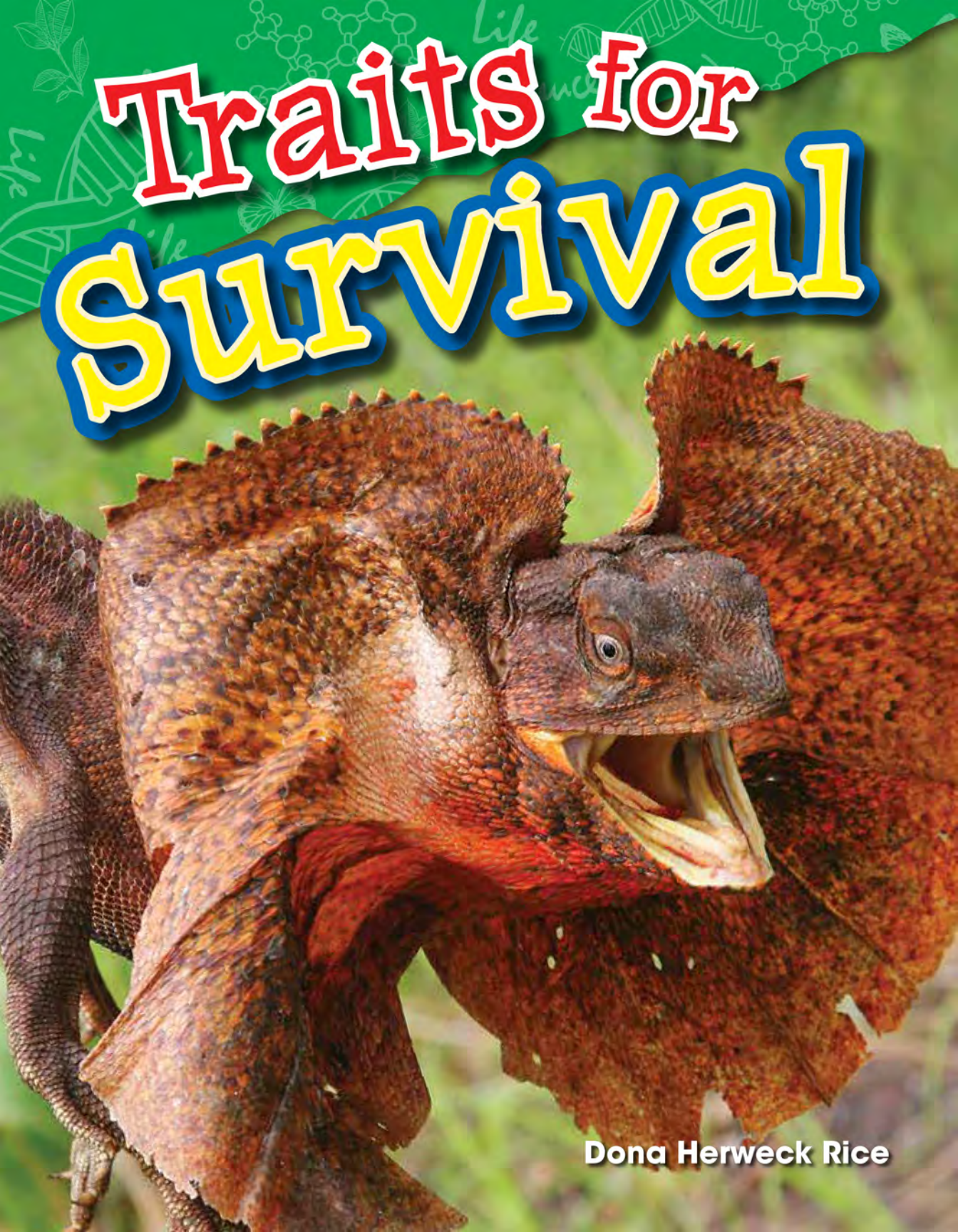
Traits for Survival



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What a Life!

Where on Earth would you like to live? Chances are, you can find a way to live there! Do you want to live in a blazing hot desert? Houses built underground or with a good air conditioner can help you live comfortably in the heat. Do you want to live under the sea? A watertight house with air piped in can make that happen. How about living in a freezing **tundra**? Thick walls and a good parka can help make that possible.



king penguins

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Adapt comes from Latin words that mean "to fit."

We humans can deal with the conditions of almost any place we want to live. We have amazing brains that make a lot of things possible for us. But what if we *couldn't* use our brains to help us survive the conditions of our **environment**? Our bodies would have to **adapt** to make life livable.



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Adaptation is the name of the game for animal **species**. Qualities that offer the best chance for survival grow strongest in a species. Qualities that don't support its chances fade away—or the species does!

Species hold on to what makes them best able to survive. Of course, a species doesn't just think, "Hey, this is working out pretty well for us. Let's keep it!" It doesn't choose anything. Instead, an animal's body adapts over time.

But sudden changes may come to a species' home. A drought may stop the flow of water. Food sources could die out. Or fire may destroy a species' home. Species don't adapt quickly to such big changes. They need to move to a new home, or they may die out.



Dogs don't sweat through their skin like humans do. They have adapted to pant, which circulates air in their bodies and cools them down.

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Five Fierce Senses

Species rely on their senses of taste, touch, hearing, smelling, and seeing to survive.

Hearing

Whales communicate with one another across thousands of miles of ocean water.



Sight

Owls that need to spot their **prey** from great distances have developed sharp eyesight.



Smell

Sharks have adapted to smell and locate a single drop of blood.



Taste

Humans have developed a dislike for foods that taste bitter, as these foods are sometimes poisonous.



Touch

Plants like the Venus flytrap have sensitive leaves that feel when a tasty meal has landed on them.



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Power Traits

Traits are the qualities that exist in DNA. There are physical traits such as eye color and the shape of teeth. And there are **instincts**, such as the urge to hunt or mate.

Among these traits are traits for survival. These are the qualities that help a species live and **thrive**. Many of them are adaptations. They help species adapt to fit their environment. These adaptations may change over time to give species the best chance to survive. Without these traits, many species would have died out long ago.

Some traits are common, and you may know them well. But some traits are uncommon—and as weird as anything you can imagine!



Tripod Fish

The tripod fish has adapted for fast-food dining! The fish's body has bony spikes that anchor it to the ocean floor. It faces the oncoming current with its mouth open, and food just floats down the hatch!

Cats' bodies have adapted to make them great hunters. Their eyes give them night vision to hunt their prey in the dark.



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DNA

Information about a body's traits is in its cells. That's where DNA is. DNA tells the body everything from what color to grow your hair to how to eat food. Every living creature has DNA.



Think Like a Scientist



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How does the shape of a bird's beak affect what it eats? Experiment and find out!

What to Get

- forks
- mini marshmallows
- plastic cups
- spoons
- straws
- timer
- toothpicks
- tweezers

