SCIENCE·3D

RATTLESNAKES

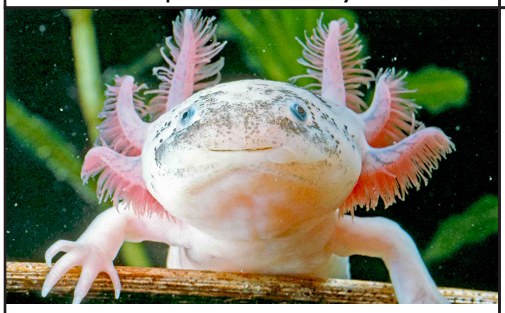
In this packet, sample student answers are provided in red and notes to teachers are in blue.

In this **Mission Research**, students will use their knowledge of plant and animal traits to match organisms to the environments they live in. Then, they will predict what would happen to an organism if its environment were to change.

Activity 1: Survival Traits

Plants and animals have traits that help them survive in their environment.

1. Guess the environment each plant or animal lives in based on their given traits. Record your guesses in the table. Choose from the following environments: **desert, rainforest, arctic, deep ocean, river, pond**

Organism	Trait	Environment
 Swiss Cheese Plant	Large leaves gather a lot of light but lose a lot of water	Rainforest
 Squid	Large eyes help to see in darkness	Deep ocean
 Spider Monkey	Long arms to move through trees	Rainforest
 Axolotl Salamander	Gills to breathe water	Pond

 Kangaroo Rat	Can get all the water they need from food; don't need to drink water	Desert
 Aloe Vera Plant	Waxy leaves keep water from being lost	Desert
 Hellbender	Flat shape helps movement in fast currents	River
 Bearded Seal	Thick layers of fat and a fur covering to keep warm	Arctic
 Cactus	Seed doesn't grow until it rains; plant grows quickly and produces seeds very fast	Desert

2. Choose one of the plants or animals from the table. Then choose one of the environments that it doesn't live in. Write two or three sentences to **describe** what would happen to that plant or animal if it were moved to that environment. Would the trait(s) listed be helpful or harmful to its survival?

   Complete answers should consider multiple changes that would occur in the new environment. For example: if the rainforest plant were moved to the desert, it would dry out and die because it would lose too much water. The large leaves would be harmful to its survival.

Extend the Lesson: Have students present their answers to the class. Encourage the class to provide additional thoughts or feedback on each presentation. Have students conduct the exercise for an organism in their local environment. Have them choose a trait and describe how it helps the organism survive in its current environment. Then, ask them how a change, such as an increase in the temperature or a reduction in the amount of rain, would influence the organism.