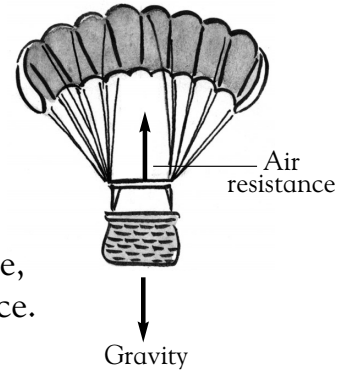


Down with parachutes



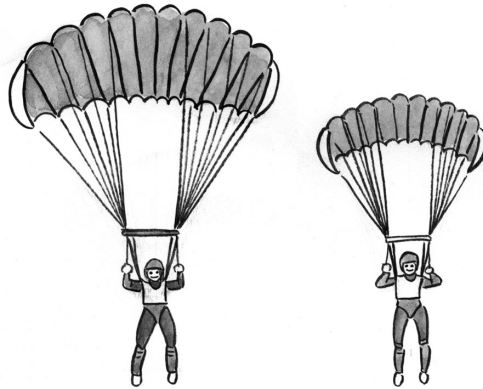
Background knowledge

Gravity is a pulling force. It pulls objects toward Earth. *Air resistance* is a pushing force. It is a source of friction because it opposes motion. When parachutes fall to Earth, air resistance pushes against them. The fabric of a parachute has a lot of surface on which air can push. The effect of this force is to slow the parachute down. The larger the parachute, the slower it will fall, because there is more air resistance.



Science activity

Examine the drawing of two people jumping with parachutes.



Which person will fall to Earth faster? Explain your answer.

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Describe all of the forces acting on the parachute. Make sure to state the direction of the force.

.....

Science investigation

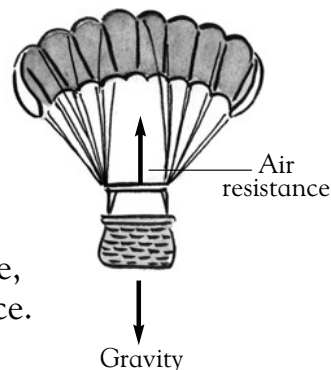
Obtain five pieces of paper of the same size. Leave one piece of paper unfolded. Fold one in half and tape it closed. Repeat this, but fold and tape two pieces of paper together. Fold one piece of paper in half two times and then tape it closed. Design and conduct an experiment to see which paper falls first when they are dropped from the same height.

Down with parachutes



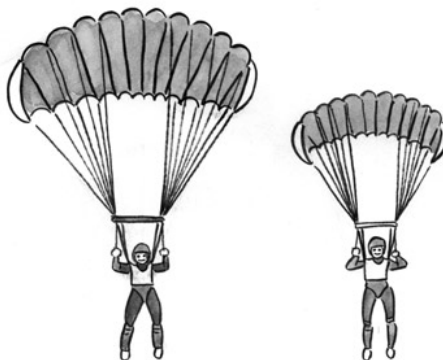
Background knowledge

Gravity is a pulling force. It pulls objects toward Earth. *Air resistance* is a pushing force. It is a source of friction because it opposes motion. When parachutes fall to Earth, air resistance pushes against them. The fabric of a parachute has a lot of surface on which air can push. The effect of this force is to slow the parachute down. The larger the parachute, the slower it will fall, because there is more air resistance.



Science activity

Examine the drawing of two people jumping with parachutes.



Which person will fall to Earth faster? Explain your answer.

The person with the smaller parachute will fall to Earth faster because there is less air resistance.

Describe all of the forces acting on the parachute. Make sure to state the direction of the force.

Air resistance is the upward force acting on the parachute.

Gravity is the force that pulls the parachute down.

Science investigation

Unfolded paper has more air resistance than folded paper, so should fall the slowest. Since gravity pulls on all objects with the same force, the paper's weight should not affect its rate of fall.