ES2506: What if Earth and the Moon Were Hit by Twin Asteroids? Question #11

Earth Science/Geology Mr. Traeger

Name: _____ Period: _____ Date: _____

Instructions

This sheet goes along with question #11 on your Internet investigation sheet. Fill in the following charts based upon the idea of controls and variables. You will vary one parameter while controlling the others. Attach this sheet to your Internet investigation sheet when you are finished.

				Earth			Moon		
Speed (km/sec)	**Impact Angle (degrees)**	**Diameter (meters)**	**Composition (iron, rock, or ice)**	**Energy (Mega Tons)**	**Crater Diameter (km)**	**Crater Depth (km)**	**Energy (Mega Tons)**	**Crater Diameter (km)**	**Crater Depth (km)**
Keep Impact Angle, Diameter, and Composition Constant, Vary Speed (Do 3 different trials)									
	90	500	Iron						
	90	500	Iron						
	90	500	Iron						
Keep Speed, Diameter, and Composition Constant, Vary Impact Angle (Do 3 different trials)									
50		500	Iron						
50		500	Iron						
50		500	Iron						
Keep Speed, Impact Angle, and Composition Constant, Vary Diameter (Do 3 different trials)									
50	90		Iron						
50	90		Iron						
50	90		Iron						
Keep Speed, Impact Angle, and Diameter Constant, Vary Composition (Do 3 different trials)									
50	90	500	**Iron**						
50	90	500	**Rock**						
50	90	500	**Ice**						

1. Analyze your data and then fill in the following chart.

How does increasing each of the following affect the size of the crater?			
Effects of Increasing Speed?	Effects of Increasing Impact Angle?	Effects of Increasing Diameter?	Effects of Increasing Composition Density?

2. Should we be concerned about asteroid impacts with the Earth? Will they ever happen again?