

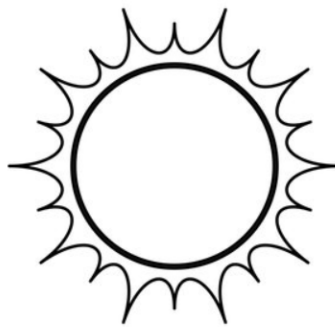
Why do things fall at different speeds?

Investigating Air Resistance:

The paper airplanes that have (**small/large**) wings are able to fly for a (**long time/short time**) because (**less/more**) air is pushing (**down/up**) on the wings. The air that pushes (**up/down**) on the wings causes the airplane to resist against gravity. The airplanes that have the (**least/most**) air resistance have (**small/large**) wings.

Investigative Gravity: Creating a Model

Use lines and arrows to model what you see from the demonstration.



Investigating Size vs. Weight:

Hypothesis: The items that are (**lighter/heavier**) will drop (**slower/faster**).

Data Table:

Item	Light/Heavy	Dropped First (X)
Tissue Paper	Light	
Typing Paper	Heavy	X
Crumpled Typing Paper	Light	
Crumpled Aluminum Foil	Heavy	X
Ping Pong Ball	Light	
Golf Ball	Heavy	X

Conclusion: The items that were (**lighter/heavier**) had the (**least/most**) amount of air resistance and dropped the (**slowest/fastest**). The items that were (**lighter/heavier**) have (**more/less**) mass and are pulled to Earth (**slower/faster**). (**Lighter/Heavier**) items have (**more/less**) gravity.

Why do things fall at different speeds?

Word Bank: Shape, Surface Area, Air Resistance, Parachute, Mass, Rock

Things fall at different speeds because of the **shape** of the object. Objects that have a large **surface area** will create a greater **air resistance** that will slow the object down while falling to Earth. An example of this would be a **parachute**. Objects that have a large **mass** and a small **surface area** have little **air resistance** and will fall very fast towards the Earth. An example of this would be a **rock**.