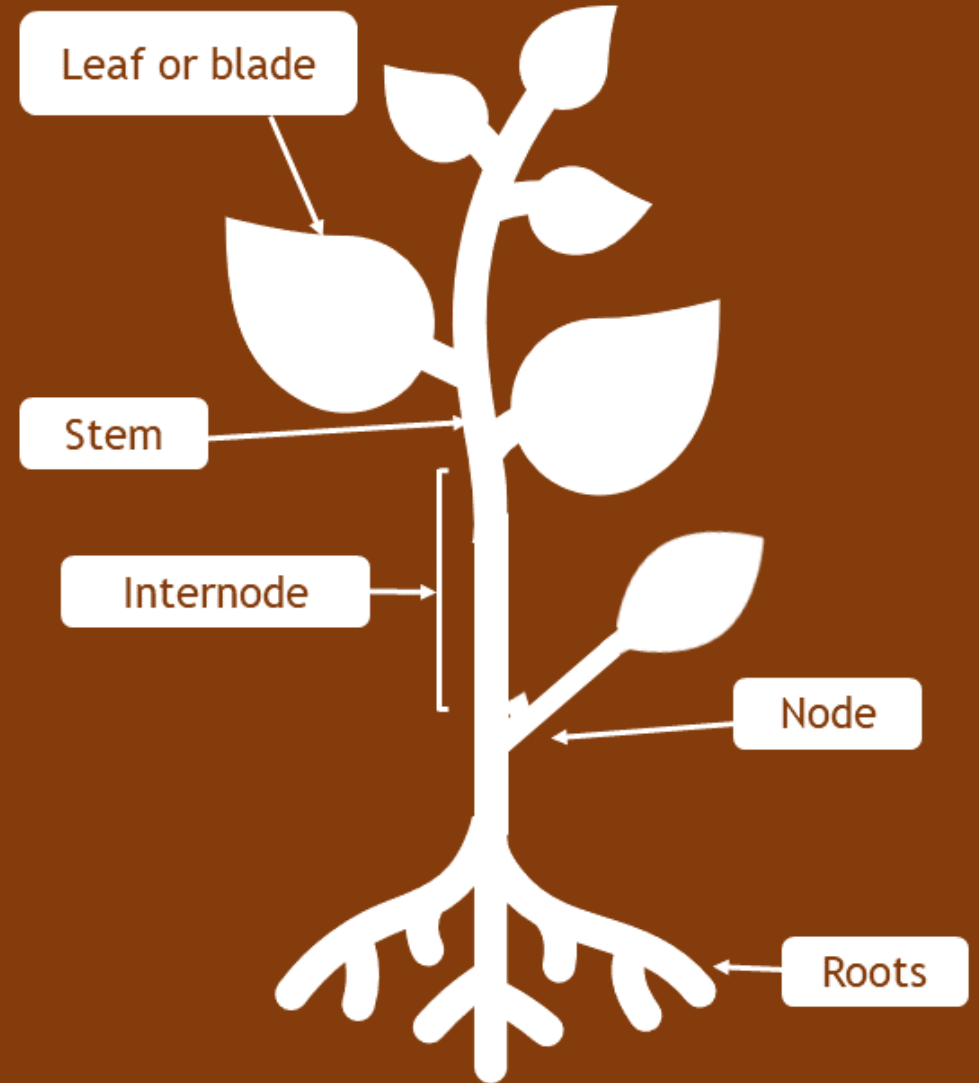
1. The best books for Plant ID?
2. Are all flower keys the same?
3. What if I can't remember all the terminology?
4. Are plant ID apps any good?



What have we learnt?



Inferior
inserte



Any questions?



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