

Activity 9: Gravity Exploration

Part A:

How much would you weigh on other planets and the moon?

The more mass a planet has, the more gravity it has. Planets which have more mass than Earth would have more gravity than Earth. A person would weigh more on these planets than they do on Earth.

| Jump 1 | Jump 2 | Jump 3 | Jump 4 | Jump 5 | Average |
|--------|--------|--------|--------|--------|---------|
| | | | | | |

| Location | Weight On Earth | Gravity | Calculated Weight |
|----------|-----------------|---------|-------------------|
| Moon | X | 0.17 | = |
| Mercury | X | 0.38 | = |
| Venua | X | 0.86 | = |
| Mars | X | 0.38 | = |
| Jupiter | X | 2.87 | = |
| Saturn | X | 1.32 | = |
| Uranus | X | 0.93 | = |
| Neptune | X | 1.23 | = |

Part B:

How far could you jump on other planets and the moon?

Determine how far you can jump on the Earth. To do this, place a piece of tape on the floor as a starting line. Jump as far as you can off of both feet. Have your partner mark where you land not where you end up! Measure the distance and record in the table. Do this five times, then find the average.

| Location | Weight On Earth | Gravity | Calculated Weight |
|----------|-----------------|---------|-------------------|
| Moon | X | 0.17 | = |
| Mercury | X | 0.38 | = |
| Venua | X | 0.86 | = |
| Mars | X | 0.38 | = |
| Jupiter | X | 2.87 | = |
| Saturn | X | 1.32 | = |
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