

## THE STANDARD

# Animal Senses

*"Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways."*

 ANCHORING PHENOMENON

## The Cat That Freezes Before the Doorbell Rings

A house cat is asleep on the couch. A second before the doorbell rings, the cat's ears swivel, its head lifts, and it bolts under the bed. Something tiny, a faint sound or a vibration, reached the cat first. 4th graders will want to know what the cat noticed that they didn't, and why its body reacted so fast.

## DRIVING QUESTION

*"What information did the cat pick up, and how did that turn into the cat running away?"*

 INVESTIGATIVE 1

### The Earthworm That Hates the Light

Put an earthworm on a damp paper towel and shine a flashlight on one end. The worm crawls away from the light toward the dark, every single time. It has no real eyes, but it still senses the light and responds. Even a simple animal catches information and reacts, sense to brain to action.

## DRIVING QUESTION

*"How does an earthworm with no eyes know which way to crawl away from the light?"*

 INVESTIGATIVE 2

### The Dog That Comes Running at the Can Opener

A dog in another room can't see the kitchen. The second a can opener clicks, the dog comes sprinting in. The sound reached its ears, its brain matched that sound to food, and it ran. Focus on the middle step: the brain reads the information and picks the response. The same sound means nothing to a dog never fed from a can.

## DRIVING QUESTION

*"Why does one sound make the dog come running while another sound is ignored?"*