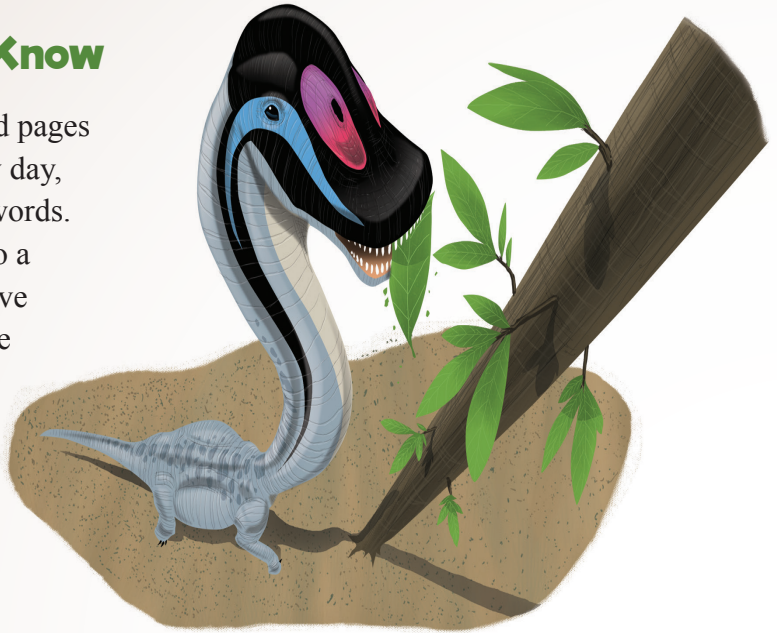# What You Need to Know

Math isn't just solving pages and pages of equations. Math is used every day, but often it is first presented in words. We need to turn those words into a math problem before we can solve it. First, think about how to solve the problem and what the numbers in the word problem mean. Then write the problem as a numerical expression.

One **paleontologist** finds three dinosaur teeth in a **quarry**. Later, she finds six more teeth. Four more paleontologists come to the quarry and do the same thing! They each find three teeth, then six more. How many dinosaur teeth were discovered in total?

How can we write this expression?

5 is the total number of paleontologists.

3 + 6 is the amount of teeth each paleontologist discovers.

$5 \times (3 + 6)$

Remember to solve the parentheses first.

$3 + 6 = 9$

Then, multiply.

$5 \times 9 = 45$

There were 45 teeth discovered in total.

Scientists need to measure a variety of things. Sometimes, they will have to record the data in many different ways.

1 foot = 12 inches

1 yard = 3 feet

A scientist is measuring a bird **fossil** from a giant extinct bird called the *Pelagornis*. She concludes that the wingspan of the bird was 18 feet long. What is the wingspan in inches? What is it in yards?

12 (inches in one foot) × 18 (feet in the wingspan) = 216 inches

18 (feet in the wingspan) ÷ 3 (feet in 1 yard) = 6 yards

Dinosaur Dig

Once the funding is secured, the digging begins! Sometimes, fossils are pushed up to the surface of the ground. Wind and rain clear away the top layer of the ground in a process called **erosion**. This makes fossils easier to find. But other times, paleontologists must be patient. They might have to dig deep into the rock for days before finding a fossil. Once a fossil is found, it is carefully cleaned, weighed, and measured.

This is another example of why paleontologists need to know math. They must be precise when measuring the fossils they find. They want to make sure that the right fossils are assigned to the correct animal.

Plus, they use those measurements to solve other missing pieces of the puzzle. If they measure a leg bone incorrectly, it might throw off how tall they think the animal was.