Asteroids: The Rocks That Could End the World

Bloom's Level: Understand

Standard:

5-ESS1-1 — Earth's Place in the Universe

NCSS.D2.PO.3.6-8 — Impact of Science and Technology

TEKS §112.19(b)(11)(A) — Components of the Solar System

STUDENT EDITION

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The Rocks That Could End the World

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A Cosmic Collision That Changed Everything

Imagine a rock the size of a small city hurtling through space at tens of thousands of miles per hour — then slamming into Earth. That's exactly what happened 66 million years ago. A six-mile-wide asteroid struck what is now the Yucatán Peninsula in Mexico, releasing energy billions of times more powerful than any nuclear bomb. The impact triggered massive fires, earthquakes, and a "nuclear winter" that blocked sunlight for years. The result? The extinction of roughly 75% of all species on Earth, including the non-avian dinosaurs. So here's the real question: Could it happen again?

The answer is yes — but understanding the actual risk, and what scientists are doing about it, is far more interesting than any disaster movie.

What Exactly Is an Asteroid?

Before we panic, let's explain what we're actually dealing with. **Asteroids** are rocky, irregularly shaped objects that orbit the Sun. They are leftover building material from the formation of our solar system about 4.6 billion years ago. Most asteroids live peacefully in the **asteroid belt**, a wide region between Mars and Jupiter.

However, some asteroids have orbits that cross Earth's path around the Sun. Scientists call these **Near-Earth Objects (NEOs)**. Not all NEOs are dangerous — most will never come close enough to matter. But a small number are classified as **Potentially Hazardous Asteroids (PHAs)**, meaning their orbits bring them within a concerning distance of Earth and they are large enough to cause serious damage.

To put the risk in perspective: scientists estimate the chance of a civilization-threatening asteroid strike in any given century is less than 1 in 10,000. That's a very small probability — but it's not zero, which is exactly why planetary defense matters. To help communicate that risk clearly, scientists use the **Torino Scale**, a 0–10 rating system where 0 means no hazard and 10 means a certain catastrophic impact. Most known asteroids score a 0. Think of it as a threat thermometer — a shared language that lets researchers, governments, and the public understand just how seriously to take any given space rock. Currently, no known asteroid scores above a 1, which is reassuring, though scientists continue to scan the skies precisely because the catalog of NEOs is still not complete.

How Scientists Track Space Rocks

NASA and other space agencies around the world operate telescope systems specifically designed to find and monitor NEOs. Programs like **NASA's Center for Near Earth Object Studies (CNEOS)** track thousands of asteroids, calculating their orbits with remarkable precision. Scientists determine an asteroid's orbit by observing its position in the sky over time, then using mathematics to calculate where it has been — and where it is headed.

Think of it like a weather forecast. Meteorologists don't just say "it might rain someday." They track specific storm systems, calculate probabilities, and give you useful information. Planetary scientists do the same thing — they track specific rocks, calculate specific orbits, and give humanity time to respond.

What are some challenges in detecting small asteroids? Why might a rock be difficult to spot even with powerful telescopes?

NASA's DART Mission: Humanity Strikes Back

Here's where the science gets genuinely exciting. In September 2022, NASA's **Double Asteroid Redirection Test (DART)** spacecraft deliberately crashed into a small asteroid called **Dimorphos** — and it worked.

Dimorphos orbits a larger asteroid called Didymos. Before the impact, Dimorphos completed one orbit every 11 hours and 55 minutes. After DART slammed into it at roughly 14,000 miles per hour, that orbit shortened by **32 minutes**. Scientists had predicted a change of about 10 minutes. The actual result was more than three times better than expected.

This is enormously important. DART proved that humanity has the ability to **deflect** an asteroid — to nudge it off a collision course — if we detect it early enough. The key phrase is "early enough." A small push applied years in advance can move an asteroid's path by thousands of miles by the time it reaches Earth.

Why is early detection so critical? What might happen if scientists only discovered a dangerous asteroid six months before impact instead of twenty years before?

Real Science vs. Movie Science

Hollywood loves to show astronauts drilling into asteroids or blowing them up at the last second. Real planetary defense looks nothing like that. It's patient, mathematical, and requires decades of advance warning. Blowing up an asteroid would simply create many smaller dangerous fragments — not a solution.

The real heroes of planetary defense are astronomers staring at telescope data, mathematicians calculating orbital paths, and engineers designing spacecraft like DART.

Summary: Knowledge Is Our Best Defense

The asteroid that ended the dinosaurs succeeded because no one saw it coming. Today, humanity has telescopes, tracking systems, and proven deflection technology. We understand our solar system's components — the planets, moons, and countless smaller bodies — better than any generation before us. The threat is real, the odds are low, and for the first time in Earth's history, one species has the tools to actually do something about it. That species is us.

Lesson Objective

In this lesson, you will explore how asteroids and other objects in our solar system interact with Earth, and explain why tracking Near-Earth Objects matters for our planet's safety. You will use evidence from real NASA missions, like the DART mission, to describe how scientists understand and respond to potential asteroid threats. By the end, you should be able to explain in your own words how Earth fits into the larger solar system and why that position has real consequences.

NASA's DART spacecraft successfully changed the orbit of the asteroid Dimorphos in 2022, proving that humanity can deflect a space rock if detected early enough.

Standard: 5-ESS1-1 — Earth's Place in the Universe; NCSS.D2.PO.3.6-8 — Impact of Science and Technology; TEKS §112.19(b)(11)(A) — Components of the Solar System

Bloom's Level: Understand

Bloom's Goal: Students will demonstrate understanding by explaining how asteroids and other solar system components interact with Earth and describing how scientific knowledge and technology are used to monitor and respond to those interactions.

Explanation: At the Understand level, students move beyond simply recalling facts and begin to make sense of ideas in their own words. This lesson asks students to interpret information about Earth's place in the solar system and explain the significance of asteroid tracking and deflection — showing they truly grasp the concepts, not just the vocabulary.

Application Questions

Read each question carefully, think about what you learned in the article, and write a complete response in your own words.

1. Explain what makes an asteroid a 'Potentially Hazardous Asteroid (PHA).' What two conditions must be true for a space rock to earn that classification?

Think about: Think about how the article describes the difference between most asteroids and the ones scientists are most concerned about. What makes a rock go from harmless to potentially dangerous?

2. The article compares planetary scientists tracking asteroids to meteorologists forecasting weather. In your own words, explain what this comparison means and why it is a useful way to think about asteroid monitoring.

Think about: Think about what both a weather forecaster and a planetary scientist are actually doing with their data. What is the goal of tracking something over time?

3. Using evidence from the DART mission, explain why early detection of a dangerous asteroid is so important. What did the mission prove, and why would finding an asteroid late make that proof less useful?

Think about: Think about what DART actually did to Dimorphos's orbit and how a small change in direction works differently depending on how far away the asteroid still is from Earth.

Data Table & Analysis

Study the data table below, which compares key facts about notable Near-Earth Objects (NEOs) and related planetary defense information from the lesson. Then answer the three analysis questions using evidence from the table.

Experiment: Scientists at NASA's Center for Near Earth Object Studies (CNEOS) track thousands of asteroids and classify them by size, orbital characteristics, and potential hazard level. The data below summarizes key asteroid and impact facts discussed in the lesson, including information from the DART mission and historical impact events.

Object / Event (N/A)	Size / Diameter (miles)	Speed at Impact or Encounter (miles per hour)	Torino Scale Score (0–10)	Key Outcome or Status (N/A)
Yucatán Peninsula Impactor (66 million years ago)	6	~45,000	10	Caused extinction of ~75% of all species, including non-avian dinosaurs
Dimorphos (before DART impact)	0.1	N/A	0	Orbited Didymos every 11 hours 55 minutes; no hazard to Earth
Dimorphos (after DART impact)	0.1	N/A	0	Orbit shortened by 32 minutes; deflection exceeded predictions by 3x
DART Spacecraft	N/A	14,000	N/A	Deliberately crashed into Dimorphos in

Object / Event (N/A)	Size / Diameter (miles)	Speed at Impact or Encounter (miles per hour)	Torino Scale Score (0–10)	Key Outcome or Status (N/A)
				September 2022; mission successful
Typical Known Asteroid (NEO)	varies	varies	0	Most score 0 on Torino Scale; catalog of NEOs still not complete
Potentially Hazardous Asteroid (PHA)	varies	varies	1	Orbits bring it within concerning distance of Earth; large enough to cause serious damage
Civilization-Threatening Impact (probability)	N/A	N/A	N/A	Less than 1 in 10,000 chance per century
Didymos (parent asteroid of Dimorphos)	0.48	N/A	0	Larger asteroid orbited by Dimorphos; located in asteroid belt region near Earth

1. Compare the Torino Scale scores in the table. What does a score of 0 versus a score of 10 tell you about an asteroid's danger level, and what does the data suggest about the current threat posed by known asteroids?

2. Look at the data rows for Dimorphos before and after the DART impact. How did the DART mission change Dimorphos's orbit, and why is this change considered a major success for planetary defense?

3. Using the data from the Yucatán Peninsula impactor and the probability row, explain why scientists continue to track asteroids even though the chance of a civilization-threatening impact in any given century is less than 1 in 10,000.

Hypothesis Builder

Read the context below carefully. Then complete each component to build a scientific hypothesis about asteroid deflection. Use evidence and reasoning from what you have learned about Near-Earth Objects and NASA's DART mission.

NASA's DART spacecraft deliberately crashed into a small asteroid called Dimorphos in September 2022. Scientists measured how much the asteroid's orbital period changed after the impact. Before the collision, Dimorphos completed one orbit around Didymos every 11 hours and 55 minutes. Scientists wanted to know whether the speed of a spacecraft impact affects how much an asteroid's orbit changes.

Independent Variable

What is the one factor that scientists would intentionally change or test in this experiment? Think about what could be adjusted when designing a spacecraft impact on an asteroid.

Dependent Variable

What is the outcome that scientists would measure or observe as a result of changing the independent variable? What did scientists actually record after DART's impact on Dimorphos?

If

Write the 'If' part of your hypothesis by stating what you will change or test. Begin your sentence with the word 'If...'

Then

Write the 'Then' part of your hypothesis by predicting what you expect to happen to the dependent variable. Begin your sentence with the word 'Then...'

Because

Explain the scientific reasoning behind your prediction. Why would changing the independent variable produce the result you predicted? Use what you know about asteroid deflection and the DART mission.

Claim-Evidence-Reasoning (CER)

Read the phenomenon below carefully. Then complete each component of the Claim-Evidence-Reasoning (CER) framework by responding to the guiding prompt. Your responses should demonstrate your understanding of how scientists track and respond to asteroid threats.

Phenomenon: In September 2022, NASA's DART spacecraft deliberately crashed into a small asteroid called Dimorphos, which orbits a larger asteroid called Didymos. Before the impact, Dimorphos completed one orbit every 11 hours and 55 minutes. After the collision, scientists measured that the orbital period had shortened by 32 minutes — more than three times the predicted change. This result was celebrated as a major milestone in planetary defense.

Claim

Based on the phenomenon, make a claim: What does the DART mission demonstrate about humanity's ability to protect Earth from asteroid threats? Write one clear statement that answers this question.

Evidence

Support your claim with specific evidence from the article. Include at least two pieces of data or factual details — such as measurements, names of missions or programs, or descriptions of how scientists track asteroids — that directly support your claim.

Reasoning

Explain how your evidence connects to your claim. Why does the DART result matter for Earth's safety? Use what you know about asteroid orbits, early detection, and the role of science and technology to explain your thinking.

Independent / Dependent Variable Analysis

Read the experimental scenario below carefully. Then, for each component listed, write a response that identifies and explains that part of the experiment. Use complete sentences and specific details from the scenario.

Scenario: A team of planetary scientists wants to test whether the speed of a spacecraft at impact affects how much an asteroid's orbital period changes. They design a series of computer simulations in which identical spacecraft are launched at the same asteroid model, but each simulation uses a different impact speed: 5,000 mph, 10,000 mph, 15,000 mph, and 20,000 mph. In every simulation, the asteroid's size, mass, and composition are kept exactly the same, and each spacecraft has the same mass. After each simulated impact, scientists measure how many minutes the asteroid's orbital period changes compared to its original 12-hour orbit. The scientists record their results and compare them across all four simulations.

Independent Variable

What is the one factor the scientists are deliberately changing across the four simulations? Explain why this factor qualifies as the independent variable.

Dependent Variable

What outcome are the scientists measuring and recording after each simulation? Explain how this outcome is connected to the independent variable.

Control Variables

What factors are kept the same in every simulation? Explain why it is important to hold these factors constant throughout the experiment.

Operationalized Definition

How is the dependent variable measured in a specific, observable way? Write an operationalized definition that makes the outcome of this experiment clear and quantifiable.

Primary Source Analysis (DBQ)

Read the following primary source excerpt carefully. Then answer the four questions below using evidence from the source and what you have learned about asteroids, planetary defense, and Earth's place in the solar system. For each question, write in complete sentences and support your answer with specific details.

Statement Before the U.S. House of Representatives Science Committee on Planetary Defense [Congressional Testimony]

The threat posed by near-Earth objects is real, and it is one that we can actually do something about. Unlike earthquakes, hurricanes, or volcanic eruptions, an asteroid impact is the only natural disaster that we have the technology to prevent entirely — provided we have sufficient warning time. Our survey programs have identified thousands of near-Earth objects, yet our catalog remains incomplete. Smaller objects, those capable of destroying a city or region, are particularly difficult to detect. We must invest in next-generation survey telescopes and develop deflection technologies before we need them. The lesson of the geological record is clear: large impacts have happened before, and they will happen again. The only question is whether humanity will be prepared. I urge this committee to treat planetary defense not as science fiction, but as serious national and international policy.

— Adapted from testimony by a NASA planetary defense official before the U.S. House Committee on Science, Space, and Technology, April 2019

1. Who is speaking in this document, and why does that matter? What is the speaker's purpose in delivering this testimony, and how might their role at NASA affect the point of view expressed? [Sourcing]

2. This testimony was delivered in 2019, several years before NASA's DART mission successfully deflected an asteroid in 2022. How does knowing this historical context help you understand why the speaker is urging investment in deflection technologies? What was the state of planetary defense at the time this was written? **[Context]**

3. The speaker states that an asteroid impact is 'the only natural disaster that we have the technology to prevent entirely.' What evidence from the source supports this claim? What condition does the speaker say is necessary for prevention to be possible? **[Close Reading]**

4. The speaker warns that the catalog of near-Earth objects is incomplete and that smaller asteroids are especially hard to detect. How does this claim connect to what you read in the article about NASA's tracking programs and the importance of early detection? Do the two sources agree or disagree on this point? **[Corroboration]**

Multiple Choice

Choose the best answer for each question based on what you have learned about asteroids, near-Earth objects, and planetary defense.

1. What are asteroids made of, and where did they come from?

A. They are icy bodies that formed from comets breaking apart near Jupiter.

B. They are rocky objects left over from the formation of the solar system about 4.6 billion years ago.

C. They are chunks of planets that exploded during ancient collisions with the Sun.

D. They are dense metal objects that drifted into our solar system from other star systems.

2. Where do most asteroids in our solar system orbit?

A. In a belt between Earth and Mars

B. In a ring around the Sun just inside Mercury's orbit

C. In the asteroid belt, a wide region between Mars and Jupiter

D. In the outer solar system beyond Neptune

3. What makes an asteroid a Potentially Hazardous Asteroid (PHA)?

A. It is made of iron and nickel, which makes it harder to deflect.

B. Its orbit brings it within a concerning distance of Earth and it is large enough to cause serious damage.

C. It travels faster than the speed of light and cannot be tracked by telescopes.

D. It has already passed by Earth more than three times in recorded history.

4. What is the purpose of the Torino Scale?

A. It measures the size and mass of asteroids discovered by NASA telescopes.

B. It ranks the speed at which an asteroid is traveling toward Earth.

C. It is a 0–10 rating system that communicates the hazard level of a near-Earth object to researchers, governments, and the public.

D. It calculates how many years it will take for an asteroid to reach Earth's atmosphere.

5. How do scientists determine the orbit of an asteroid?

A. They send probes to land on the asteroid and measure its speed directly.

B. They observe the asteroid's position in the sky over time and use mathematics to calculate its past and future path.

C. They analyze the color of the asteroid's light to determine which direction it is moving.

D. They wait for the asteroid to pass Earth and then measure how much gravity it exerted.

6. What was the main goal of NASA's DART mission?

A. To collect rock samples from an asteroid and return them to Earth for study

B. To destroy a dangerous asteroid before it could reach Earth

C. To test whether a spacecraft could deliberately change an asteroid's orbit by crashing into it

D. To place a tracking device on an asteroid so scientists could monitor it more closely

7. What result did the DART spacecraft achieve when it struck the asteroid Dimorphos?

A. It broke Dimorphos into two smaller pieces that drifted away from Earth.

B. It shortened Dimorphos's orbital period by 32 minutes, more than three times the predicted change.

C. It slowed Dimorphos down enough to cause it to fall into the Sun.

D. It pushed Dimorphos into a new orbit around Earth instead of around Didymos.

8. Why is early detection of a dangerous asteroid so important for planetary defense?

A. Early detection gives scientists time to evacuate the side of Earth facing the asteroid.

B. A small change in an asteroid's path applied years in advance can move it thousands of miles away from Earth by the time it arrives.

C. Early detection allows scientists to increase Earth's gravity to pull the asteroid off course.

D. Asteroids slow down over time, so detecting them early means they will be easier to destroy.

9. Why do real planetary defense scientists avoid trying to blow up a dangerous asteroid?

A. Explosions in space are impossible because there is no oxygen to fuel them.

B. Blowing up an asteroid would simply create many smaller dangerous fragments, which is not a solution.

C. The cost of building a large enough bomb would be too expensive for any space agency.

D. Asteroids are too far away for any spacecraft carrying explosives to reach them in time.

10. According to the article, what is the estimated chance of a civilization-threatening asteroid strike occurring in any given century?

- **A.** Less than 1 in 100
- **B.** Less than 1 in 1,000
- **C.** Less than 1 in 10,000
- **D.** Less than 1 in 1,000,000

True / False

Read each statement carefully. Write T if the statement is true or F if the statement is false.

1. Asteroids are rocky objects that orbit the Sun and are leftover material from the formation of our solar system about 4.6 billion years ago.

○ True ○ False

2. Most asteroids are found in the asteroid belt, which is located between Earth and Mars.

○ True ○ False

3. Near-Earth Objects (NEOs) are asteroids whose orbits cross Earth's path around the Sun.

○ True ○ False

4. The Torino Scale is a 0–10 rating system used to communicate the hazard level of a near-Earth asteroid, where 10 represents a certain catastrophic impact.

○ True ○ False

5. Currently, several known asteroids score above a 5 on the Torino Scale, meaning they pose a serious threat to Earth.

○ True ○ False

6. NASA's DART mission proved that a spacecraft can change an asteroid's orbit by deliberately crashing into it.

○ True ○ False

7. After the DART spacecraft struck Dimorphos, the asteroid's orbital period around Didymos shortened by 32 minutes.

○ True ○ False

8. Blowing up a dangerous asteroid with explosives is the method planetary scientists recommend as the safest and most effective form of planetary defense.

○ True ○ False

9. Early detection of a potentially hazardous asteroid is critical because a small change in its path applied years in advance can move it thousands of miles away from Earth by the time it arrives.

○ True ○ False

10. The asteroid impact 66 million years ago contributed to the extinction of roughly 75% of all species on Earth, including the non-avian dinosaurs.

○ True ○ False

Vocabulary

Review the vocabulary terms below. Each term comes directly from the lesson article. Read each definition carefully and be prepared to use these terms when discussing Earth's place in the solar system and planetary defense.

Asteroid

A rocky, irregularly shaped object that orbits the Sun and is leftover building material from the formation of our solar system about 4.6 billion years ago.
Explain in your own words:

Asteroid Belt

A wide region of space between Mars and Jupiter where most asteroids orbit peacefully around the Sun.
Explain in your own words:

Near-Earth Objects (NEOs)

Asteroids whose orbits cross Earth's path around the Sun, making them objects that scientists closely monitor.
Explain in your own words:

Potentially Hazardous Asteroids (PHAs)

A category of near-Earth asteroids whose orbits bring them dangerously close to Earth and that are large enough to cause serious damage if they were to strike.

Explain in your own words:

Torino Scale

A 0–10 rating system used by scientists to communicate the hazard level of a near-Earth asteroid, where 0 means no threat and 10 means a certain catastrophic impact.

Explain in your own words:

Orbit

The curved path that an object, such as an asteroid or planet, follows as it travels around a larger body like the Sun.

Explain in your own words:

NASA's Center for Near Earth Object Studies (CNEOS)

A NASA program that uses telescope systems to track thousands of asteroids and calculate their orbits to determine if any pose a threat to Earth.

Explain in your own words:

Double Asteroid Redirection Test (DART)

A NASA spacecraft mission that deliberately crashed into the asteroid Dimorphos in 2022 to prove that humanity can change an asteroid's orbit.

Explain in your own words:

Deflect

To nudge an asteroid off its original path so that it no longer follows a course that would bring it into collision with Earth.

Explain in your own words:

Extinction

The complete disappearance of a species from Earth, such as the extinction of non-avian dinosaurs caused by a massive asteroid impact 66 million years ago.

Explain in your own words:

Exit Ticket

Answer both questions in 1–2 sentences each using what you learned from the article. Be specific and use science vocabulary where you can.

1. What is a Near-Earth Object (NEO), and why do scientists pay special attention to the ones called Potentially Hazardous Asteroids (PHAs)?

2. What did NASA's DART mission prove about humanity's ability to protect Earth from asteroids?

Most asteroids orbit harmlessly in the asteroid belt between Mars and Jupiter, but some have paths that cross Earth's orbit, making them Near-Earth Objects.

NASA's DART spacecraft successfully changed the orbit of the asteroid Dimorphos in 2022, proving that humanity can deflect a space rock if detected early enough.

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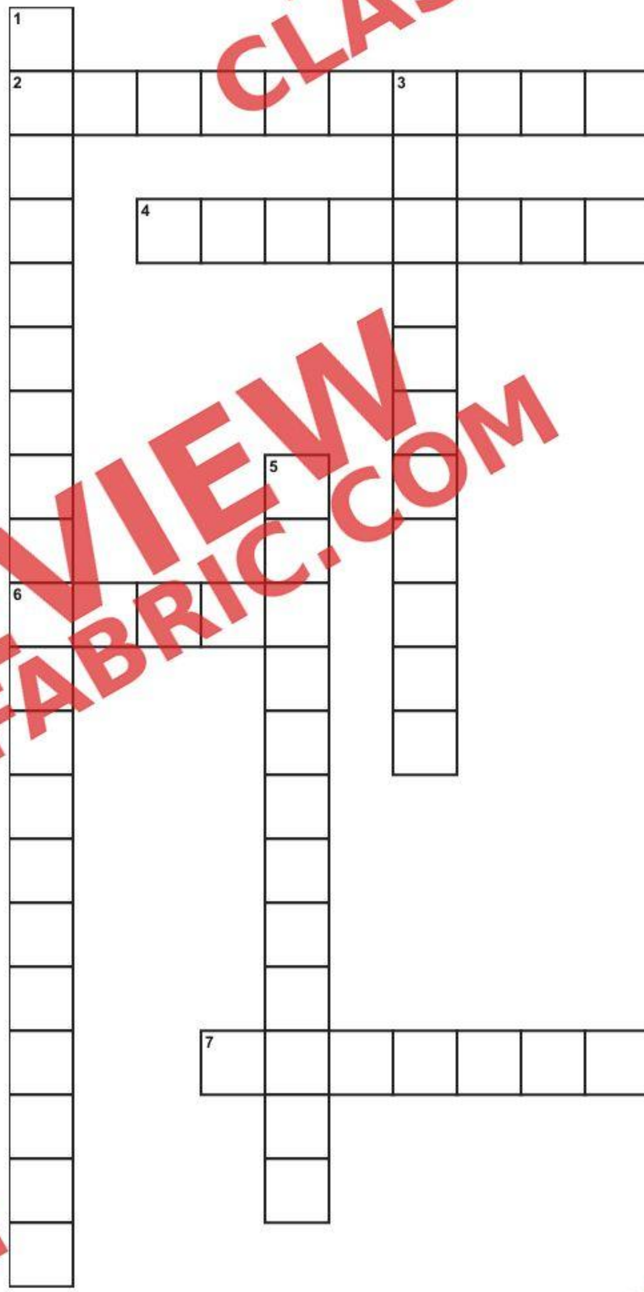
CROSSWORD PUZZLE



Asteroids: The Rocks That Could End the World

CROSSWORD PUZZLE

ACROSS

2. The complete disappearance of a species from Earth, such as the ________ of non-avian dinosaurs caused by a massive asteroid impact 66 million years ago.
4. A rocky, irregularly shaped object that orbits the Sun and is leftover building material from the formation of our solar system about 4.6 billion years ago.
6. The curved path that an object, such as an asteroid or planet, follows as it travels around a larger body like the Sun.
7. To nudge an asteroid off its original path so that it no longer follows a course that would bring it into collision with Earth.

DOWN

1. Asteroids whose orbits cross Earth's path around the Sun, making them objects that scientists closely monitor.
3. A 0–10 rating system used by scientists to communicate the hazard level of a near-Earth asteroid, where 0 means no threat and 10 means a certain catastrophic impact.
5. A wide region of space between Mars and Jupiter where most asteroids orbit peacefully around the Sun.

Asteroids: The Rocks That Could End the World

WORD SEARCH

A	N	E	A	R	E	A	R	T	H	O	B	J	E	C	T	S	N	E	O	S	H	U	H
S	I	W	M	O	G	R	C	X	R	J	T	E	R	M	W	R	J	K	M	M	Q	H	X
T	E	L	D	T	B	Z	I	M	F	G	G	P	I	Y	P	J	K	G	T	I	N	U	U
E	F	A	H	W	K	Y	E	T	Q	L	Q	A	B	P	J	O	M	X	L	F	E	G	Z
R	G	Z	B	B	R	B	I	V	J	B	B	Y	W	C	V	I	A	A	H	X	Q	E	W
O	L	R	G	C	M	D	G	G	C	U	J	O	O	K	X	K	U	Y	E	F	E	X	M
I	Z	P	C	I	M	V	Z	E	I	J	M	E	Q	Z	X	W	R	C	W	A	M	T	N
D	K	H	B	B	D	G	H	O	N	X	Z	J	I	X	G	W	J	R	T	R	M	I	I
T	N	Y	R	S	I	A	F	S	Q	Q	Z	X	I	G	F	R	Y	U	F	Q	E	N	V
E	F	R	P	K	U	M	K	V	I	X	L	U	R	X	Z	O	S	E	C	V	S	C	S
E	C	Z	L	K	F	H	R	R	V	A	N	X	G	U	Y	B	W	N	V	B	P	T	C
Q	T	X	L	O	U	K	F	D	E	F	L	E	C	T	R	V	U	L	T	S	K	I	A
U	O	O	X	U	L	R	J	X	K	B	A	R	P	F	Q	A	E	Z	H	B	L	O	J
T	R	X	H	Q	A	N	P	V	P	W	M	M	Q	Q	T	R	T	X	G	Q	G	N	P
Y	I	B	R	Q	N	D	F	G	C	V	W	H	P	M	F	I	A	O	N	T	F	Z	P
Z	N	Y	G	C	K	C	U	Y	B	H	N	B	V	Z	E	D	X	Y	N	Y	E	Q	O
C	O	E	F	G	A	D	Q	T	P	Z	I	D	T	X	Z	E	B	W	P	E	X	I	U
W	S	A	Y	E	T	K	A	B	K	S	E	E	E	W	M	F	Z	G	N	J	S	Q	E
C	C	X	I	A	N	L	W	R	O	J	K	Y	Z	M	L	D	X	Y	X	X	S	L	S
R	A	I	X	P	K	F	M	J	R	I	A	P	A	G	I	M	X	L	Y	M	W	B	U
L	L	O	H	L	L	R	E	G	B	A	Z	Z	U	H	Q	Z	A	J	U	U	O	E	T
S	E	V	I	M	H	H	Y	H	I	J	D	P	K	L	F	N	X	F	A	M	Y	U	P
F	V	E	T	X	T	B	Q	U	T	Q	F	R	H	H	Y	A	P	B	C	V	B	K	W
G	R	G	X	D	K	X	L	I	C	S	D	A	S	T	E	R	O	I	D	B	E	L	T

FIND THESE WORDS

Near-Earth Objects (NEOs)
Asteroid Belt
Torino Scale
Extinction
Asteroid
Deflect
Orbit