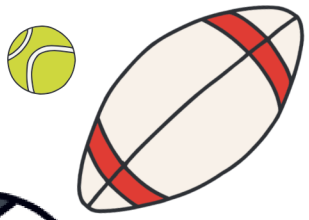
BOUNCING BALLS



You'll need

Pen and paper
Different types of balls
Tape measure
Chalk

Instructions

Look at the different types of balls and try bouncing them gently on the floor.

Place the balls in order from most bouncy to least bouncy.

Use a long ruler or tape measure and chalk to mark heights of 0.25m, 0.5m, 0.75m, 1m, 1.25m, 1.5m and 1.75m on a wall outdoors.

Drop the balls gently one by one and record the height of the first bounce. Try to use the same force each time and drop each ball from the same height.

Record the number of bounces each ball makes before stopping.

Repeat 3 times for each ball and calculate the average height reached and number of bounces.

What's happening?

When a ball is held in the air it has potential energy (this is the energy stored in the ball because of its height). When the ball is dropped, gravity pulls it down, and the potential energy is converted into kinetic energy. When the ball hits the ground, some energy is lost in the collision, and so the ball loses energy each time it bounces until there's no energy left.

Remember - energy is always conserved; the total energy is not lost, but changes form.

Name of scientist .....

I predict the ..... ball will bounce the highest and the ..... ball the lowest.

Type of ball	Height bounced	Number of bounces
		

The ..... ball reached the highest height.

The ..... ball reached the lowest height.

The ..... ball bounced the most number of times.

The ..... ball bounced the least number of times.

My predictions were:

Correct ☐ Incorrect ☐