

CURIOSITY AT HOME

CRATER CREATORS



MATERIALS

- Old newspapers or cardboard (optional)
- Pan or pie tin
- Flour (about 2 cups)
- Cocoa powder or cinnamon (about $\frac{1}{4}$ cup)
- 4 rocks of various sizes not to exceed 4 cm (1 $\frac{1}{2}$ " in diameter)
- Meter- or yardstick
- Paper or science notebook
- Pen or pencil

The surface of the moon is scarred with craters of different sizes and shapes. The following activity can help demonstrate the impact asteroids and meteorites have on our moon and other planetary bodies.

PROCEDURE

- If doing this indoors, place newspapers or cardboard on the floor.
- Fill a pan 5 cm (2 in) deep with flour. Level the flour so it forms a smooth surface.
- Sprinkle the surface of the flour with cocoa or cinnamon to cover the flour.
- Measure the diameters of the 4 rocks and record your measurements in the chart or in your science notebook.
- Have a helper hold the meter- or yardstick inside the edge of the pan.
- Drop the smallest rock into the pan from 30 cm (12 in) high. Record your observations in the chart or your science notebook.
- Follow with progressively bigger rocks. Record the diameter of the rocks and your observations for each in the chart or in your science notebook.
- Level the flour so it forms a smooth surface and re-sprinkle it with cocoa or cinnamon.
- Have a helper hold the meter- or yardstick inside the edge of the pan.
- In the same order used previously, drop the rocks again from 60 cm (24 in).
- Record the similarities and differences of the results of the 1st and 2nd steps.

TRY THIS

- Continue from 90 cm (3") if desired.
- Try tossing the rocks from different angles.
- What happens when craters overlap?
- What seems to have the greatest effect on the size of a crater: the speed, size, angle, etc. of the rock?



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K-2 GRADE EXPLORATION

· In the space to the right, draw what **you think will happen**, when you drop a rock into the powder mixture. →

· In the chart below, draw pictures of **what happened** when you dropped the rocks into the powder mixture.

	First Drop (30 cm or 12 in)	Second Drop (60cm or 24 in)
Rock 1		
Rock 2		
Rock 3		
Rock 4		

- How does the size of the rock change your crater?
- How does the height which you drop the rock?
- Think about the moon. How does the surface of this landscape compare to the moon?
- Where do you think the objects that made craters on the moon came from?
- Do you think there are craters on other planets including Earth?



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