

### Discovery Lab Description:

With the new exhibit Survival of the Slowest here at the museum in the Fall and we ask the question why would a slow animal ever exist? This hands-on lab will challenge students to figure out how that might happen. They will work as a team through a few simulations where they will use mathematical modeling to figure out why populations of animals change over time. We will conclude with some key components of conservation biology and what students can do to make a difference to keep richness of biodiversity.

### During the Discovery Lab students will be expected to:

- Sit in groups of 4 students per table.
- Students should be prepared to give their full attention to the Lab instructors when given the quiet signal.
- Work cooperatively with one another at the table.
- Follow the hands-on procedures just as the Lab teacher or assistant explains them.
- Handle materials and equipment carefully

### It is important that teachers and chaperones:

- Help focus the students' attention.
- Assist students with lab activities through questioning allowing the student to do the actual building and decision making. For example a parent might ask, "I see your base is shaky, what could you do to strengthen it?"
- Engage students at a higher level by asking open-ended questions throughout the class. For example: why did you choose \_\_\_\_?
- Turn off cell phones and other electronic devices during the class.

### Literary connection:

To get students excited about the upcoming Discovery lesson we suggest reading *Outrageous Animal Adaptations: From Big-Eared Bats to Frill-Necked Lizards* by Michael J. Rosen. In the book, readers will explore a fish that walks on land, a frog that makes its own sunscreen, and an insect that can become invisible. Whether to avoid predators, to stalk prey, or to withstand extreme temperatures, Earth's creatures have evolved some outrageous features and tricks to ensure survival.

### Nevada Academic Content Standards in Science (NGSS):

**MS-LS4-4.** Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

**MS-LS4-6.** Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.

### Common Core:

SL.(6-8).1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

