

Lunar Reconnaissance Orbiter Student Worksheet



Splat!

Each group will model the impact process using water balloons. Impacts will be modeled by breaking water balloons onto an outdoor concrete patio or sidewalk and measuring the resulting splash.

1. Each group of 2-4 students should have 3 water balloons.
2. Before beginning, measure the shorter diameter of the water balloon and record it below. This is the size of your impactor.
3. Drop or throw your water balloon on a flat, solid, dry area.
4. Measure the width of the continuous wet area (splash) and record it below. This is your crater.
5. Calculate the ratio of crater size to impactor size and record it.
Hint: [crater width \div impactor width]
6. Repeat for all 3 balloons.
7. Calculate the average of your ratios and record it.
8. Be sure to pick up all of your leftover balloon pieces!

Impact #1

Impactor (balloon) width _____

Crater (splash) width _____

Ratio of crater size to impactor size: _____

Impact #2

Impactor (balloon) width _____

Crater (splash) width _____

Ratio of crater size to impactor size: _____

Impact #3

Impactor (balloon) width _____

Crater (splash) width _____

Ratio of crater size to impactor size: _____

Calculate the average of the three ratios. [(ratio 1 + ratio 2 + ratio 3) \div 3]

Average size ratio for three impacts: