

Name _____

Period _____

Video – The Universe: Deadly Comets and Asteroids

1. The Earth Impact Effects Program that Dr. Jay Melosh is demonstrating in the video can be found here: <http://www.lpl.arizona.edu/impacteffects/>
2. Some asteroids are differentiated, meaning they have a _____ core.
3. A meteorite is _____.
4. Explain why it is possible that the Oort Cloud and the comets within it may have formed in the inner solar system.
5. When the Giotto probe flew by Halley's Comet in 1986, it confirmed that Halley's Comet contained tons of _____.
6. New research seems to indicate that comets did not provide Earth with its water. What evidence has lead scientists to this conclusion?
7. Why are carbonaceous chondrites from the outer asteroid belt now believed to be the objects responsible for bringing water to Earth?
8. What is a "main belt comet" and why are they considered important?

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9. What is significant about the discovery of over 70 amino acids in meteorites?

10. _____ tons of microscopic comet/asteroid dust falls on Earth each day.

11. What did the results of the Stardust Mission tell us about the formation of comets?

12. What did the results of the Deep Impact Mission tell us about comets?

13. Researchers have drilled down into the rock of the Chicxulub crater. Explain how the results of their drilling have helped confirm the life-ending scenario from 65 million years ago.

14. Which travels faster? An asteroid from the inner solar system, or a comet from the outer solar system?

15. Why are scientists confident that the Tunguska event from 1908 was an airburst?

16. Name some minerals, compounds, or elements that we can potentially mine from asteroids.