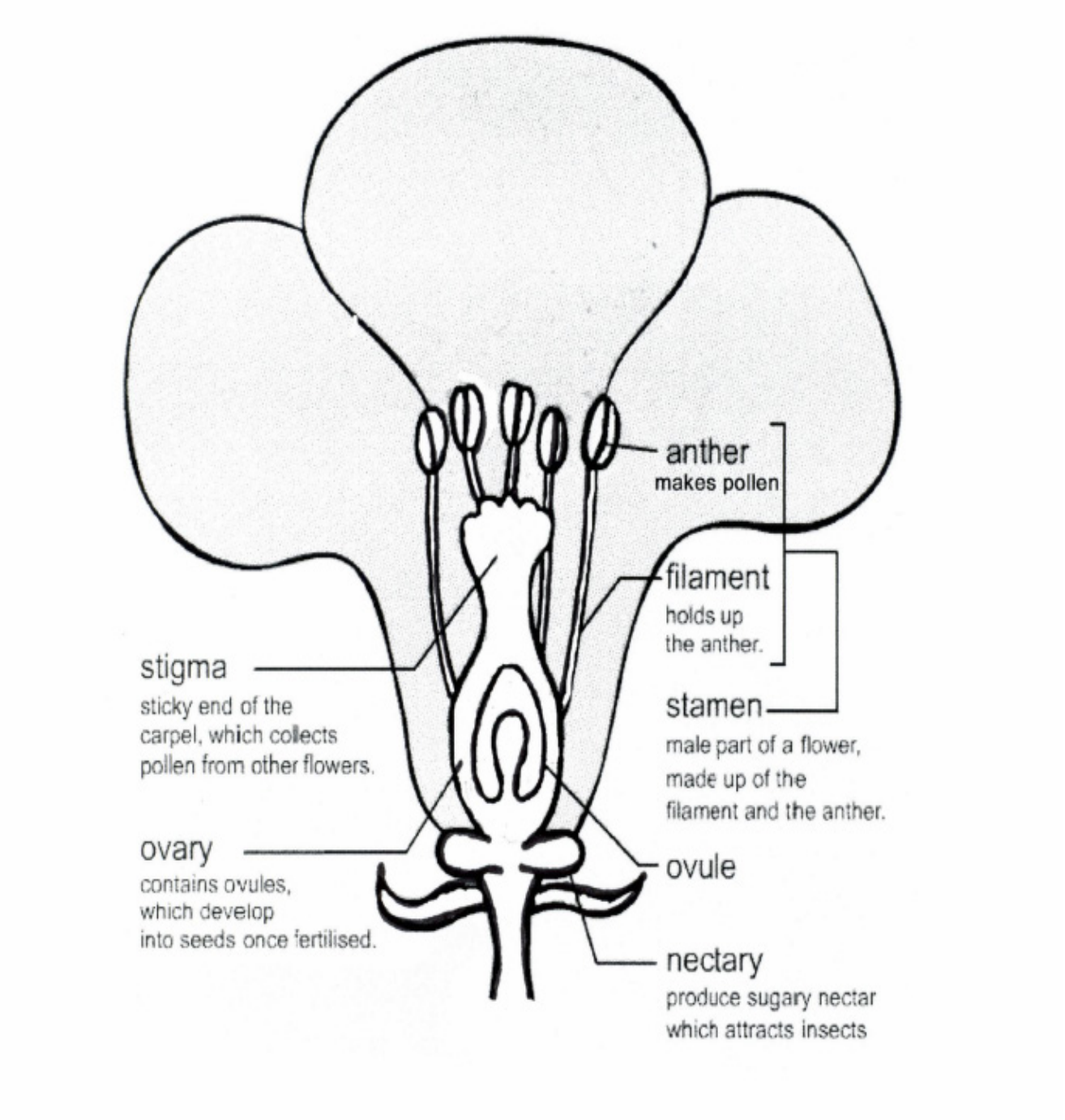
Flowering Coloring Page



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What is Pollination?

- If no pollination occurs, then plants will not be able to grow seeds, and no other plants will be made
- Flower pollen is produced and released from an anther.
- Pollen is moved to another flower by the wind or animals.
- Pollination takes place when pollen lands on the stigma of a plant.
- The pollen travels down to the ovary and fertilizes ovules. Seeds will be formed.
- Mostly, plants rely on insects, such as bees, to take the pollen from the anthers of one flower to the stigma of another flower.

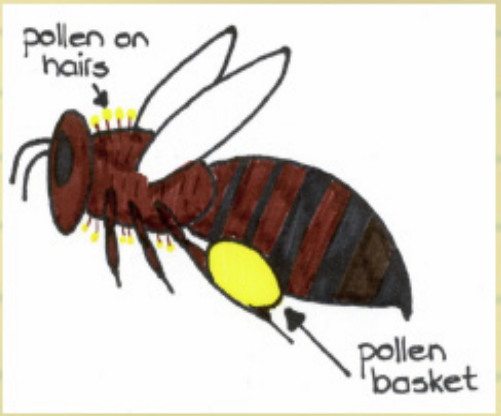


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Pollination by Honey Bees

Honey bees are very important insect pollinators. Most of the time, both the bees, and plants they visit, are benefited. The honey bee gets some food and the plant gets pollinated.

When a honey bee is collecting pollen from the anthers of a flower, it puts the pollen in a special pollen basket on its hind legs. All that pollen will be taken back to the hive. The honey bee is a messy gatherer of food, and some pollen gets stuck on the hairs of its body.



When the bee visits the next flower, some of the pollen brushes off onto the flower and if it sticks to the stigma of the flower, pollination will take place. The bee does not make any effort to put the pollen in the right place.

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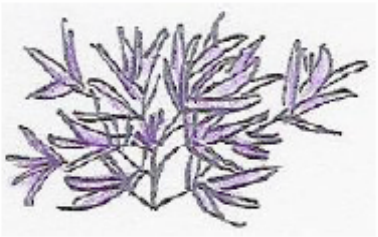
Moths and Butterflies

If you look closely you will notice that moths and butterflies look different from each other and have different behaviors. The flowers they pollinated are also different





Moth	Butterfly
Antennae feathery or thin	Antennae have small clubs at their ends
Plump, fuzzy body	Slender, smooth body
Usually duller in color	Usually have some bright colors
Have a good sense of smell	Not such a good sense of smell
Cannot see very well	Have good vision
Feed on plant nectar while hovering	Like to perch on something while feeding



Flowers pollinated by _____ usually have white or pale colors. They open at night when they release a strong sweet smell. Their petals are flat and bend back to give a hovering _____enough room.

Flowers pollinated by _____ usually are brightly colored and have no smell. They often occur in clusters so that they form a landing platform.

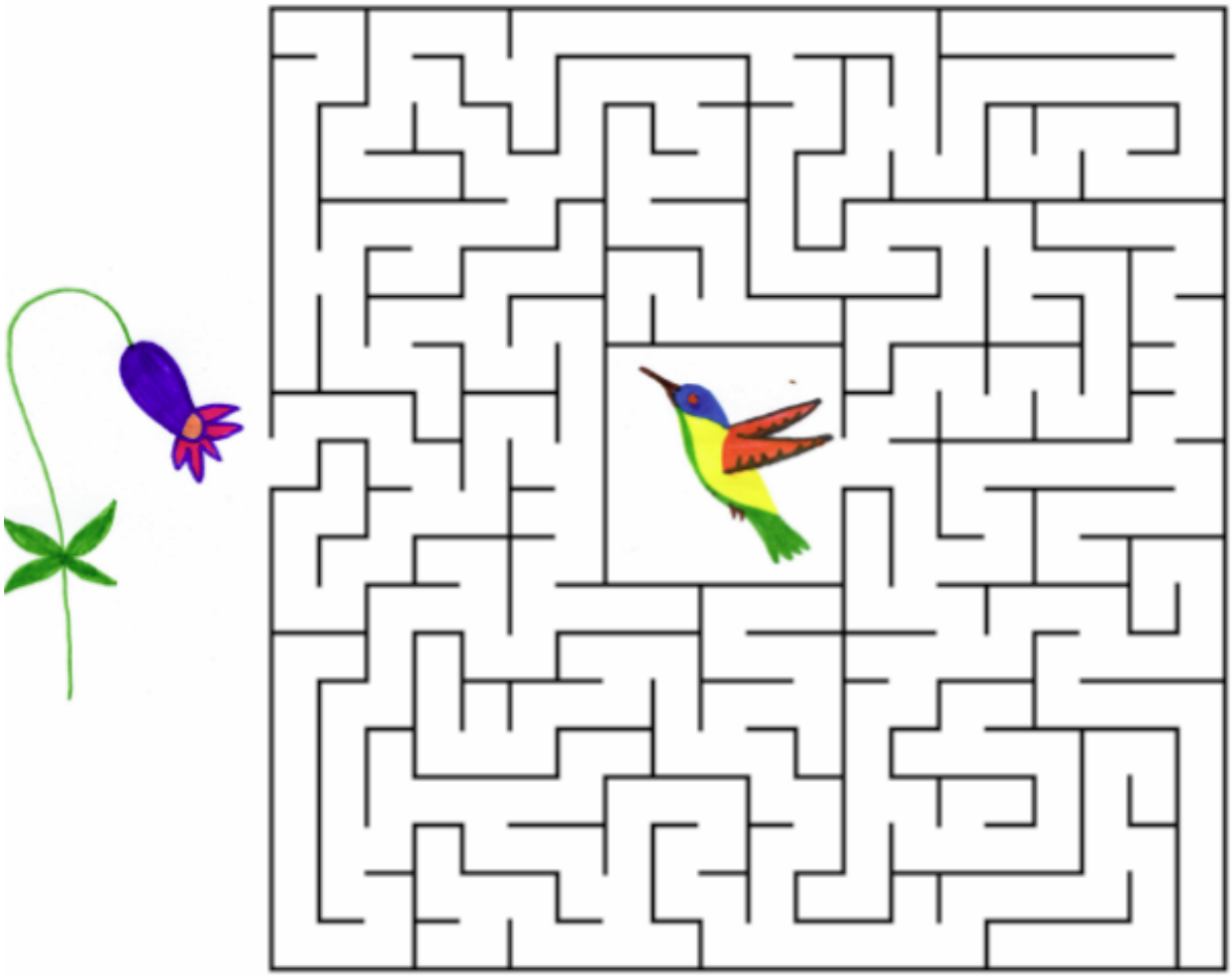


Drawings by Lisa Knolhoff

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Pollination by Vertebrates

Pollen can also be transferred by vertebrates (animals with internal skeletons), particularly by **hummingbirds** and other birds, and **bats**. But also by monkeys, marsupials, lemurs, bears, rabbits, deer, rodents, lizards and other animals.



Did you know? Hummingbirds use so much energy hovering in front of flowers that it would be like you needing to eat 300 lbs of hamburgers every day!

http://www.life.illinois.edu/entomology/pollinators/docs/Pollination%20Activity%20Book.pdf

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Ladybug



Green Lacewing

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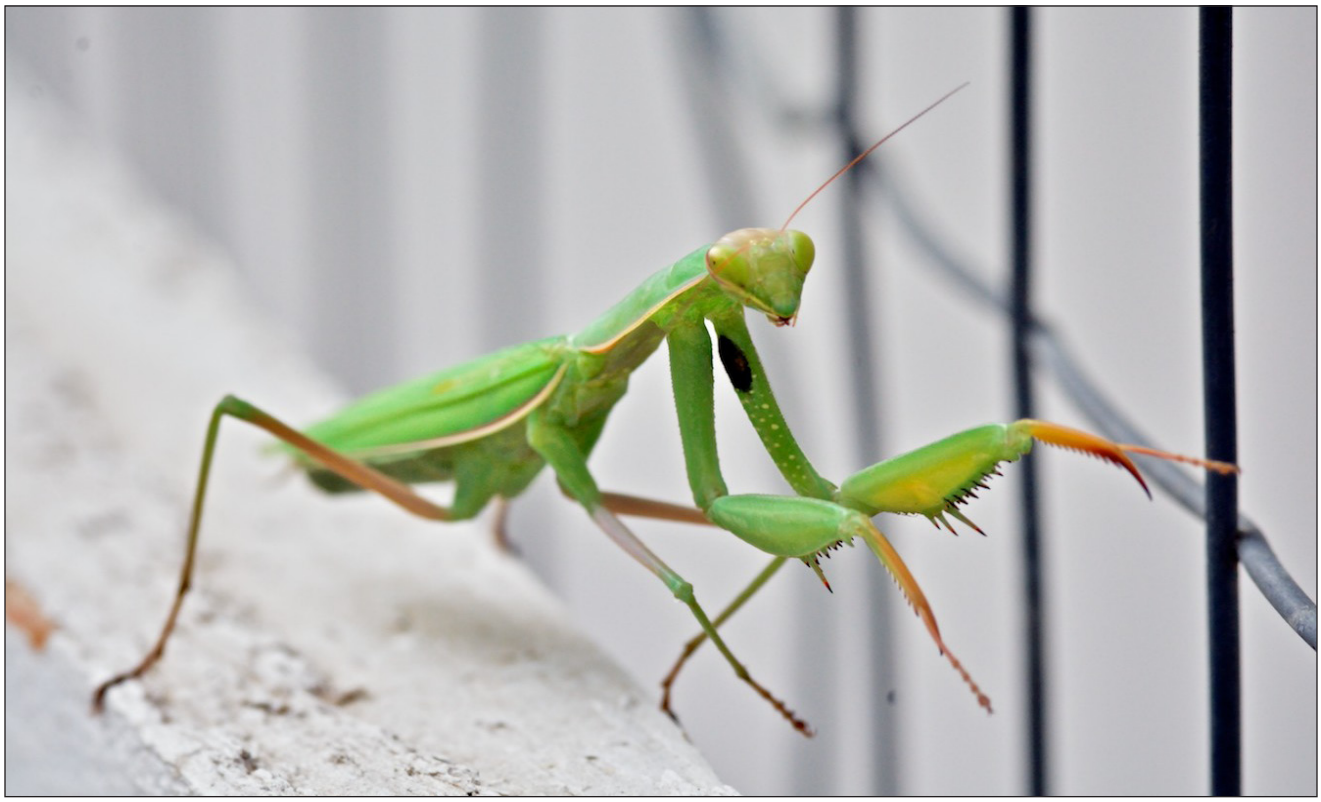


Nematodes



Honeybee

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Praying mantis



Tomato hornworm

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Squash bug



Earwig

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All about Broccoli

Broccoli is a cabbage family vegetable grown for its nutritious flower heads. Its green or purple ***florets*** have been known for several noteworthy, unique phyto-nutrients that are found to have disease prevention and health promoting properties.

Botanically, the vegetable is a member of large ***cruciferous (Brassica)*** family of vegetables, which also include cauliflower, brussel sprouts, cabbage, arugula, etc.

Broccoli is a cool-season crop and demands fertile rich and well-drained soil to flourish. Technically, broccoli is categorized into two main types according to their appearance; heading and sprouting. Heading variety forms a large, solid head, whereas sprouting types forms many smaller heads or florets.



Broccoli floret



Romanesco broccoli

Mature plant bears about 4-10 inches wide, dark green to purple color flower-head depending on the cultivar type. Its central thick stalk measures about 6-10 inches in length. Both stalk and fleshy flower heads are ***edible.***

Several different hybrid-mix of broccoli have developed with other cruciferous family members such as ***broccoflower*** (hybrid of broccoli and cauliflower), ***broccolini*** (broccoli and chinese-kale), etc.

http://www.nutrition-and-you.com/broccoli.html

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Romanesco broccoli



Broccoli floret

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What are the health benefits of broccoli?

Broccoli is one of the very low calorie vegetables; provides just 34 calories per 100 g. Nevertheless, it is rich in dietary fiber, minerals, vitamins, and anti-oxidants that have proven health benefits.

Fresh Broccoli is a storehouse of many *phyto-nutrients*. Studies have shown that these compounds, by modifying positive signaling at molecular receptor levels, help protect from prostate, colon, urinary bladder, pancreatic, and breast cancers.

This fresh vegetable is exceptionally rich source of *vitamin-C*. Vitamin-C is a powerful natural anti-oxidant and immune modulator, helping to fight against flu-causing viruses.

Broccoli contains very good amounts of another anti-oxidant vitamin, *vitamin-A*. Vitamin A helps maintain integrity of skin and mucus membranes and is essential for healthy eye-sight.

Fresh broccoli is an excellent source of *folates*. Studies have shown that consumption of fresh vegetables and fruits rich in folates during pre-conception, and pregnancy helps prevent neural tube defects in the offspring.

This flower vegetable is rich source of vitamin-K and the B-complex group of vitamins. The flower heads also have some amount of omega-3 fatty acids.

Furthermore, it is also a good source of minerals like calcium, manganese, iron, magnesium, selenium, zinc and phosphorus.

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