

## GUIDED NOTES



**Directions.** Use your Life Cycle Card Sort and the slides to complete the following.

### Blow Fly Life Cycle

Blow flies are attracted to dead bodies and often arrive within \_\_\_\_\_ of the death of an animal. They have a \_\_\_\_\_ life cycle that consists of egg, larva, pupa, and adult stages.

Label the life cycle diagram and fill in the blanks below.

1<sup>st</sup> – Adult flies lay eggs on the carcass.

2<sup>nd</sup> – Eggs hatch into larvae (maggots) in \_\_\_\_–\_\_\_\_ hours.

3<sup>rd</sup> – Larvae continue to grow and molt (shed their exoskeletons) as they pass through the various instar stages.

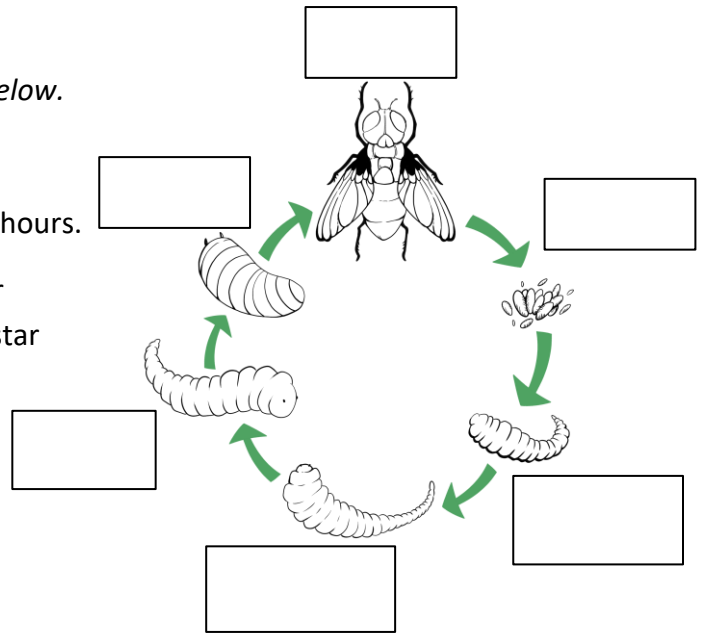
1<sup>st</sup> Instar – \_\_\_\_ mm long after \_\_\_\_ days.

2<sup>nd</sup> Instar – \_\_\_\_ mm long after \_\_\_\_ days.

3<sup>rd</sup> Instar – \_\_\_\_\_ mm long after \_\_\_\_ days.

4<sup>th</sup> – The larvae (\_\_\_\_ mm) develop into pupae after burrowing in surrounding soil.

5<sup>th</sup> – Adult flies emerge from pupae cases after \_\_\_\_–\_\_\_\_ days.



### What do they do?

- Forensic \_\_\_\_\_ apply their knowledge of entomology to provide information for criminal investigations.
- A forensic entomologist’s job may include:
  - Identification of insects at various stages of their \_\_\_\_\_, such as eggs, larvae, pupae, and adults.
  - Collection and preservation of insects as \_\_\_\_\_.
  - Determining as an estimate for the postmortem interval or \_\_\_\_\_ (the time between death and the discovery of the body) using factors such as insect evidence, weather conditions, location and condition of the body, etc.
  - \_\_\_\_\_ in court to explain insect-related evidence found at a crime scene.

### Video Reflection

| I Notice | I Wonder |
|----------|----------|
|          |          |

### Insects as Evidence

Forensic entomologists use their knowledge of insects and their life cycles and \_\_\_\_\_ to give them clues about a crime.

Most insects used in investigations are in two major orders: \_\_\_\_\_ (flies) and \_\_\_\_\_ (beetles).

Species \_\_\_\_\_ may also provide clues for investigators. Some species may feed on a \_\_\_\_\_ corpse, while another species may prefer to feed on one that has been dead for two weeks. Investigators will also find other insect species that \_\_\_\_\_ on the insects feeding on the corpse.

**Stages of Decomposition:** What occurs during each stage of decomposition?

|             |             |             |             |
|-------------|-------------|-------------|-------------|
|             |             |             |             |
| _____ stage | _____ stage | _____ stage | _____ stage |

## Other Factors

\_\_\_\_\_ data are also important tools in analyzing insect evidence from a corpse. Investigators will make note of the temperature of the \_\_\_\_\_, ground surface, the interface area between the body and the ground, and the \_\_\_\_\_ under the body as well as the temperature inside any \_\_\_\_\_ masses. They will also collect weather data related to daily \_\_\_\_\_ (highs/lows) and \_\_\_\_\_ for a period of time before the body was discovered to the time the insect evidence was collected.

What are some other factors that could affect a forensic entomologist's estimate of PMI?

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