

## Marine Discovery Key points and Big Ideas

### Rocky Intertidal

- What defines the intertidal zone?
  - How are tides created?
- Using live animals (sea cucumbers, sea urchins, snails, hermit crabs, brittle stars, and sea stars) from the intertidal zone students discover:
- How these animals eat
  - How these animals protect themselves from life in the intertidal zone: drying out, crashing waves, changes in temperature, being eaten by other animals
  - How are stresses imposed by man affecting the animals living in the intertidal zone?
  - What phylum are each of the animals in?
  - How are animals in different phyla similar and different?

### Squid Dissection

Using preserved squid students do a dissection and learn:

- How has the squid adapted to its environment?
- Where is it found? What does it eat? How does it swim? What is its prey? What preys on it? How does it reproduce?
- What is the external and internal anatomy of the squid?
- Why are squid caught by humans?

### Shark Dissection

Using a preserved shark (Spiny Dogfish) students learn:

- How has the shark adapted to its environment?
- Where is it found? What does it eat? How does it swim? What is its prey? What preys on it? How does it reproduce?
- What is the external and internal anatomy of a shark?
- How are sharks similar to and different from bony fish?
- Why are Spiny Dogfish caught by humans? What are some of the impacts of over fishing?
- How big was the fossil shark Megalodon, based on the size of its teeth?

### Marine Fossils

- What are fossils?
- What kinds of animals can become fossilized?
- How are fossils created?
- What do marine fossils found near Tucson tell us about Tucson's past environment?
- What is continental drift and what is the evidence for it? What are plate tectonics?
- How was the supercontinent Pangaea formed?
- Geological Timeline – when were the major events in earth's history?

### Fish Diversity

Using preserved fish students learn:

- What defines a fish?
- How has each fish adapted to its environment?
- What does the shape of a fish tell us about what it does for a living (form and function)?
- For each fish we look at it: Where is it found? What does it eat? How does it swim? What is its prey? What preys on it? How does it protect itself?