Gravity

Answers

KS3 science quick questions

This topic online

Activate 1: Forces; Activate 1: Space | Exploring Science 7K, 8L

Q	Answer	Remember
1	gravity	Gravity pulls every mass towards every other mass, and the Earth is a very big mass.
2	mass	Mass is how much stuff there is - it does not depend on where you are.
3	kilograms	Mass in kilograms, weight in newtons - a common mix-up.
4	newtons	All forces, including weight, are measured in newtons.
5	weight = mass × g	Multiply your mass by how strongly gravity pulls on each kilogram.
6	10 N/kg	Each kilogram on Earth is pulled down with about 10 newtons.
7	30 N	3 kg × 10 N/kg = 30 N.
8	2 kg	Moving somewhere else does not add or remove any matter, so mass stays the same.
9	decreases	The Moon's pull is weaker, so she weighs less even though her mass is the same.
10	non-contact	Gravity, magnetism and static electricity all act across a gap.
11	Earth	The Earth has far more mass than the Moon, so its pull is stronger.
12	field	Fields are how non-contact forces reach across empty space.
13	no	Gravity only ever attracts - unlike magnets, there is no gravity push.
14	gravity	Without the Earth's pull, the Moon would fly off in a straight line.
15	forcemeter	Hang an object on it and the spring stretches to show its weight.
16	80 N	50 × 1.6 = 80 N - on Earth the same pupil weighs about 500 N.
17	15 kg	Turn the equation round: mass = weight ÷ g = 150 ÷ 10.
18	800 N	First find the mass (200 kg), then multiply by the Mars value: 200 × 4.
19	decreases	Gravity gets weaker with distance, but it never quite reaches zero.
20	Mass is the amount of matter in you, which does not change, but weight is the pull of	Mass is about you; weight is about you and the planet you stand on.

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Q	Answer	Remember
	gravity on you, and the Moon's gravity is weaker.	

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