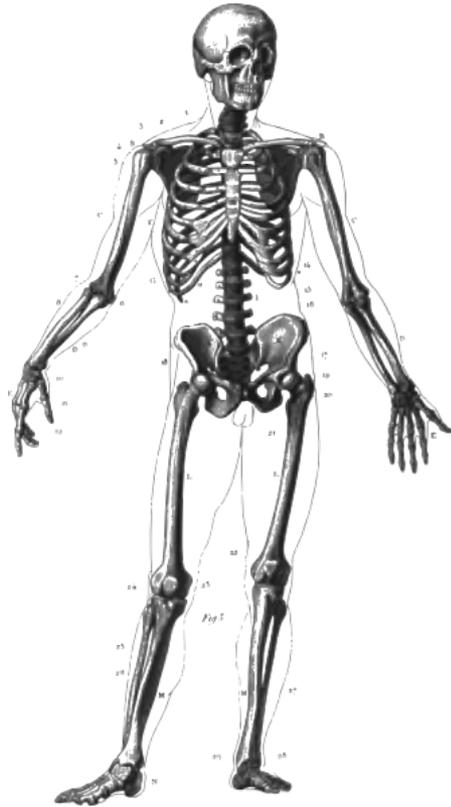


# Arthropods

Our Creepy Crawly Friends

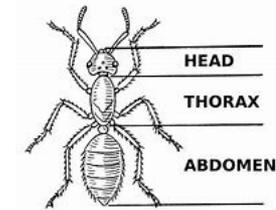




# Arthropods or Creepy Crawlies

- Arthropods include insects like ants and bees, arachnids like spiders, myriapods like millipedes and centipedes, and crustaceans like pill bugs.
- Tap your forehead, elbow, knee. Can you feel the hard bone under your soft skin? Those bones are part of our skeletons that give structure to our bodies. Our skeletons are inside our skin.

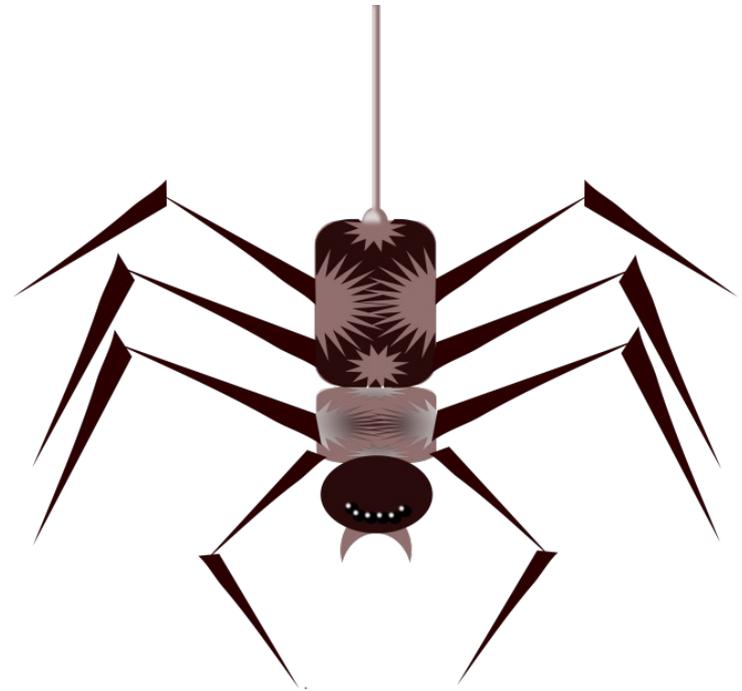
Arthropods have exoskeletons; that means that their skeletons (hard structures) are outside their bodies like a suit of armor. Their exoskeletons are made of a cellulose like material, chitin, and minerals.



They also have bodies in segments (parts) and jointed (like our knee or shoulder) legs. There are appendages (like our legs and arms) or body parts, attached to the segments.

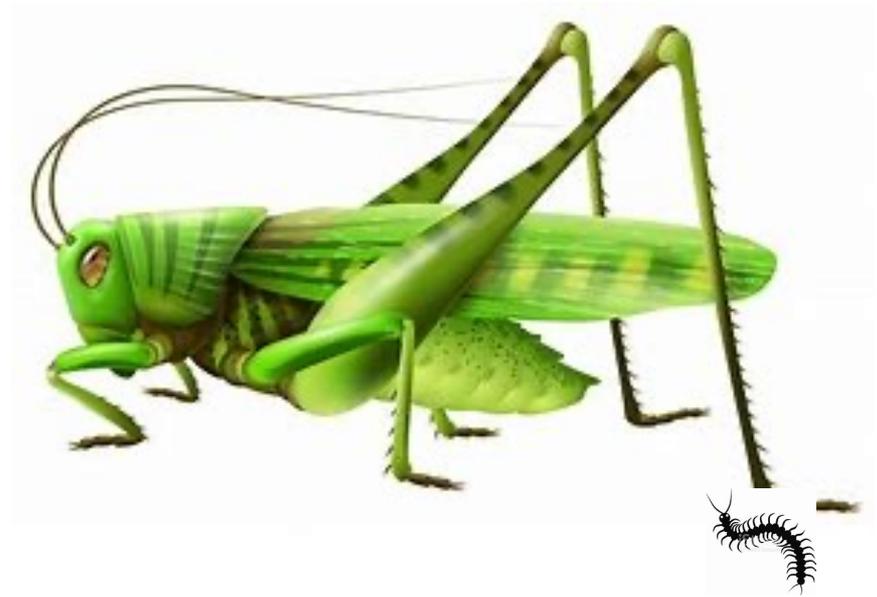
# Arthropods

- Exoskeleton=skeleton outside so they moult to grow,
- no backbone,
- jointed legs,
- segments=body divided,
- appendages=parts attached,
- cuticle made from chitin.





- There are several kinds of arthropods (segmented body, exoskeleton, segmented legs)
- Arachnids—8 legs, chelicerae (used for eating), 8 eyes, pedipalps (used for bringing food to the mouth), 7 segments in legs, 2 body parts (cephalothorax =combined head and thorax, and abdomen)
- Insects—6 legs, some wings, antennae, variable eyes but generally 2 compound eyes and 3 simple eyes, 3 body parts (head, thorax, abdomen)
- Crustaceans—like woodlice or pill bugs—long segmented body and segmented legs—some crustaceans have claws and antennules (small antennae).
- Myriapods—long segmented bodies and many legs.



# Some arthropods use mimicry to protect themselves.

With Batesian mimicry a harmless species that tastes good to a predator, mimics the appearance of a harmful creature that tastes bad or is poisonous. In Müllerian mimicry, two equally bad tasting or poisonous creatures evolve to look like each other.

An example of Batesian mimicry is the tasty Viceroy and the poisonous Monarch. Many bees and wasps look similar; that is Mullerian mimicry.

And Buckeye butterfly wings look like big eyes on a face; that is self- mimicry, when parts of the animal look like other parts.



# How insects eat....

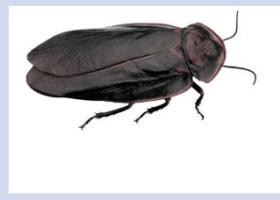
## Siphon

Siphon—butterfly proboscis like a party toy



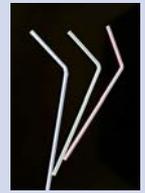
## Pierce

Pierce—bugs like a straw into a juice box



## Lap

Lap—bees sip nectar like drinking from a straw



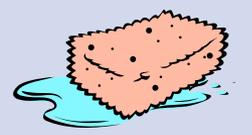
## Chew

Chew—grasshoppers have chewing mouthparts like a scissors



## Sponge

Sponge—flies have sponging mouthparts



# Creepy arthropods!

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My appendages are attached  
(fingers wiggling)

And my body is divided (fingers  
straight out)

Into segments with jointed legs  
(fingers curled)

And skeleton outsided! (patting  
body)



# Creepy, Creepy Crawlies to *Clementine*

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I'm a creepy, creepy crawlie  
And my body does divide,  
Jointed legs and wings attach,  
And the skeleton outside!



# Arthropods

Same and different!



Insects have 3 body parts, 6 jointed legs, 2 bent antennae, some wings, and two big eyes and sometimes 3 little eyes.

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Arachnids have two body parts, 8 legs and 8 small eyes, chelicerae and pedipalps.

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Crustaceans have 3 body parts, with the middle segmented with a pair of appendages per segment. They have antennae and antennules by the mouth. Woodlice, also known as Pill Bugs or Roly Polies have seven segments with a pair of legs on each, 2 pair of antennae, and three pair of mouthparts. They get most of their sensory information through their antennae.

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Myriapods include centipedes and millipedes. They have a head with a pair of antennae and pair of jaws, long body formed by rings, divided into head and trunk, with 1-2 pairs of legs per ring.

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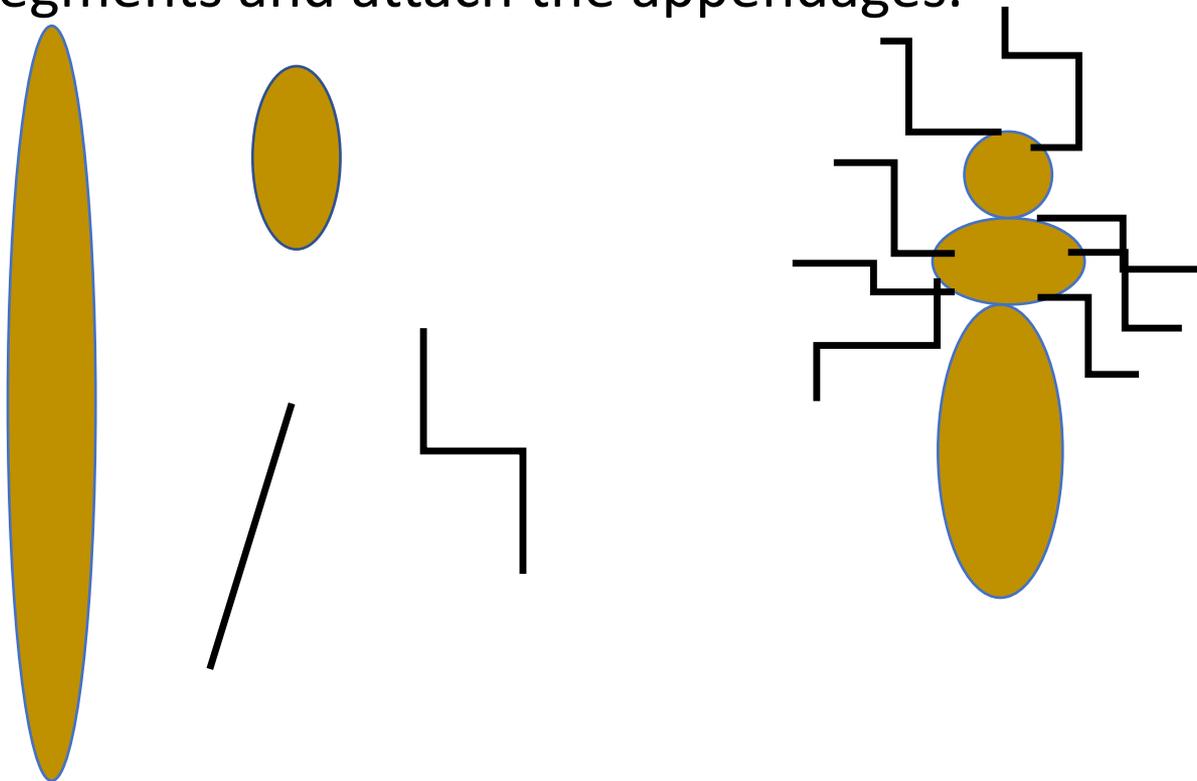
# Where can you find arthropods?

In the grass, on a tree, on a leaf or flower?



Design your own arthropod!

Choose how many legs and segments and appendages. Draw the segments and attach the appendages.





# Creepy eats!

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How would you make a crustacean or myriapod snack?

## Compare arthropods....

- Ant, 2 antennae, 3 body parts, 6 legs, 2 big eyes, 3 small eyes, wings sometimes.
- Spider, 2 body parts, 8 small eyes, spinnerets, 8 legs, no wings, no antennae.



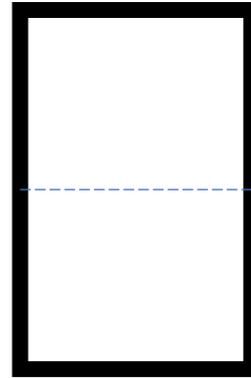
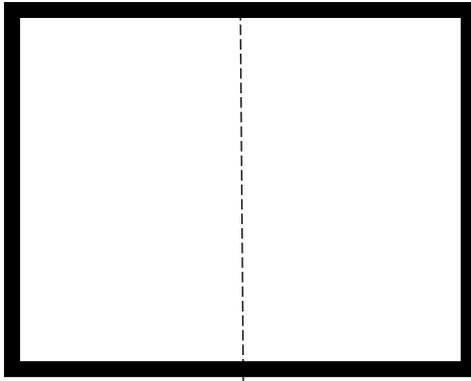
Roly Poly (crustacean) and myriapod (many segments, many legs)....

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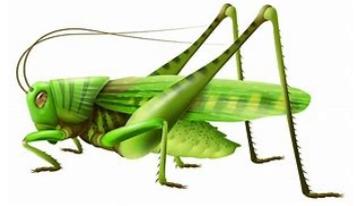
# You can make a mini-book!

- Fold the paper in half
- Then in half again.



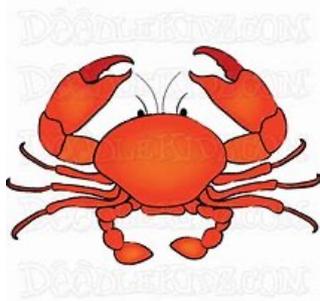


**Arachnids**



**Insects**

**Crustaceans**



**Myriapods**



