**Pre-Lab Assignment 2: Sensory Ecology (12 points)**

Pre-lab assignments are designed to get you thinking about the upcoming experiment and experimental design process. Before beginning this assignment please read the lab notebook module related to Sensory Ecology.

To help with your understanding of this topic and help to prime your thinking about this experiment we want to know what you know and what you don’t know about sensory ecology and *Drosophila*.

1. Please list 4 things that you know for sure about sensory ecology and *Drosophila* (1 point for each complete statement).
2. Sensory ecology studies the ways in which organisms respond to the sensory stimuli in their environment.
3. Drosophila is a good organism to use in the laboratory because they’re easy to genetically manipulate, i.e., change or tweak things like the ability to fly and smell.
4. Scents is one of the most important ways organisms interact with their environment.
5. Humans sense of smell and taste are the strongest.
6. Please list 4 things that you think you know about sensory ecology and *Drosophila* but you are not sure about (1 point for each complete statement).
7. Drosophila have a short life cycle and need rotting fruit to reproduce.
8. The mutation of the odorant receptor co-receptors does not affect a fruit flies’ ability to see.
9. Drosophila only have the ability to smell and see.
10. Photoreceptors is more important for land animals than water animals.
11. Please list 4 things that you feel you need to know about sensory ecology and *Drosophila* before beginning this experiment (1 point for each complete statement).
12. Specifically, what part of the fruit fly is important for its ability to perceive the different senses.
13. The specific environment or type of fruit that is most attractive to Drosophila.
14. What type of environment (which abiotic and biotic factors) is most favorable for a fruit fly to be attracted to the fruit?
15. How does mutating the wings of a Drosophila affect its ability to acquired food and nutrients?