SCIENCE 3D

RIVER DRAGONS: NILE CROCODILES

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 and the **Mission Reader** to explore how animal behaviors assist in reproduction and raising young successfully. Alternately, students can compare and contrast body systems of people and other types of vertebrates.

Successful reproduction is critical to the survival of species. Animals have many behaviors that help them succeed in finding a mate and giving their young the best chance of survival. Before we head to the Okavango to study crocodiles, let's explore some of those behaviors.

1. **Complete** the table below by filling in the blank with one of the following statements:
   Protects young
   Helps get a mate

Behavior	Benefit of the behavior
Female crocodiles dig nests in the sand.	Protects young
Male birds of paradise have bright feathers and impressive dances.	Helps get a mate
Female crocodiles guard nests until babies hatch.	Protects young
Male alligators bellow and display during the mating season.	Helps get a mate
Alligators come to the defense of babies that are calling.	Protects young
Wildebeest live in large herds.	Protects young (could also be helps get a mate)
Female leopards live in a male's territory that is defended by that male from others.	Helps get a mate

Choose an animal that you want to know more about. Make sure it is an animal that you can research using online resources or books.

2. My animal is mallard duck.

3. In the spaces below, take notes on the behaviors the animal does for each situation.

a. Help it find or attract a mate:

Males have bright plumage that females find attractive.

Males and females 'head-bob' while courting to establish pair bonds.

Males will fight, drive off, chase, or attack competitors.

Females will encourage aggressive behavior between rival males (evaluate mate strength).

b. Give their young the best chance to survive:

Female plumage helps camouflage into the ground while nesting to avoid predators.

Female lays multiple eggs in a clutch for a large brood size.

Ducklings are able to walk, swim, and feed themselves right after hatching.

Females protect and care for ducklings after they hatch.

4. **Create** a poster that **compares** and **contrasts** the behaviors that crocodiles use to help get a mate and to protect their young with the species that you chose in question 2.

Alternate Mission Research: Other missions have activities that address specific functions of body systems. However, if this is an area that you want to emphasize or if you are not planning to use those missions, you could have students read the **Mission Reader**. Then, have students create a presentation that describes how their (human) body systems work together. You could also add a comparative aspect to the project by having students choose another animal and compare and contrast how body systems work across species. In general, they should identify that although some of the specifics vary, the basic way the systems work together is the same. Have them include the circulatory, respiratory, muscular, nervous, digestive, and excretory systems. This would explicitly cover NGSS standard MS-LS1-3.