

Middle School Science

Name:

Date:

Gravity Worksheet

This worksheet accompanies slide 11 of *Gravity.ppt*

Your weight on different planets

Calculate how much you would weigh on different planets in the Solar System.

1. Find your mass in kg by standing on a scale.
Your mass never changes, no matter where you are in the Universe.
2. Use the information below to calculate your weight on different planets and fill in the table.

| Planet | Gravitational field strength | Your mass (kg) | Your weight on the planet (N) |
|---------|------------------------------|----------------|-------------------------------|
| Mercury | 3.8 | | |
| Venus | 9.1 | | |
| Earth | 10.0 | | |
| Mars | 3.8 | | |
| Jupiter | 25.3 | | |
| Saturn | 10.6 | | |
| Uranus | 8.9 | | |
| Neptune | 11.2 | | |

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Conclusions

Use some of the words at the bottom to complete these sentences.

My mass always on different planets.

My weight on different planets.

I am heaviest on and

I am lightest on

The gravity on is the most similar to Earth's.

| | | | | |
|-----------------------|----------------|----------------|------------------|-------------|
| Saturn | Jupiter | varies | Mercury | Mars |
| stays the same | Venus | Neptune | decreases | |

What do you think your weight would be if you were floating in space a long way from any planets?
Explain your answer.

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