INVESTIGATION QUESTION
How do impact velocity and projectile size affect crater size and debris distribution?

HYPOTHESIS

Hint: try writing it as "If _____, then _____, because _____."

MATERIALS

shallow tray, flour or sand, rocks or marbles of different sizes, ruler

Crater Data Table

Trial	Projectile Size	Drop Height	Crater Diameter	Debris Distance
1				
2				
3				
4				
5				

ANALYSIS

What relationship did you find between drop height and crater size? Between projectile size and crater size?

CONCLUSION

The Chicxulub asteroid was roughly 10 km across and struck Earth at tens of km per second. Based on your experiment, describe the scale of destruction you would expect.

CONNECT IT

Luis and Walter Alvarez proposed the asteroid theory in 1980 using iridium as their evidence. Why is iridium significant? Why did many scientists initially resist their theory?

THINK FURTHER

Some animals survived the K-Pg extinction while others did not. Based on what you know about what happened after the impact (darkness, cold, food collapse), design the profile of a survivor. What traits would help?

ADDITIONAL NOTES