

Splat! Student Guide

| Check It Out | What To Do | What To Ask |
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| <p>1. The young Moon was hit by large asteroids.</p> | <p>Each group will model their own impact with a water balloon.</p> <p>Using a ruler, measure the shortest width of the water balloon.</p> <p>Record your measurement on the Splat! comic panel.</p> | <p>How wide across is your water balloon?</p> |
| <p>2. These impacts left scars that we can see today: impact basins.</p> | <p>Break the balloon by throwing it onto an outdoor concrete patio or sidewalk.</p> <p>Measure the width of the continuous part of the splash.</p> <p>Record your measurements on the Splat! comic panel.</p> | <p>How big is the splash (the “crater”)?</p> |
| <p>3. Craters on the Moon are larger than the asteroids that created them – 10 to 20 times larger! Like the water balloon, the impactors broke apart when they hit the Moon.</p> | <p>Calculate the ratio of the size of the impact to the size of the balloon.</p> <p>Record your measurements on the Splat! comic panel.</p> | <p>How much larger is your splash compared to the size of the balloon?</p> <p>Asteroids and comets travel much faster than you can throw a balloon. They are also rocky and hard. What do you think would happen if you threw the balloon faster?</p> <p>How would the “splash” caused by an impactor on the Moon look compared to the balloon’s splash?</p> |
| <p>4. Rocks like this Earth rock were found on the Moon and brought back to study in laboratories.</p> <p>On Earth, these rocks, breccias, can form in many ways. ON the Moon breccias form when the heat and pressure of an impact breaks the rock. Some of the rock is melted and glues the pieces together into one bigger rock. Impacts eject the rocks far from the crater.</p> | <p>Feel and study the rock.</p> | <p>What do you notice about the color and texture of this rock?</p> |
| <p>5. Scientist record videos of projectiles impacting different types of materials. They study the videos to see how the materials behave.</p> <p>Scientists also use computer models to imagine and test their ideas about what happens during an impact.</p> <p>They also study impact craters on Earth, Like Barringer crater in Arizona.</p> | <p>Check out the Moon map and find the largest features. These impact basins were caused by large impacts long ago.</p> <p>These features changed since they first formed; they are not simple bowl-shaped features on the Moon’s surface.</p> | <p>Go outside sometime and look at the Moon. Can you find the large circular features?</p> |