

## Comets, Meteorites and Craters

Our solar system not only contains the planets, but also comets and meteors and asteroids. These are rocky and icy bodies left over from the formation of the solar system. Sometimes these can hit the planets, causing craters – we see these craters on Earth, as well as on the Moon and other planets.

### Instructions

Each team has a 'planet' tray, filled with layers of 'soil', and a selection of different objects to act as meteorites. Your challenge is to investigate what type of craters different meteorites make.

Measure the diameter (the width) of your meteorite, and the height from which you drop it onto your 'planet'. You should then examine the crater it made, and measure the crater's diameter and depth. Does the size of the meteorite affect the size of the crater? Does the height it falls, or the material it's made from, affect the crater? Record your observations on the table on this worksheet. What things should you do to make sure this is a fair test?

### Results

Draw a diagram of the first crater you make below.



Record the results of your experiment in the table below.

Meteorite diameter (cm)	Drop height (cm)	Meteorite material	Crater diameter (cm)	Crater depth (cm)	Notes about crater

What conclusions can you draw from your experiment? What would be good next steps to investigate the formation of craters?

---

---

---

---

---

---

---

---

---

---

**Can you use what you've learned to create your own piece of artwork by dropping 'meteorites' into your 'soil'? Think about what colours of 'soil' you want – and in what order – and how many 'meteorites' you want to drop!**