**Lesson 3B: Data Collection and ANeMoNe**

**Learning Objectives:**

* Students will learn that scientists can and do monitor changes in ocean acidification through research and data collection.
* Students will be introduced to how the ANeMoNe project uses community science to monitor ocean acidification in WA
* Students will understand the tools and techniques that ANeMoNe uses to collect data, and they will understand what data is collected

**NGSS Standards That Apply**

* **MS-LS2-3:** Develop a model to describe cycling of matter and flow of energy among living and nonliving parts of an ecosystem. *The living aspect of this standard will be achieved in conjunction with the shelled organism lessons.*
* **MS-LS2-4** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
  + Emphasis is on recognizing patterns in data and making warranted inferences about changes in populations, and on evaluating empirical evidence supporting arguments about changes to ecosystems. *This standard will be achieved in conjunction with the shelled organism and data lessons.*

**Materials**

* Three short ANeMoNe data collection videos
  + Sensor Protocol
  + Eelgrass Protocol
  + Shellfish Protocol
* Worksheet

**Introduction**

**Activity 1:** Data Collection Brainstorm

Students should discuss in groups what they would want to collect if they were scientists trying to study impacts of ocean acidification. Remind them that they should focus on both biotic and abiotic factors when thinking about this. Then come together as a class and make a list on the whiteboard.

**Activity 2:** ANeMoNe Data Collection Video

This video will introduce data collection by ANeMoNe. The video will show the tools used by ANeMoNe to measure and collect data in the field, as well as what data is being collected. Students will have a worksheet that they can complete with a partner in between the different videos. The teacher should ask students about takeaways or questions they have between videos, to ensure students are understanding each part of the data collection.