

# Forces in Action

## Science Library and Web Links

### Science Library Recommendations

The following is a list of recommended books that provide a wide range of reading and research resources for this topic. Collect as many as you can for your classroom science library, or provide the list to your school or local public librarian and enlist their help.

If you have a budget for purchasing books, consider the following titles to supplement the Forces in Action topic:

#### Forces and Motion

##### ***Eyewitness: Force and Motion***

By Peter Lafferty. (1999, Dorling Kindersley)

Focuses on contemporary and historical developments in the study of forces that set the world in motion, including what they are and how they can be harnessed by machines. Includes black and white and color photos, charts, graphics, and three-dimensional models.

##### ***Forces and Movement (Start-Up Connections)***

By Claire Llewellyn. (2010, MMS Gold)

This introduction to the world of physics focuses on the motion of humans and other animals. The concepts of pushing and pulling are explored in great detail and children are encouraged to experiment with these forces themselves.

##### ***Forces Make Things Move (Let's-Read-and-Find-Out Science 2)***

By Kimberly Brubaker Bradley; illustrated by Paul Meisel. (2005, HarperCollins)

This text starts with a common childhood experience of pushing toys cars across the floor, and gradually works into physics concepts such as forces, reactions, inertia, friction, and gravity.

##### ***Isaac Newton and Gravity (Science Discoveries)***

By Steve Parker. (1994, Chelsea House)

A brief, but substantive, scientific biography. Explains the three laws of motion, and includes a glossary.

##### ***Oscar and the Cricket: A Book about Moving and Rolling (A Start with Science Book)***

By Geoff Waring. (2009, Candlewick)

In this delightful book of fiction, Oscar the cat and his friend a cricket share their knowledge of pushes, pulls, and other aspects of force and motion.

***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.

***Why Doesn't the Earth Fall Up? And Other Not Such Dumb Questions About Motion***

By Vicki Cobb; illustrated by Ted Enick. (2001, Scholastic)

Answers nine questions about motion, explaining Newton's laws of motion, gravity, centrifugal force, and other principles of movement.

**Friction**

***Friction (A True Book)***

By Matt Mullins. (2012, Scholastic Children's Press)

Discusses friction on stationary objects as well as objects that are in motion. Describes friction in sports and how some sports work to create situations with more friction while others create situations with less friction. The books also discusses how our transportation systems handle friction as well as how scientists discovered friction in the first place.

**Gravity**

***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.

***Gravity in Action: Roller Coasters***

By Joan Newton. (2009, The Rosen Publishing Group, Inc.)

Students learn that gravity is a force that acts on all objects on earth. They also discover that all roller coasters, from the first roller coasters, which were just human-made hills, to modern day roller coasters, which provide major thrills and excitement, rely on gravity to keep moving.

***Gravity is a Mystery (Let's-Read-and-Find-Out Science 2)***

By Franklyn M. Branley; illustrated by Edward Miller. (2007, HarperCollins)

Gravity is a mysterious force that pulls all things toward the center of the earth. With the help of an adventurous scientist and his dog, students can learn about gravity.

***The Magic School Bus Lost in the Solar System***

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

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. (2012, Dial)

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."

**Magnets**

***Magnets (All Aboard Science Reader)***

By Anne Schreiber. (2003, Grosset & Dunlap)

This wonderfully illustrated book explains the history of magnets, different kinds of magnets, how they work, and how they are used.

***Magnets (Young Scientist Concepts and Projects)***

By Steve Parker. (1998, Gareth Stevens)

This book covers many aspects of magnetism, including the properties of magnets. In addition, it includes a variety of experiments and activities to reinforce the concepts presented in the book.

***What Makes a Magnet? (Let's-Read-and-Find-Out Science 2)***

By Franklyn Branley. (1996, Harper Collins Children's Books)

This book explains the property and behavior of magnets and gives instructions about how to make a magnet and a compass.