Lecture 3 – Arthropods

Arthropods: *Animals with segmented bodies, allowing them to turn and manevour in very precise ways.*

Exoskeleton: *A hard outer body covering.*

Molting: *The name of the process in which arthropods shed and rebuild their outer shells*

Spermatophores: Capsules that contain sperm cells.

4 Different Classes of Arthropods

- **Crustaceans:** Crabs, shrimp and lobsters.
- **Chelicerates:** Scorpions, spiders and ticks.
- **Myriapods:** Centipedes and millipedes.
- **Insects:** Flies and Bees

Crustaceans

Arthropods which contain a head, a thorax and an abdomen.

Abdomen: *The part of animal's body that contains the stomach and intestines.*

Thorax: *The part of the animal which usually contains the heart and lungs. (Often found between the neck and the abdomen).*

Chelicerates

Arthropods which have a cephalothorax, an abdomen and a jawline structure called the chelicera.

Cephalothorax: *The fused head and throax of arthropods.*

Chelicera: *Jawlike structure often shaped as articulated fangs. (Head of a spider)*

Pedipalps: *Appendages that are close to the chelicera, help with taste and smell as well as working as external weapons. (Think spiders again)*

Myriapods

Arthropods with very long segmented bodies, and a pair of antennae. Each segment of their bodies have a pair of legs, and, depending on the type of body, myriads can have anywhere between 10 to 750 legs.

Examples: Millipedes, centipedes.

Insects

Of the most common arthropods. Bodies are divided into three segments;

1. **Head:** Containing a pair of antennae.
2. **Thorax:** Containing six legs and sometimes a pair of wings.
3. **abdomen**

Metamorphosis: *A process in which an organism passes through three or four distinct life phases.*

Processes of development (Difference of opinion):

1. **Egg:** Beginning stage of life
2. **Larva:** Secondary stage, primary goals are to consume as much energy as possible while undergoing processes such as molting and separating of cells.
3. **Pupa:** Inactive immature state prior to adult stage, larval cells die off to provide energy for the processes involved in the development of the final stage.
4. **Adult:** Final stage of development.