STEM Challenge: Biology

South Carolina Aquarium

B-LS1-4 – *Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.*

Discuss some of the ways that different living things in the Aquarium (such as plants, sharks, skates, turtles, etc.) reproduce.

B-LS1-5 – *Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.*

Find plants around the Aquarium that photosynthesize. Are there any exceptions that don't only use this process?

B-LS2-1 – *Use mathematical and/or computational representations to support explanations of biotic and abiotic factors that affect carrying capacity of ecosystems at different scales.*

What are some natural factors that impact an environment's carrying capacity? What are some human-caused factors?

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B-LS2-4 – *Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.*

Pick an exhibit/habitat and discuss its food web. Is it "heavier" on the top or the bottom? If so, why is this the case?

B-LS4-3 – *Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.*

What are some adaptations that you see in animals at the Aquarium? How might they have progressed or been furthered by natural selection? What makes them good traits to have inherited through natural selection?

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