

## Chapter 27.4 Comets, Meteoroids Quiz Study Guide: Geology 1P, Mr. Traeger

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

Period: \_\_\_\_\_

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

Section	Major Questions to be asked and/or tasked to be measured	Where do I find the information and/or where did we learn this?
27.4	<p><b>Solar System Debris</b></p> <ul style="list-style-type: none"> <li>▪ What are the basics of how impact craters form?</li> <li>▪ What is the difference between simple and complex craters?</li> <li>▪ How does changing the following parameters change the type and size of craters that are made? Asteroid speed, asteroid mass (size), asteroid impact angle, and asteroid composition (rock, ice, iron)?</li> <li>▪ Why do impact craters disappear over time on Earth, but they stay on the Moon?</li> <li>▪ How does the formula Kinetic Energy = <math>\frac{1}{2} * \text{mass} * \text{velocity}^2</math> explain the change in energy when you double the mass of an asteroid and when you double the velocity of an asteroid?</li> <li>▪ How do you use Area = <math>\pi * \text{radius}^2</math> to calculate the comparison of likelihood of asteroid impact?</li> <li>▪ What are comets? What are they made of? How and where do they orbit the sun?</li> <li>▪ What are the parts of a comet? (i.e.) nucleus, coma, ion tail, and dust tail</li> <li>▪ What are asteroids? What are they made of? How and where do they orbit the sun?</li> <li>▪ What are the differences among meteors, meteoroids, and meteorites?</li> <li>▪ What are some major ideas for how humanity might stave off annihilation from an incoming asteroid? In other words, how would we deflect an asteroid once we have determined that it is a threat? How would we convince world governments that a combined effort among all nations is needed to develop a worldwide asteroid defense system?</li> <li>▪ What evidence was found near Chicxulub, Mexico that determined that the extinction of the dinosaurs was likely caused by the impact of an asteroid 6 miles wide? <i>Hint:</i> Think larger crater and Iridium.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Deadly Comets and Meteors</i> video questions</li> <li>▪ ES2506 <i>What if the Earth and Moon were hit by Twin Asteroids?</i> Internet Investigation.</li> <li>▪ Comet making lab</li> <li>▪ Starry Night activities D1 and D2 and D3 on Asteroids and Comets</li> <li>▪ Asteroid and Comet fact sheets on class schedule part of class website.</li> <li>▪ Bill Nye asteroid deflection video on class schedule portion of class website.</li> <li>▪ Section 28.4 homework and links</li> </ul>