



Friction and Gravity Lessons

Websites

[Friction Explorer](#)

Students explore what happens when they vary the force of a push on a sliding object on this interactive website.

(<http://www.seed.slb.com/labcontent.aspx?id=17210&terms=friction+explorer>)

[Friction](#)

Students explore how different surfaces (vinyl, wood, carpet, and ice) effect friction.

(http://www.bbc.co.uk/schools/scienceclips/ages/8_9/friction.shtml)

[Physics4Kids: Friction](#)

The Physics4Kids web site has a section on Motion, including a page that talks about friction in straightforward terms.

(http://www.physics4kids.com/files/motion_friction.html)

[Friction - BBC – Bitesize: Science activity](#)

How does friction affect the distance an object will travel on a surface? Find out on this interactive website.

(http://www.bbc.co.uk/schools/ks2bitesize/science/physical_processes/friction/play.shtml)

[Forces in action – BBC – Bitesize: Science activity](#)

How does changing the gradient affect the car's speed? Find out on this interactive website.

(http://www.bbc.co.uk/schools/ks2bitesize/science/physical_processes/forces_action/play.shtml)

[Friction – Thermodynamics, Heat, Temperature](#)

Children learn how friction causes a material to heat up and melt on this interactive website.

(<http://phet.colorado.edu/en/simulation/friction>)

[Projectile Motion – Gravity, Velocity, Air Resistance](#)

On this website, children learn about projectile motion by firing various objects out of a cannon. Children set the angle, initial speed, and mass and can even add air resistance. They can make a game out of this simulation by trying to hit a target.

(<http://phet.colorado.edu/en/simulation/projectile-motion>)



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Books

Floating in Space (Let's-Read-And-Find-Out Science Series)

By Franklyn M. Branley; illustrated by True Kelley. (1998, HarperCollins Juvenile Books)

Narrates a space shuttle mission, from blast-off to touchdown, but focuses mainly on life in orbit.

Describes how a negligible gravitational pull affects astronauts.

The Magic School Bus Lost in the Solar System

By Joanna Cole; illustrated by Bruce Degen. (1992, Scholastic Books)

Ms. Frizzle takes her class on a trip to the planetarium, but the magic school bus has a better idea and blasts off into space to visit each planet in the solar system. Includes information about how much a child would weigh on each planet.

No Jumping on the Bed

By Tedd Arnold. (1996, Puffin)

But Walter can't resist, so he ignores his father's bedtime warning. He bounces so high his hair brushes the ceiling. But when he comes down, well, let's just say the laws of gravity and weight are somewhat altered. This is a fun fiction read aloud that you can use for speculation and discussion.

The Science of Gravity

By John Stringer. (2000, Hodder Wayland)

Introduces the force of gravity and discusses its effects and reasons for its variations in strength.

Science Rock (Video or DVD)

By Schoolhouse Rock! (2008, Disney Educational Productions)

A collection of three-minute segments with catchy, instructional songs about science from Schoolhouse Rock! Includes "A Victim of Gravity."

The Magic School Bus Plays Ball: A Book About Forces

By Joanna Cole; illustrated by Art Ruiz and Bruce Degen. (1998, Scholastic Trade)

On a field trip inside a physics book, Ms. Frizzle's class plays baseball in a world without friction and learns all about friction and forces.



Start and Stop (The Way Things Move)

By Lola M. Schaefer. (1999, Pebble Books)

One of a series of books written for young children about the physics of motion, this title touches on the subject of friction as it relates to changes in motion.