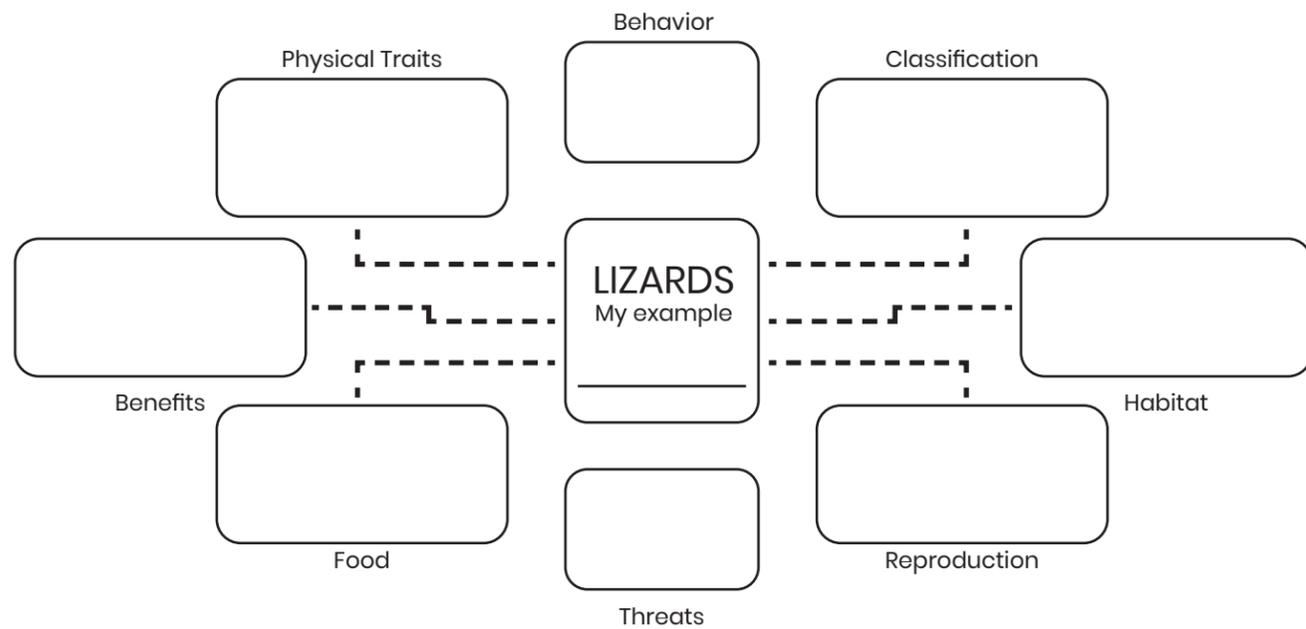


How does the horned lizard survive?



How does the horned lizard survive?

- 1. The poster shows a Texas horned lizard. Look at the physical characteristics of the horned toad. Discuss how you think these features help it survive in its environment?**
- 2. In Eastland, Texas, there is a story of a horned toad named Blinky that survived entombed in the cornerstone of the local courthouse for 30 years. In 1928, when the old cornerstone was opened, Blinky was pulled out and found to be alive. He quickly became a “celebrity” and was given a new nickname of “Old Rip” (after the storybook character Rip Van Winkle). Do you think it is possible that he survived for 30 years in the cornerstone? Why or why not?**
- 3. Research lizards in general. Select one type of lizard to study further and complete the graphic organizer below.**



Texas Horned Lizard (*Phrynosoma cornutum*)

Also known as the “horned toad.”

Image Information: The poster image is of a Texas horned lizard (*Phrynosoma cornutum*). Named for the spiked scales (horns) on their heads, these animals are not toads (amphibians), but lizards (reptiles) that require warm temperatures and sunlight to help them survive. Their bodies are covered in scales. They breathe with lungs and their young are produced on land. Their habitat includes dry, open areas with little plant cover and loose, sandy soil where they feed primarily on harvester (red) ants. Once found across all of Texas, their populations have declined greatly in the last 30 years, nearly disappearing from the eastern third of the state.

Possible Student Answers: Question #1: Discuss how you think these features help it survive in its environment? Coloration might help it blend into the sandy ground; skin is scaly and the spiked horns protect the body from predators; eyes on side of its head allow it to see in different directions to spot prey and avoid predators. **Question #2:** Do you think it is possible that he survived for 30 years in the cornerstone? Why or why not? Students should consider that it seems improbable that the lizard survived for 30 years without food, water and oxygen in the cornerstone. They should do some research to see if any such examples exist in nature and provide evidence to support their position.

Support the Phenomena: Lizards are adapted to survive in a variety of habitats around the world. Have students research a lizard type of their choosing and complete the graphic organizer. Attention should be given to how the physical traits, characteristics, and behaviors that help the lizard to survive in its habitat.

NGSS Science and Engineering Practice #6 – Constructing Explanations and Designing Solutions: In K-2, students **make observations and construct an evidence-based account** for natural phenomena. In 3-5, students **identify evidence that support points of view** in an explanation; in 6-8, students **construct an explanation using models or representations** based on valid and reliable evidence; in 9-12, students should **construct an explanation based on evidence obtained from a variety of resources** that describes how the natural world operates.

- In K-2, have students use information, images, and descriptions from classroom literature books [like *Amazing Lizards* by Travis Smith, DK Eyewitness Junior Series; *Reptiles for Kids* by Michael Starkey, Rockridge Press; *Gecko* by Raymond Huber, Candlewick Press; *Guess Who's in the Desert* by Charline Profiri, Rio Nuevo Publishers] to describe how lizards live and survive in their habitat.
- In 3-5, have students use the information collected in their lizard graphic organizer as evidence to answer the question of how the physical traits and behaviors of their lizard help it survive in its habitat.
- In 6-8, students design a model habitat for their lizard. Using the information collected in their lizard graphic organizer, students describe/defend how their models represent their lizard's habitat.
- In 9-12, students investigate factors that may be impacting the long-term survival of their selected lizard, provide detailed explanations and evidence of how those factors impact their lizard, and then propose a researched solution that offers ideas to mitigate each of those factors.

More information: Learn more about lizards at [Animal Corner](#); [San Diego Zoo, Lizards](#); [Britannica: Lizards](#); or how naturalists are working to study and protect lizard populations at [PARC](#) (Partners in Amphibians and Reptile Conservation).