

**End of an Era** The Mesozoic Era ended about 65 million years ago with a major extinction of land and marine species. Many groups of animals, including the dinosaurs, disappeared suddenly at this time. Many paleontologists hypothesize that a comet or asteroid collided with Earth, causing a huge cloud of dust and smoke to rise into the atmosphere, blocking out the Sun. Without sunlight the plants died, and all the animals that depended on these plants also died. Not everything died, however. All the organisms that you see around you today are descendants of the survivors of the great extinction at the end of the Mesozoic Era.

## Math Skills Activity

### Calculating Extinction Using Percentages

#### Example Problem

At the end of the Cretaceous Period, large numbers of animals became extinct. Scientists still are trying to understand why some types of animals survived while others died. Looking at data about amphibians, reptiles, and mammals that lived during the Cretaceous Period, can you determine what percentage of amphibians survived the extinction?

#### Solution

**1** *This is what you know:*

Animal Extinctions		
Animal Type	Groups Living Before Extinction Event ( $n$ )	Groups Left After Extinction Event ( $t$ )
Amphibians	12	4
Reptiles	63	30
Mammals	24	8

**2** *This is what you need to find out:*  $p$  = the percentage of amphibian groups that survived the Cretaceous extinction

**3** *This is the equation you need to use:*  $p = t / n \times 100$   
Both  $t$  and  $n$  are shown on the above chart.

**4** *Substitute the known values:*  $p = 4 / 12 \times 100 = 33.3\%$

#### Practice Problem

Using the same equation, calculate the percentage of reptiles and then the percentage of mammals that survived. Which type of animal was least affected by the extinction?

For more help, refer to the **Math Skill Handbook**.