

Name: \_\_\_\_\_

## Excerpt from “Scientists Explain How Asteroid Impact Led to Dinosaur Extinction”

by Monique Conrod  
Lexile: 1050 | Word Count 330

Most scientists agree that dinosaurs became extinct after a huge asteroid (space rock) struck the Earth. Now, an international team of researchers thinks they can show exactly why the asteroid caused dinosaurs [to die] out.

Dinosaurs lived on the Earth for more than 160 million years. There were more than 1,000 species of land-based dinosaurs, living all over the world. But the dinosaurs disappeared very suddenly about 66 million years ago, soon after the asteroid hit the Earth. . . .

The researchers wanted to understand better why this happened. . . .

By studying fossils, the researchers discovered that the populations of large herbivores (plant-eating dinosaurs like triceratops, duck-bills and ankylosaurus) had gotten much smaller by the late Cretaceous period. . . .

When the asteroid struck, it caused big changes on the Earth. . . . A huge cloud of dust filled the air, blocking out the sun’s light and warmth and causing many plants to die.

Fewer plants meant there was less food for plant-eating dinosaurs. Because there were already fewer herbivores, the lack of food caused them to die off quickly.

This led to what the researchers call “cascading extinctions.” That means that, as dinosaurs at the bottom of the food chain died out, the dinosaurs that preyed on them also became extinct. The effects were felt all the way up the food chain, to the largest meat-eating dinosaurs.

The asteroid impact wiped out about 80 per cent of the species living on Earth in the late Cretaceous period. Mammals were also affected – especially larger species, or those that had specialized diets. But those that survived began to increase and spread rapidly after dinosaurs became extinct. More species emerged, until eventually mammals became the dominant animals on Earth.

Steve Brussette, a paleontologist at Edinburgh University in Scotland, was one of the researchers involved in the study. He believes that if the asteroid had hit a few million years earlier or later, when the plant-eating dinosaur population was at a normal level, the dinosaurs probably would not have gone extinct. . . .

Date: \_\_\_\_\_

## Excerpt from “What Killed the Dinosaurs”

by Thomas Sumner  
Lexile: 950 | Word Count 272

### The smoking gun

A massive die-off took place around 66 million years ago. It is visible in the layers of rock that mark the boundary between the Cretaceous and Paleogene periods. Fossils that were once abundant no longer appear in rocks after that time. . . .

Everything living on Earth today traces its ancestry to the few lucky survivors.

Over the years, scientists have blamed many suspects for this catastrophic die-out. Some have suggested global plagues struck. Or maybe a supernova fried the planet. In 1980, a team of researchers including father-son duo Luis and Walter Alvarez reported discovering lots of iridium in places worldwide. . . .

Iridium is rare in Earth’s crust, but abundant in asteroids and other space rocks. The finding marked the first hard evidence for a killer-asteroid impact. But without a crater, the hypothesis couldn’t be confirmed.

Piles of impact debris led crater hunters to the Caribbean. Eleven years after the Alvarez paper, scientists at last identified the smoking gun — the hidden crater. . . .

Questions have remained, though, about how the impact might have caused so much death and destruction worldwide.

It now appears that the blast itself wasn’t the big killer in the impact scenario. It was the darkness that followed. . . .

### Inescapable night

For two years, no light reached Earth’s surface. . . . Global temperatures plummeted 16 degrees Celsius (30 degrees Fahrenheit). Arctic ice spread southward. . . .

Similar abrupt temperature drops plus darkened skies killed plants and other species that nourish the rest of the food web, Vellekoop says. “Dim the lights and the entire ecosystem collapses.”

The cold darkness was the impact’s deadliest weapon. Some unfortunate critters, though, died too soon to witness it.

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**Standard RI.6.9**

**I can compare and contrast the claims and evidence presented by two authors.**

**1**

DOK 1

According to the article, “What Killed the Dinosaurs” what was the first hard evidence that supported a killer asteroid impact?

- a. Inescapable night
- b. Iridium was found in places worldwide.
- c. A few lucky survivors were discovered.
- d. Critters died too soon.

**2**

DOK 1

Which evidence from the article, “Scientists Explain How Asteroid Impact Led to Dinosaur Extinction” supports the article’s reasoning for why the dinosaurs became extinct? Mark **all** that apply.

<b>Evidence</b>	<b>Check if the Evidence Fits the Claim</b>
“Dinosaurs lived on the Earth for more than 160 million years.”	
“A huge cloud of dust filled the air, blocking out the sun’s light and warmth and causing many plants to die.”	
“Because there were already fewer herbivores, the lack of food caused them to die off quickly.”	
“Steve Brusanette, a paleontologist at Edinburgh University in Scotland, was one of the researchers involved in the study.”	

3

DOK 2

Read the text excerpt taken from the article, “Scientists Explain How Asteroid Impact Led to Dinosaur Extinction”.

*By studying fossils, the researchers discovered that the populations of large herbivores had gotten much smaller by the late Cretaceous period. . . .*

*When the asteroid struck, it caused big changes on the Earth. . . . A huge cloud of dust filled the air, blocking out the sun’s light and warmth and causing many plants to die.*

*Fewer plants meant there was less food for plant-eating dinosaurs. Because there were already fewer herbivores, the lack of food caused them to die off quickly.*

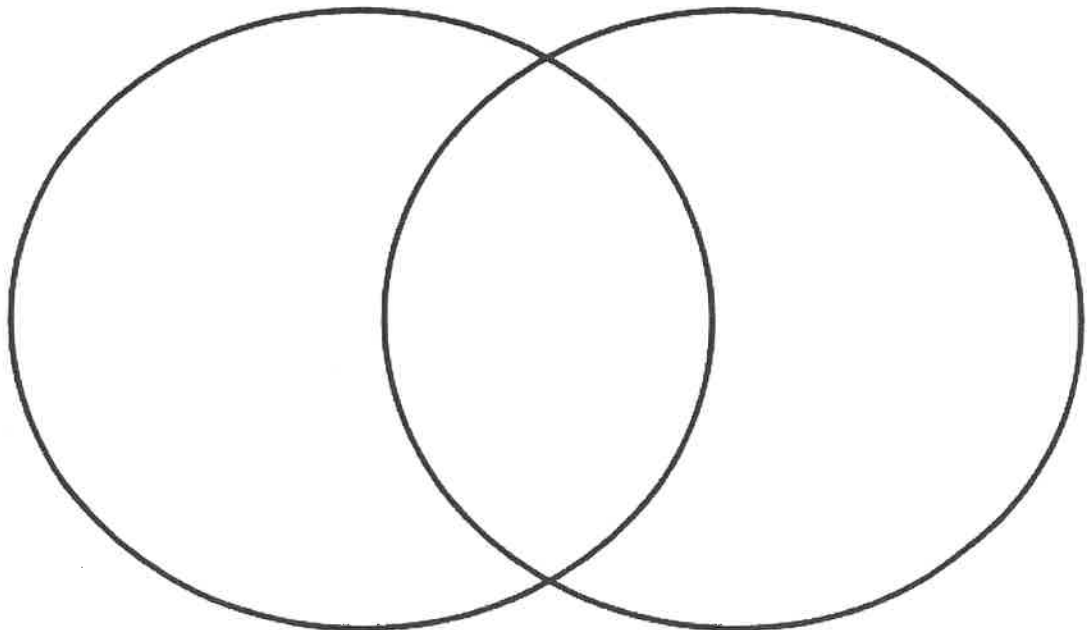
Read the text excerpt taken from the article, “What Killed the Dinosaurs”.

*Questions have remained, though, about how the impact might have caused so much death and destruction worldwide.*

*It now appears that the blast itself wasn’t the big killer in the impact scenario. It was the darkness that followed. . .*

*Similar abrupt temperature drops plus darkened skies killed plants and other species that nourish the rest of the food web, Vellekoop says. “Dim the lights and the entire ecosystem collapses.”*

Compare the similarities and differences in the excerpts. Complete the Venn diagram by placing **one** idea from each excerpt in each section.



4

DOK 2

**Part 1**

What claim is shared by the authors of **both** articles, “Scientists Explain How Asteroid Impact Led to Dinosaur Extinction” and “What Killed the Dinosaurs”? Explain your answer in 1-2 sentences.

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**Part 2**

Which **two** pieces of evidence from the articles **best** support your answer to Part 1?

- a. “Everything living on Earth today traces its ancestry to the few lucky survivors.” (“What Killed the Dinosaurs”)
- b. “The researchers wanted to understand better why this happened.” (“Scientists Explain How Asteroid Impact Led to Dinosaur Extinction”)
- c. “Most scientists agree that dinosaurs became extinct after a huge asteroid (space rock) struck the Earth.” (“Scientists Explain How Asteroid Impact Led to Dinosaur Extinction”)
- d. “. . . the dinosaurs probably would not have gone extinct.” (“What Killed the Dinosaurs”)
- e. “The finding marked the first hard evidence for a killer-asteroid impact.” (“What Killed the Dinosaurs”)



