

Mosquito School Lesson

Topic: Life History of the Mosquito

Outcome: Name and describe the four stages of the mosquito life cycle and describe types of larval habitats used by different mosquito species.

Objectives:

- Describe four stages of the mosquito life cycle
- Describe function of each stage.
- Describe larval habitat types.

Materials needed:

- Growing chamber with mosquito larvae and pupa
- Line drawings of mosquitoes
- Larvae dippers
- Brochures, container habitat survey

Teacher's Notes:

1. There is a name for the group of insects that have two wings, which includes mosquitoes, flies, gnats, etc.. Does anyone know this name?

Diptera: di= two and pteron=wing

2. Does anyone know how many different kinds of mosquitoes we have in the world, US, and Portland?

3,000; 165; 22

3. Like all other insects, mosquitoes go through distinct stages in their life cycle, going from being a baby to an adult. In order to grow, insects need to shed their old skin. There are **four life cycles** that mosquitoes grow through. Does anyone know what the four stages are?

Egg, larvae, pupa, adult

4. The **egg** is laid by the female mosquito in or near the water. Some species lay up to 300 eggs clustered into a raft that floats on top of the water. If the weather conditions are right – wind, sun, rain, and so forth – these eggs will hatch in one to five days.

5. The **larvae** emerge when the mosquito egg hatches, kind of like when a chick begins to come out of an egg shell. Mosquito larvae are called wrigglers. Why do you think they are called wrigglers? (b/c they are worm-like and swim by wiggling through the water). Mosquito larvae are aquatic and lives in water where it feeds on bacteria, algae, and other things in the water. Most larvae can live for one to four weeks and breathe through a siphon, or breathing tube, like a mouth, at the base on their tails. They swim to the surface of the water and breathe through the siphon like a swimmer with a snorkel.

6. The larva shed its skin and then becomes a **pupa**. The ears are a pair of breathing tubes called trumpets that the pupa uses to breathe. When it swims, it tumbles through the water and floats back to the surface when it stops swimming. Adult tissues are being grown, the digestive system is changing to one that handles food particles to liquid and the legs, wings and eyes are forming. The pupal stage is usually one to three days.

7. Then the **adult** emerges. It has a head, thorax and abdomen. (blood and flower nectar). The head has eyes and antennae. The eyes are to see and the antennae are to hear and smell. The mosquito's mouth, called the proboscis sucks up the liquid which is food for the adult. What kinds of liquids do adult mosquitoes like?

8. Mosquitoes mostly need water to grow, but can use different types of water as **habitats**: permanent like swamps and ponds or floodwater, areas where it's wet when the snow melts. They also grow in containers.

9. Mosquitoes are **important** for lots of reasons, for example they pollinate flowers, such as wildflowers, and they are also transmitters of disease.

10. Does anyone know what kind of diseases mosquitoes can give humans?

11. **West Nile virus**: Mosquito to Bird/Horse to Mosquito to Human

12. Prevention tips