How much would I weigh on Mars? My Space Card, and why it's a game number

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On Mars a scale reads 0.377 times what it reads on Earth, by NASA's numbers. How My Space Card works it out for eleven worlds, with nothing sent anywhere.

On Mars, a scale would read 0.377 times what it reads on Earth, because Mars pulls 0.377 times as hard, by NASA's planetary fact sheet. So a scale that reads 100 on Earth would read about 38 on Mars, about 16.5 on the Moon and about 236 on Jupiter. Peabody's My Space Card works this out for eleven worlds at once. A weight there is a game number: it can be skipped, it is never compared with anyone's, and nothing your child picks leaves your device. The card does birthdays on other worlds too; that's in our post on how old you'd be on Jupiter.

The one sum

Every world pulls on things on its surface. NASA gives that pull as a multiple of Earth's. What a scale would read there is what it reads on Earth, times that number. That's all the card does.

For a scale that reads 100 on Earth, rounded the way the card rounds:

- World: Sun · Pull, times Earth's: 27.9 · The scale would read: 2,790
- World: Jupiter · Pull, times Earth's: 2.36 · The scale would read: 236
- World: Neptune · Pull, times Earth's: 1.12 · The scale would read: 112
- World: Earth · Pull, times Earth's: 1 · The scale would read: 100
- World: Saturn · Pull, times Earth's: 0.916 · The scale would read: 92
- World: Venus · Pull, times Earth's: 0.907 · The scale would read: 91
- World: Uranus · Pull, times Earth's: 0.889 · The scale would read: 89
- World: Mercury · Pull, times Earth's: 0.378 · The scale would read: 38
- World: Mars · Pull, times Earth's: 0.377 · The scale would read: 38
- World: Moon · Pull, times Earth's: 0.165 · The scale would read: 16.5
- World: Pluto · Pull, times Earth's: 0.063 · The scale would read: 6.3

The Sun is on the list for the fun of the number; nobody could stand on it, and nobody should ever look at it.

Things children notice

- Mars and Mercury give almost the same number, though Mars is bigger across. Size isn't the whole story: what the world is made of matters too.
- Saturn is enormous but its number is under 1. It is mostly gas, spread over a huge size, and the "surface" is the top of its clouds.

• On the Moon, a jump goes about six times as high. That's the same 0.165 working the other way.

How the card works

The card asks for a guess first, in three boxes: which world would make you weigh the most? Then a child slides a picture scale to a number, in pounds or kilograms, or taps Skip. Nothing is typed. The card draws eleven little cards, one for each world, with the number on each marked "a game number", and prints as a page for the fridge.

Nothing is sent anywhere: no name, no birthday, no weight. The numbers are used on the page to draw the cards, and kept on the device only if your child taps "Keep my card".

Why "a game number"

Children's bodies are none of a website's business, and a number on a scale can mean a lot to some children. So the card treats it as a toy for the arithmetic, not a measurement of anybody. It never compares one child with another, never says whether a number is good or bad, and works just as well with the scale skipped. A child can slide the scale to what a big dog or a packed suitcase weighs instead. The sum is the same.

What it teaches

The idea underneath is that weight is a pull between two things, and mass is how much stuff there is. Your mass is the same on Mars as on Earth; the pull is weaker, so the scale reads less. For older children, that difference is worth a conversation, and each world page says the same thing at three reading levels.

Three questions grown-ups ask

Where do the numbers come from? NASA's planetary fact sheets, checked on 29 October 2026. Each world's page on Peabody links its own fact sheet.

Why does the Moon get a decimal and Jupiter doesn't? The card shows whole numbers from 20 up and one decimal below, so small numbers don't round to zero.

Can my child use it without a weight? Yes. Skip it and the card still draws, with ages and the other facts.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up. The library has stories at your child's reading level.

Sources

• NASA, planetary fact sheets (the ratio table): each world's surface gravity, checked 29 October 2026.

- NASA's Mars fact sheet: 0.377 times Earth's gravity.

Free at peabody.kids/blog/how-much-would-i-weigh-on-mars