



Education and Research: Testing Hypotheses

## Appearances are Deceiving

### *Eye in the Sea* Observations

Directions: On a separate piece of paper, answer the following questions about your *Eye in the Sea* observations:

1. For each animal observed, identify the Phylum and Class.
2. Compare the morphological characteristics of the various classes. Are there members of different classes that share similar characteristics? Create lists of classes that have similar traits. For example, list all that have a streamline body shape, list all that have fins, list all that have the same type of fins, list all that have scales, list all that lack scales, etc.
3. Suggest the adaptive advantage for the various morphological features observed.
4. Compare the behaviors of the various classes. Are there members of different classes that share similar behaviors? Create lists of classes that share these traits. For example, list all that are attracted to the food or signal, list all that are repelled from the food or signal, etc.
5. Suggest the adaptive advantage for the various behaviors observed.
6. What is convergent evolution? What is divergent evolution? Based on the observations made, suggest which has occurred in the organism described in this activity. What evidence supports your decision?