



## CHECK IT OUT

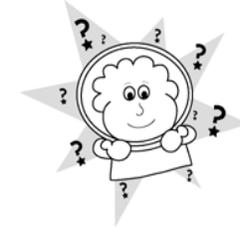
1

It is *gravity* that causes a ball to fall back to Earth after it has bounced. *Gravity pulls* the ball back to Earth. The stronger the *pull* of gravity, the lower the balls bounce, and the quicker they fall back down.



## WHAT TO DO

Answer these questions ...



## WHAT TO ASK...

Which is bigger - has more mass - the Earth or the Moon?

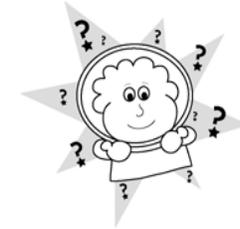
Which would have a greater pull of gravity on you, if you were standing on it, the Earth or the Moon?



## CHECK IT OUT



## WHAT TO DO



## WHAT TO ASK...

2

The Moon's gravity is about  $1/6^{\text{th}}$  of Earth's gravity, because the Moon is smaller and has less mass.

Many people think the Moon does not have gravity, but it does!

When the Apollo astronauts jumped up, the Moon's gravity pulled them back to the surface.

Take a ball labeled Earth and a ball labeled Moon.

The Earth ball will simulate how a ball bounces on Earth and the other will simulate how a ball bounces on the Moon.

Put one in each hand. Make a prediction...

If you hold both of these balls at shoulder height and drop them, what do you think will happen?

Drop - or *gently* throw - the balls at the same time.

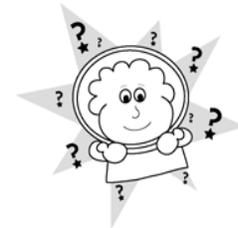
Which one bounced higher, the Earth or the Moon ball?



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## WHAT TO DO



## WHAT TO ASK...

3

The Moon ball bounced higher and for longer than the Earth ball.

This simulates Earth's greater force of gravity pulling on the ball more than the Moon's smaller force of gravity.

Ask yourself ...

If you attended the Olympics on the Moon, would athletes in the high jump be able to jump higher or not as high as on Earth?