Amazing Arthropods - Researching Insect Orders

The Study Guide uses the terminology "*basic biology, life history, and ecology"* in regards to the researching and studying the list of Insect Orders.

To clarify, students should understand the following biological and ecological concepts:

- Greek origin of the name for each Insect Order *(e.g., Lepidoptera, 'Lepido' means scale and 'ptera' means wing – so Lepidopterans are "scale wings" meaning that their wings are covered with tiny little scales).*
- Key physical characteristics to look for when identifying each Insect Order *(e.g., Insects belonging to the Order Diptera have only 2 wings. Their hind wings are reduced to little stubs that no longer function as wings, and are called halteres. These are used for balancing in flight.)*.
- Key behavioral characteristics *(e.g., Mantises are an ambush predator, often go unnoticed because of their camouflage and ability to sit and wait long periods of time waiting for prey).*
- Type of Metamorphosis *(e.g., Insects belonging to the Order Odonata have an aquatic stage of life and therefore undergo Incomplete metamorphosis)*.
- Habitat *(e.g., Coleopterans are the most diverse order of animals on the planet, with over 350,000 described species of beetles currently known. They are found in nearly every different habitat on Earth and are only absent from the freezing polar regions.)*
- Diet *(e.g., Insects belonging to the Order Siphonapera are ectoparasites, meaning the adults live on and feed on the outside of a host, generally a mammal or a bird)*.
- What role do they have in the Ecosystem? *(e.g., Dermapterans are contributors to biodegradation in that they are feeders of decaying organic matter).*