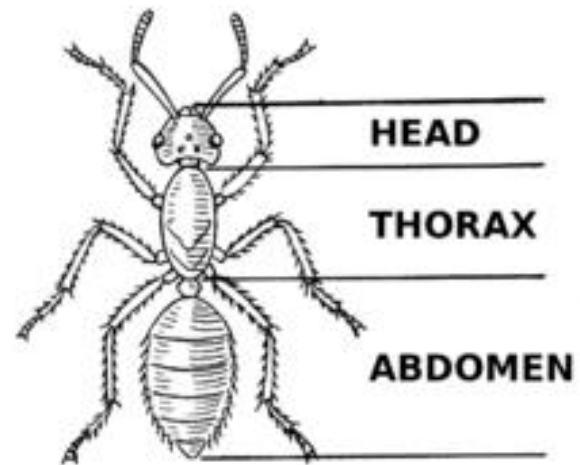


L.O. To investigate the life cycle of insects.

- Steps to success
- I can:
- Understand the life cycle of a butterfly and ladybird.
- Understand the difference between complete and incomplete metamorphosis.

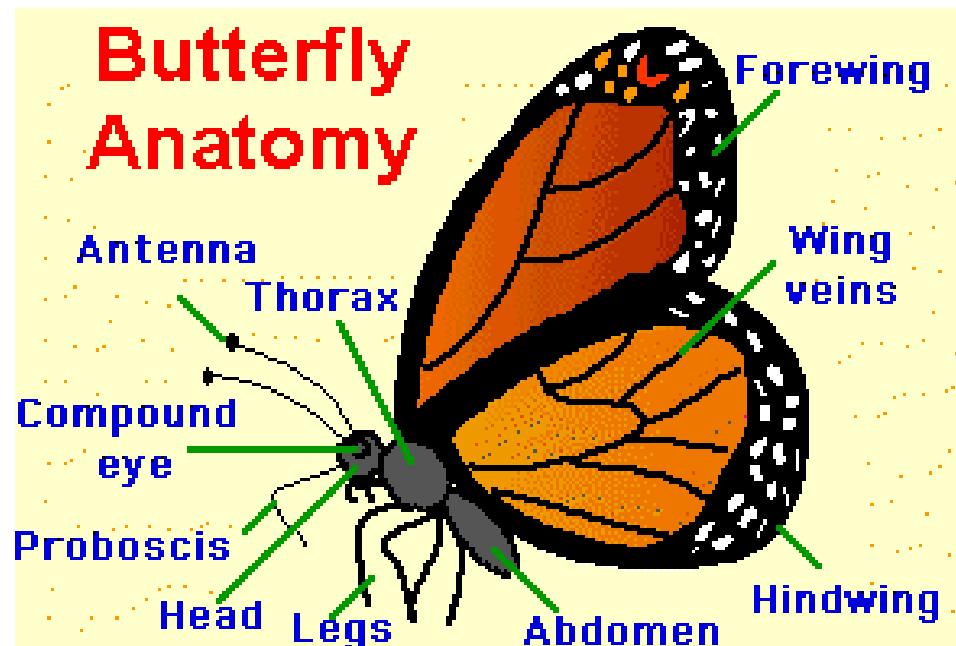
What is an insect?

- A creature that is invertebrate (has not got a backbone) and has a well-defined head, thorax, and abdomen, only three pairs of legs, and typically one or two pairs of wings.

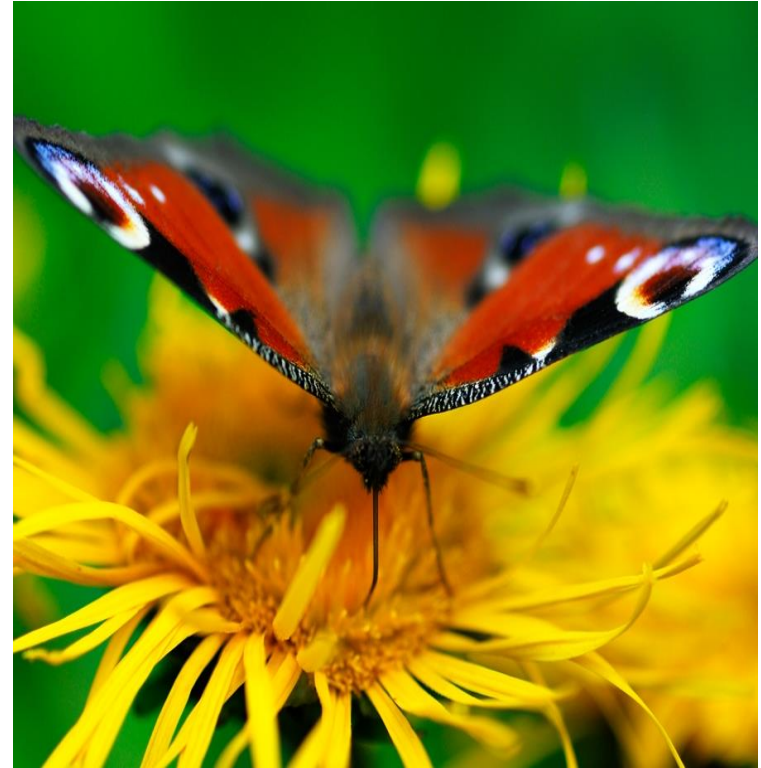


- *Draw and label an insect. List any examples you can think of.*

Butterflies and moths are insects.



The Life Cycle of a Butterfly



A butterfly begins its life as a
small egg



After about 5 days the egg hatches into a small caterpillar

A caterpillar's first meal is its own egg shell!



Caterpillars eat a huge amount of leaves so this stage is sometimes called the eating stage! Caterpillars grow very quickly and have to shed their skins many times as they grow out of them. They then eat their skins as well!



Another word for caterpillar is **larva**.

A **larva** is a stage many animals undergo before metamorphosis into adults. Animals with indirect development such as insects and amphibians typically have a larval phase of their life cycle.

The plural of **larva** is **larvae**.

The caterpillar becomes a chrysalis



After a few weeks the caterpillar attaches itself to a twig and forms a hard outer shell called a chrysalis or pupa. There is no eating during this stage, this is the time where the caterpillar is transforming.

The plural of pupa is pupae.

The butterfly emerges from the chrysalis

An adult butterfly will only live for about 2 weeks.



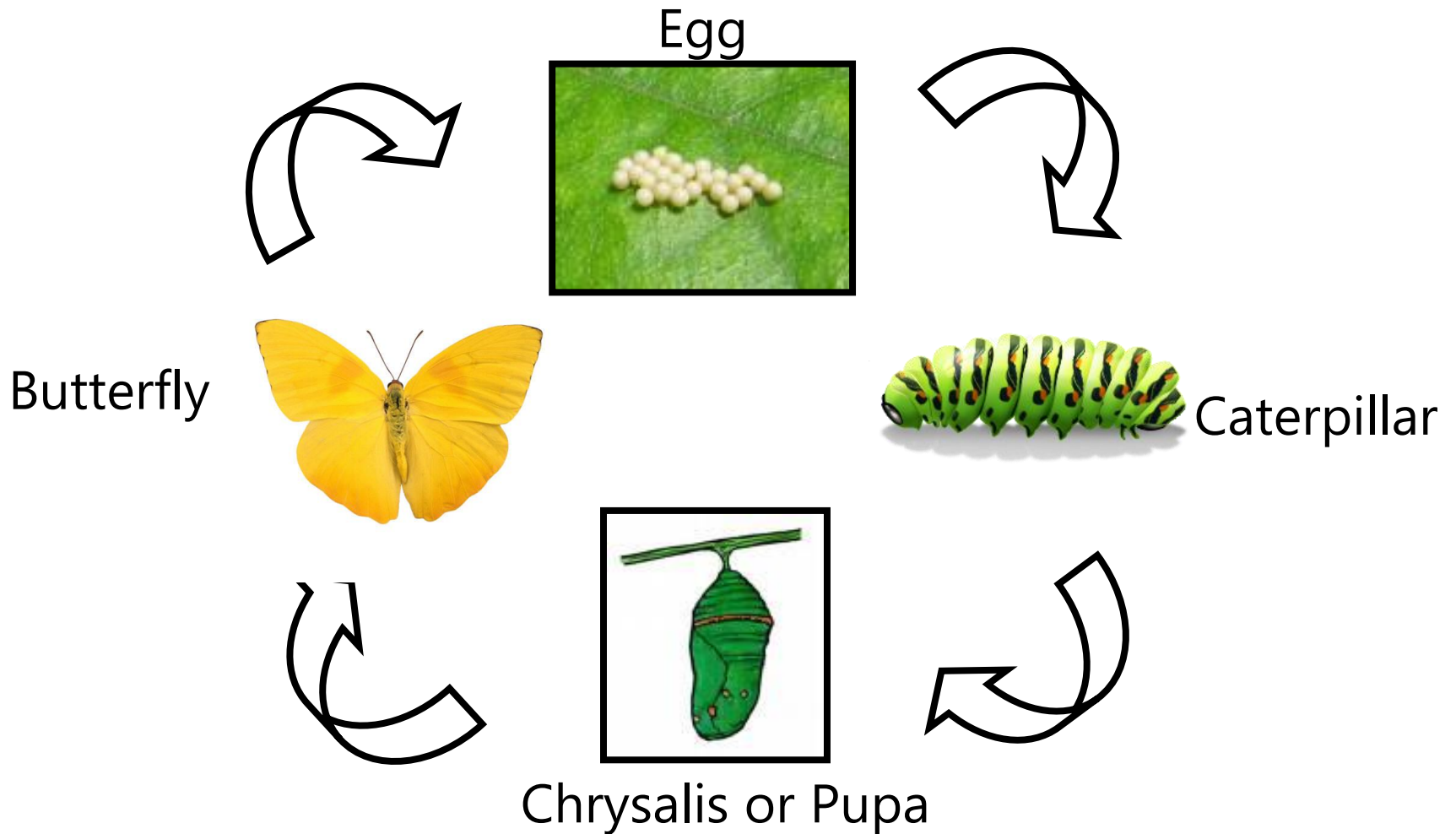
The sun warms the butterfly's body and it is able to fly to different flowers and suck nectar using its long, curly tongue. Butterflies can not bite or chew.

The female butterfly then
lays more eggs!



Some butterflies can lay as many as 500 eggs!
Butterfly eggs are different shapes and sizes.

The Life Cycle of a Butterfly



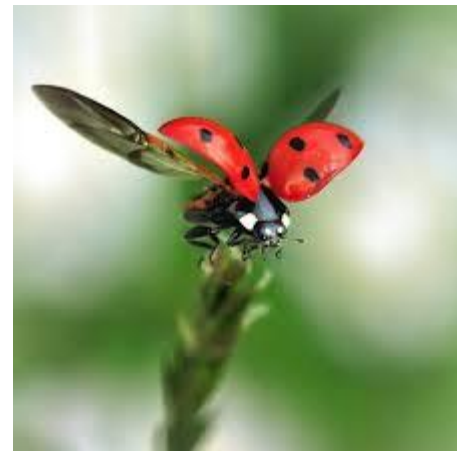
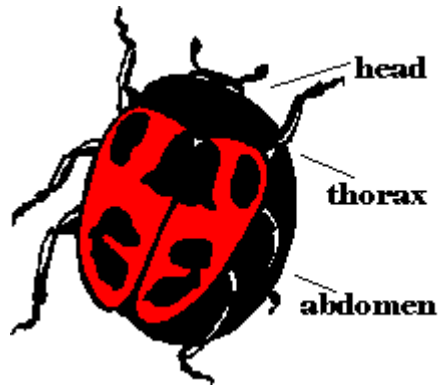
Watch!

- <https://www.youtube.com/watch?v=5XWFFTUX5gQ>

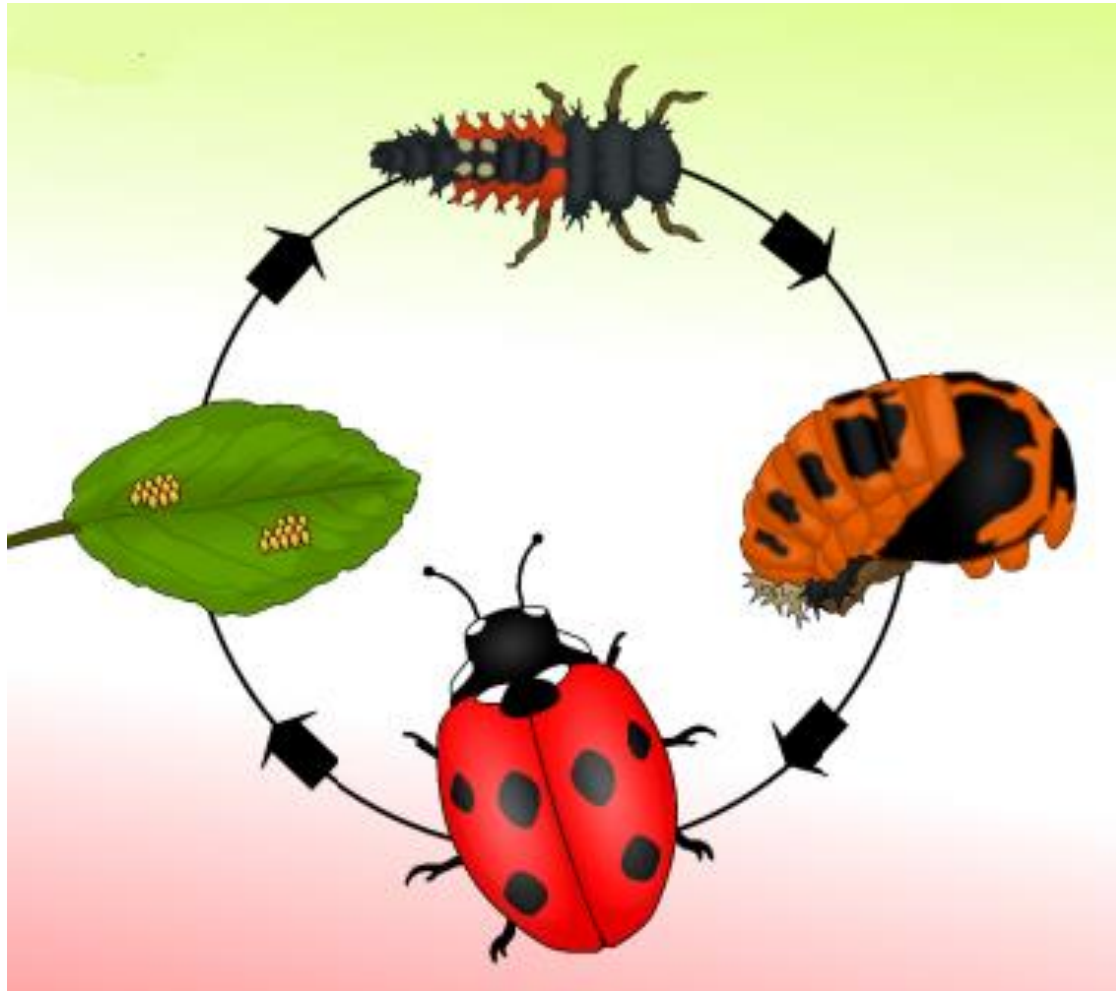
Did you know?

- Caterpillars have more than 4,000 separate muscles. Humans have only 792.
- Butterflies have six jointed legs, a pair of antennae and three body parts called the head, thorax (chest) and abdomen (tail end). The four wings and six legs of a butterfly are attached to its thorax.
- Butterflies have four brightly-coloured wings, covered in tiny scales. They are the only insects with scaly wings.
- Each scale on a butterfly's wing is a single colour - either red, yellow, black or white. Other colours, including green and blue, are created by light refracting on the butterfly's wings.
- Special sensors on a butterfly's feet allow the insect to taste food. It cannot taste through its mouth parts.
- Butterflies prefer pink, yellow, red or purple flowers.

Ladybirds are also insects.



Lady Bird life cycle



Eggs



- The eggs are bright yellow, about 1mm long, and are laid on the underside of leaves. They take about one week to hatch.

Larva



- At first they are about 3mm long but they are voracious feeders, and each time they grow they shed their outer skin. This period lasts about three weeks to a month.
- During the larval stage they will consume up to 500 plant lice, and when fully grown they'll look like this.

Pupa



- The larva sheds its skin one last time and changes into this immobile blob - the pupa. Inside the body dissolves into a soup and then starts reforming as an adult beetle. This process only takes about a week.

Adult Ladybird



- When it first emerges from pupation the ladybird looks very pale in colour but you can just about see where the spots are. After a short time the true colours come through.

Complete Metamorphosis

- **Complete metamorphosis has four stages: Egg, Larva, Pupa, and Adult.**
- In each stage of complete metamorphosis, the animal looks different than at all other stages. This is different from incomplete metamorphosis where the early stages of development look like tiny versions of the adult. Butterflies and ladybirds are examples of insects that go through all the stages of complete metamorphosis.

What are the similarities between the ladybird and butterfly life cycle?

● Butterfly



● Ladybird

