

ARTICLE: TEACHER VERSION

About this Article

Lexile: 650

Wordcount: 704

Text Complexity: The Lexile level for this text falls in the middle of the grades 2-3 CCSS text complexity band. This text is suitable to use as an interactive read-aloud for grades K-2. Second-grade teachers should use their professional judgement and knowledge of students' independent reading levels to determine if this text would be appropriate for students to read independently.

Note: Students should know who their "talk partner" is before the teacher begins the interactive read-aloud. Whenever the teacher notes suggest **Think/Pair/Share**, it is generally followed by instructions to "listen in" to student conversations. This enables the teacher to select students to share out thinking that would benefit the whole group to hear. Additionally, it allows the teacher to informally assess student thinking about the text. The teacher can follow up with a **think aloud** to help clarify parts of the text as needed. At times, the teacher may want to facilitate whole class discussion after **Think/Pair/Share**. For this text, primary grade teachers may opt to have students read in unison to familiarize themselves with the pronunciations of specific dinosaurs.

Key for Teacher Notes

- **Green text**
specific strategies
- Regular text
instructions for teachers
- *Italicized text*
teacher's instructions to students
- Underlined text
important domain-specific words

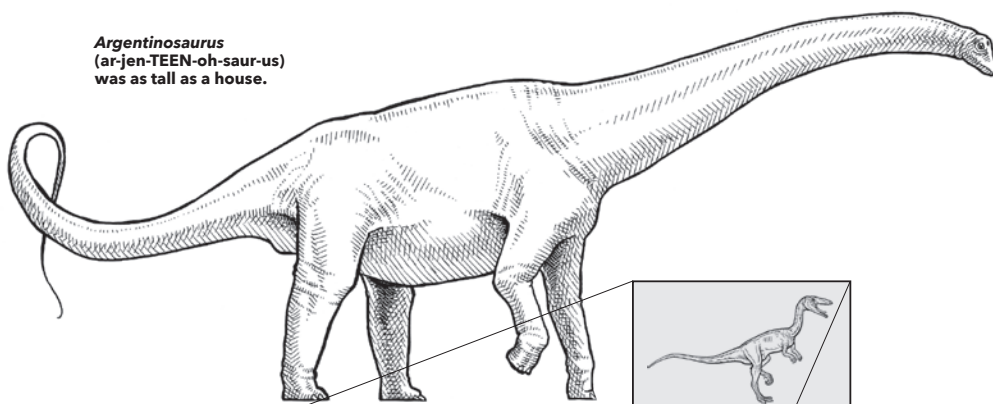
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Birds and Other Dinosaurs

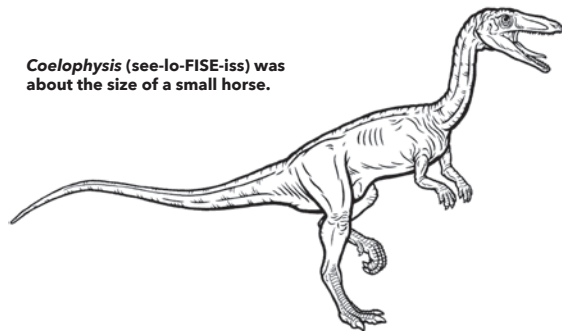
Long ago, many kinds of dinosaurs lived on Earth. Some dinosaurs were as tall as a house. Others were smaller than you! Different dinosaurs had different body parts. The biggest dinosaurs had long necks that could reach leaves that were far away.

Think-Pair-Share: What does this title make you think? Listen in. Optional: select a few students to share out. Students may wonder aloud about birds being grouped with dinosaurs.

Argentinosaurus
(ar-jen-TEEN-oh-saur-us)
was as tall as a house.

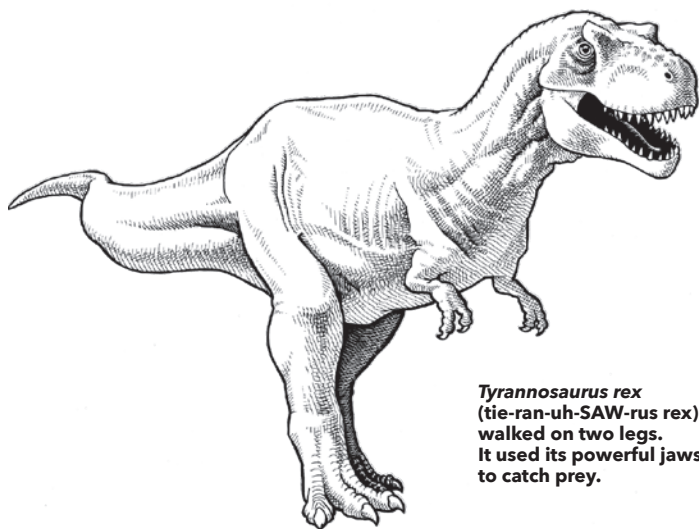


Coelophysis (see-lo-FISE-iss) was
about the size of a small horse.



Think-Pair-Share: What do you notice about the dinosaurs in these two illustrations? Listen in and select a few students to share out.

Dinosaurs moved in different ways too. Some walked on four legs. Others walked on two. The dinosaurs that lived long ago are extinct. This means that there are none of them living today.



Tyrannosaurus rex
(tie-ran-uh-SAW-rus rex)
walked on two legs.
It used its powerful jaws
to catch prey.

Stegosaurus
(steg-uh-SAW-rus)
walked on four legs.
It had thick skin and
a spiky tail.



But one kind of dinosaur survives: birds! We know that birds are a kind of dinosaur because birds and extinct dinosaurs are alike in lots of ways.

You may prompt students to **think/pair/share** about the meaning of the word "extinct." Listen in and select a student to share out if you overhear an accurate definition. If you need to give students a definition, say: *The word extinct means a that a species (type of animal) is no longer living.* You may want to elaborate on the difference between "dead" and "extinct" by explaining that one individual animal can die, but we use the word "extinct" to mean that NO type of that animal is living. Add to science word wall.

Think Aloud: We are learning about lots of different kinds of dinosaurs! It seems like they looked and behaved in a variety of different ways.

Think-Pair-Share: What else have you learned about different kinds of dinosaurs so far (either from the text or these next two illustrations)? Optional: Create a web with the students based on what they have read so far. Sample web: Put the phrase "All About Dinosaurs" in the middle, and the offshoots can say, "they were of many different sizes," "they had different ways of moving", and "they ate different types of food". You can add specific examples from the text for each offshoot (with student input) if you choose.

Think Aloud: Wow! We just learned something very important and (perhaps) surprising.

Think-Pair-Share: What is the big idea that we just read about in that last paragraph? Listen in and select a pair to share out. Optional: Chart this idea, composing a sentence with student input (shared writing).

Birds are Dinosaurs

Compare the two animals in the pictures below.

Sinornithosaurus (sigh-NOR-nith-oh-sawr-us) is a dinosaur that lived long ago. The roadrunner is a bird living today. Both animals walk and run on two legs. They are alike in other ways too. They both have claws and bodies that are covered with feathers.



No one has ever seen a living *Sinornithosaurus*. This is a photograph of a model that was made by an artist.



Roadrunners are birds living today. A photographer took this picture of a roadrunner in a field.

Think-Pair-Share: How are these two animals alike? Look at the photographs and you can also reread the paragraph I just read. Listen in and select a pair to share out. After they point out similarities, **think aloud** about how one is extinct and the other is living (if this did not come up naturally when students were sharing out).

Let's take a look at more dinosaurs. See if you can spot other ways they are alike and different.

Living Dinosaurs

Here are three birds, or living dinosaurs:

Cardinals are familiar birds in many parts of the United States. The northern cardinal male is very easy to spot because of its feathers. It has a bright red body, a black face, and a pointed crest of feathers on its head. The males show off their feathers to attract females. They might stick up their crest and sway back and forth while chirping a song. Feathers aren't just for finding mates. They also help keep cardinals warm and dry. Without feathers, cardinals couldn't fly!



The ostrich is a very different kind of bird. This large bird is covered with feathers, but it doesn't fly. It runs! Ostriches stand and run on two long, powerful legs. When they're chased, ostriches can run over 70 kilometers per hour (43 miles per hour). That's as fast as a car on a city street. And if they can't run away, they use their strong legs to deliver a mighty kick!



Eagles are big, strong birds. They can fly high and far. They can also dive very fast to catch dinner.

This eagle has sharp, curved claws. These claws are good for grabbing and carrying small animals. It also has a big, sharp beak shaped like a hook. The eagle uses its beak to kill and eat the animals it catches.



Think Aloud: We just learned about three different kinds of dinosaurs (birds) that are alive today. **Think-Pair-Share:** Talk with your partner about what you learned about the cardinal, the ostrich, and the eagle. Look back at the photographs and the text as you talk. Alternate Option: For more scaffolding, you may prompt students to **think/pair/share** after each paragraph, rather than asking them to discuss all three examples after you have read all three paragraphs in this section and looked at their corresponding photographs.

Extinct Dinosaurs

Compare those birds to these dinosaurs from long ago. Remember, these dinosaurs have never been seen alive. The drawings are based on clues that scientists have found.

Living birds aren't the only dinosaurs with feathers. Some dinosaurs that lived long ago had feathers too! Look at *Anchiornis* (an-kee-ORN-is). Red, black, and white feathers covered its body from its head to its tail. These feathers kept the dinosaur warm. Feathers may have helped it get around, too. *Anchiornis* could not fly. But it may have used its wings to glide through the air.



Think-Pair-Share: What do these extinct dinosaurs have in common with modern day dinosaurs (birds)? Listen in and select a pair to share out. **Follow Up Think-Pair-Share:** Based on the second paragraph in this section, what are some of the ways extinct dinosaurs may have used their feathers? Listen in and select a pair to share out.

Yutyrannus (yoo-tee-ran-us) was a big, strong hunter like its cousin *Tyrannosaurus rex*. Like *T. rex*, it could walk on two legs. This dinosaur also had huge jaws and sharp teeth for eating meat. But unlike its cousin, this dinosaur was covered with spiky feathers. They may have used these feathers to stay warm and show off for other dinosaurs.



Coelophysis (see-low-FIGH-sis) was a small, fast hunter that ran on two legs. It had sharp claws for catching and holding small animals. And it had lots of sharp, jagged teeth for biting and eating them. One *Coelophysis* fossil was found with small lizard-like animals in its belly. This was probably what the dinosaur ate right before it died. Small lizard-like animals may have been a typical meal for all *Coelophysis*.



Dinosaurs Past and Present

We used to think that dinosaurs were extinct. Now we know birds are dinosaurs too. Like some of their extinct dinosaur relatives, birds walk on two legs. They also have feathers and claws. Scientists are still learning about dinosaurs of the past and the dinosaurs flying above us today!

Dinosaurs live among us today. Look at all the different kinds of birds!

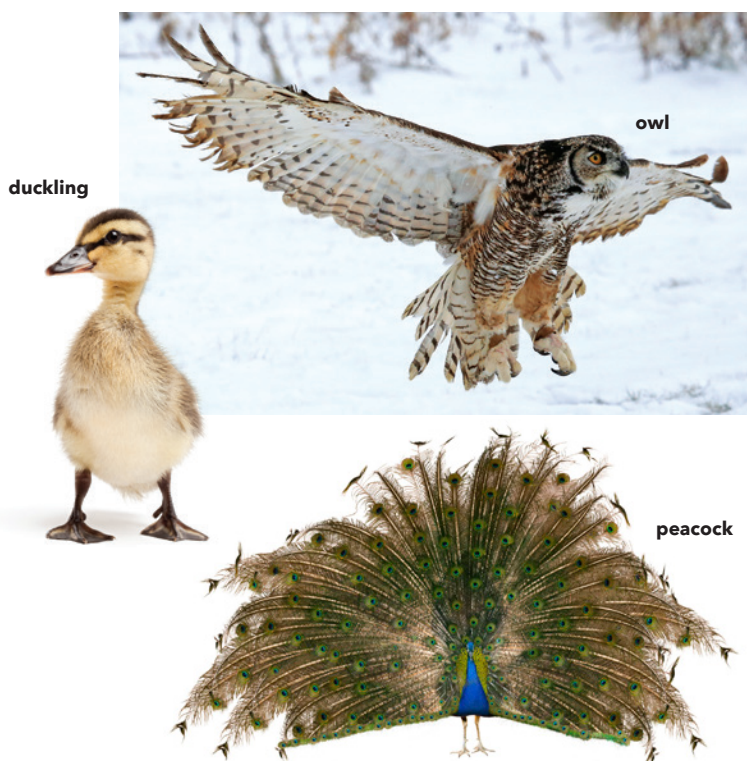


Image Credits

Argentinosaurus, *Tyrannosaurus rex*, *Sinornithosaurus*, and road runner illustrations, © AMNH/Sean Murtha; *Coelophysis* and *Stegosaurus* illustrations, © AMNH/Ed Heck; road runner, © Sandy & Chuck Harris; *Sinornithosaurus* model, © AMNH; cardinal, © Craig O'neal; ostrich, © Davida De La Harpe; eagle, © Bob Harris; *Anchiornis*, *Yuturannus*, and *Coelophysis* illustrations, © Zhao Chuang, Courtesy of Peking Natural Science Organization; owl, Shutterstock; duckling, CSP-Alptraum/AGE Fotostock; peacock, iStockphoto.

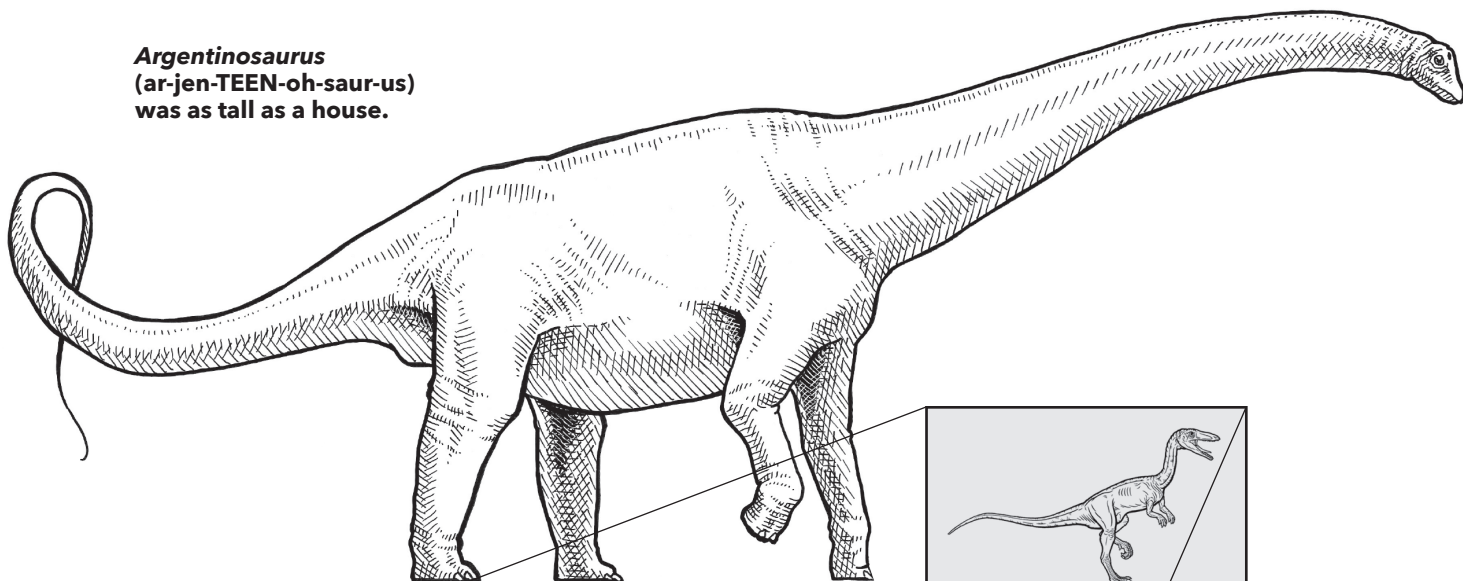
Think Aloud: Scientists are always asking questions and learning new information... This last paragraph describes a major change in the way scientists think about dinosaurs. **Think-Pair-Share:** Describe the change that occurred in the way scientists think about dinosaurs. Listen in and select a pair to share out. What are some examples of the evidence that led scientists think about dinosaurs in this new way? Listen in and select a pair to share out.

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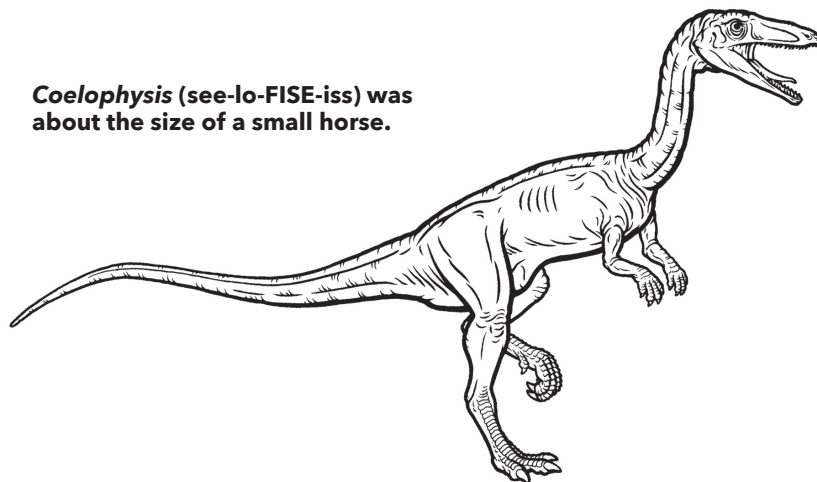
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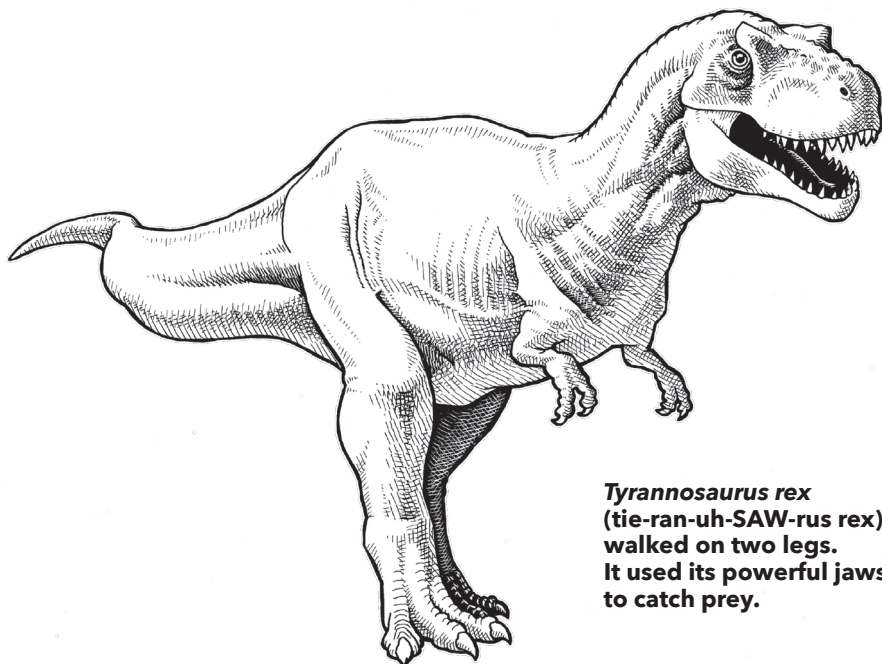
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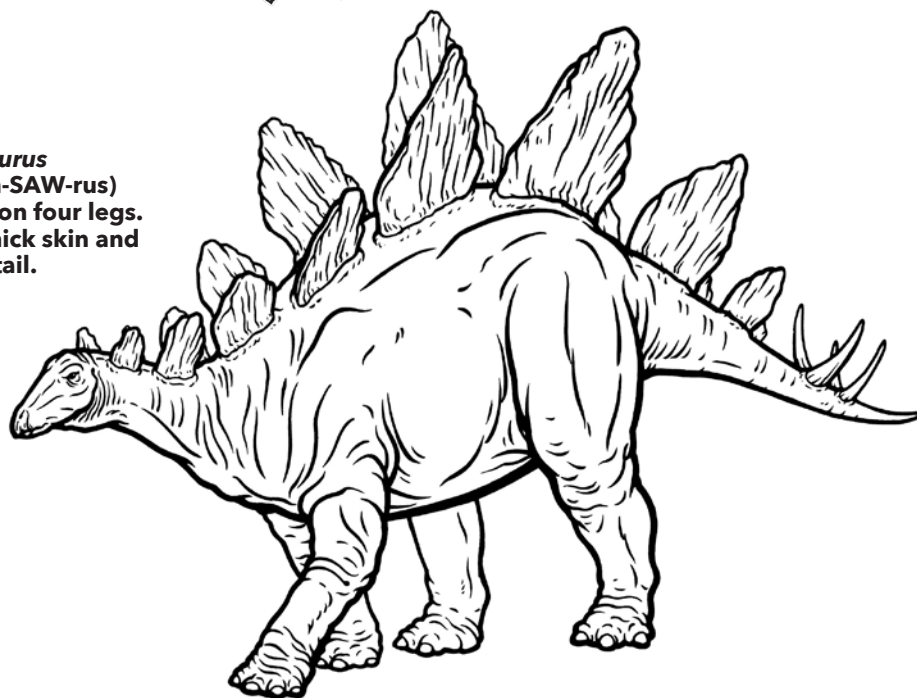


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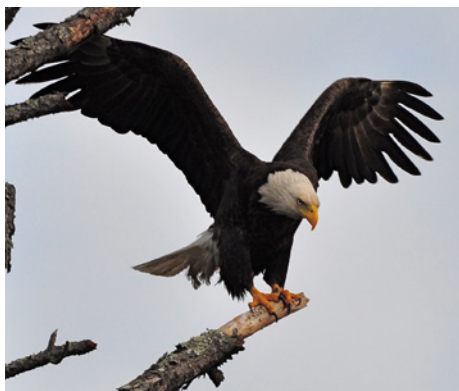
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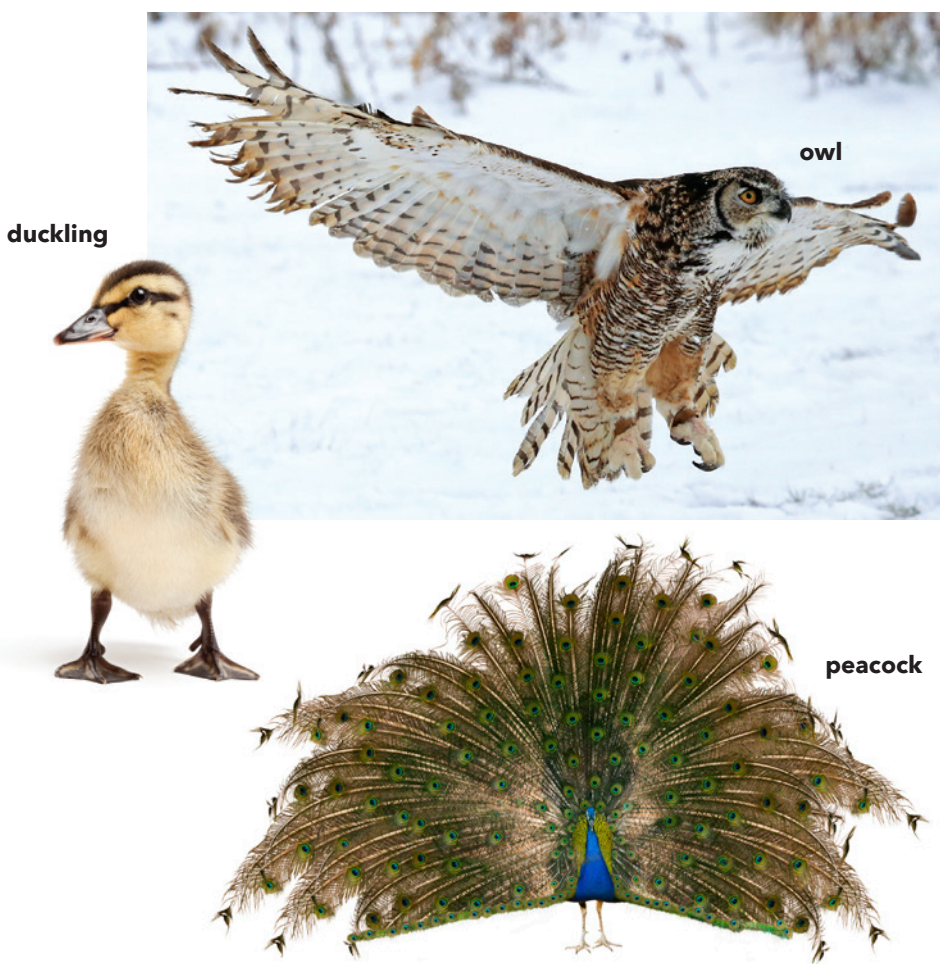


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