

Deep Space Math

Activity 5 - Making Craters

Did you ever wonder how craters are formed? Well, now's your chance to find out! You are about to embark on a journey to the moon where crater creation is at its best!

Have you ever heard of a meteorite? A meteorite is a massive lump of rock that travels through space. By doing this activity, you will discover how the size and speed of a meteorite's impact can affect the properties of a crater.

For this activity you will need the following:

- a bag of flour
- a box of cocoa (only if available)
- three small round pebbles (approximately 1 cm)
- three medium round pebbles (approximately 2 cm)
- three large round pebbles (approximately 3 cm)
- a newspaper
- a ruler
- a pen
- a shallow basin (at least 5 cm deep)
- experiment sheets (attached at end of activity)



Activity Instructions:

- Fill the basin with three or four centimetres of flour.
- Sprinkle a layer of cocoa on top of the flour (this makes the craters more visible).
- To test the size of the meteorite, hold three of your smallest pebbles one meter above the basin and drop them one by one into the flour.
- From the same height, drop your medium-sized pebbles into the basin.
- Do the same with your large pebbles.
- Carefully remove the pebbles from the basin.
- Observe and compare the craters.

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Activity 5 - Making Craters - *continued*

- Record your results on the experiment sheet.
- To test the speed of the meteorite, select three medium sized pebbles.
- Smooth out the flour and cocoa.
- Drop the first pebble from one meter, the second from two meters and the third pebble from three meters high. You may need to stand on a chair.
- Remove the pebbles from the basin and observe the craters produced at all three speeds
- Record your results on the experiment sheet. What do you notice about the craters? Are they the same? Are they different? Why?

Meteoroid Experiments

Experiment 1
Size of Meteoroid

Record the Crater Diameter for:

Small

Medium

Large

What can you conclude?

Experiment 2
Speed of Meteoroid

Record the Crater Diameter for:

1 m

2 m

3 m

What can you conclude?

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Meteoroid Experiments

Experiment 1

Size of Meteoroid

Record the Crater Diameter for:



Small



Medium



Large

What can you conclude?

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Activity 5 - Making Craters - *continued*

Meteoroid Experiments

Experiment 2

Speed of Meteoroid

Record the Crater Diameter for:



1 m



2 m



3 m

What can you conclude?

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