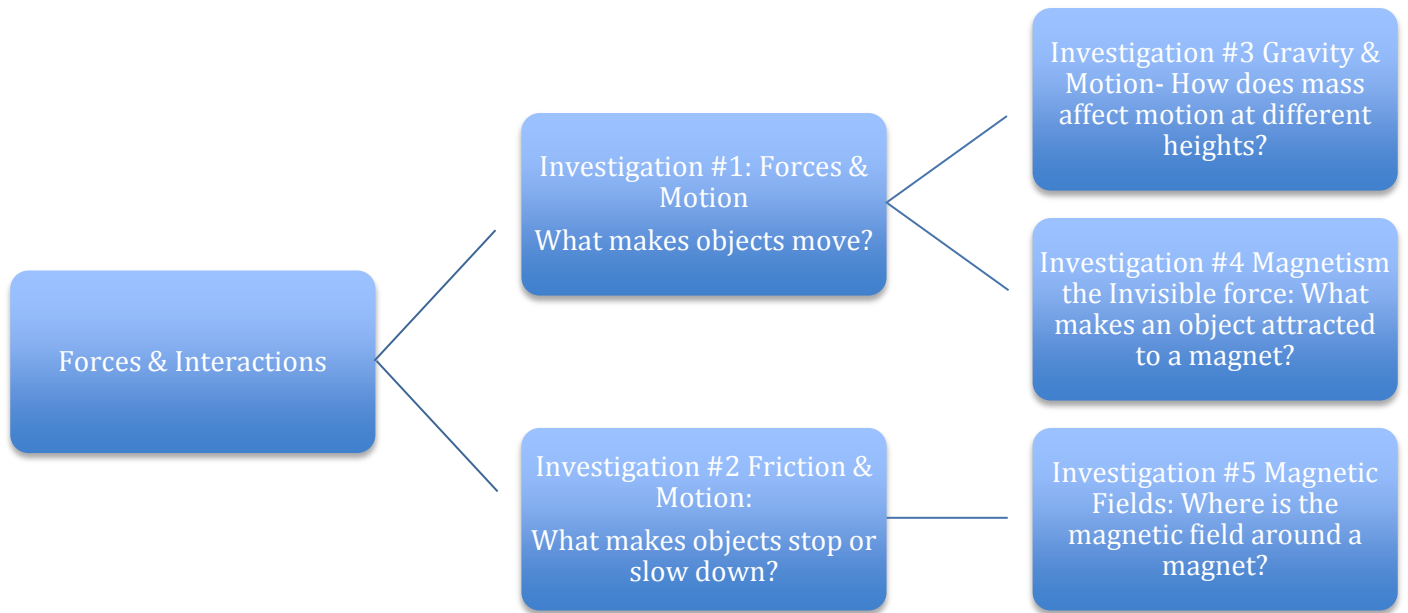


Outline of Forces and Interaction Investigations



Core books with Lexiles Used in Engineering Unit

Core Books for Engineering and Design Unit	Lexile - (CCR Expectations for 2–3 grades: 450-790)
<i>A True Book: Experiments with Magnets</i>	(700L)
<i>What Magnets Can Do</i> (by Allen Fowler)	(580L)
<i>Girls Think of Everything</i> (by Catherine Thimmesh)	(960L)
<i>The Kids' Invention Book</i> (by Arlene Erlbach)	(760L)
<i>Ben Franklin and the Magic Squares</i> (by Frank Murphy)	(400L)
<i>Magnets in the Real World</i> (by Chris Eboch)	(730L)
<i>Earth Is a Giant Magnet</i> (by Barbara Seuling)	(980L)
Core Books with a Literary Focus	
<i>Now & Ben: The Modern Inventions of Benjamin Franklin</i>	(910)
<i>The Boy Who Invented TV: The story of Philo Farnsworth</i>	(860)

Student Work Sample - Chart

Result	When I rolled the ball it kept on going until it was slowing down from <u>friction</u> . When I rolled the ball on the carpet it did not go far because it is a rough <u>surface</u> . <u>Motion</u> was happening when the ball was rolling.
Conclusion	I see friction when I run and then I stop from falling. I see friction when a bowling ball is rolling and there is bumpy spots on the ally and the ball stops.
Inquiry/ Questions about friction	<ol style="list-style-type: none">①. is friction able to stop an object if a floor has cracks?②. Can friction stop someone with out rubber on there shoe.③. Friction can stop us if we have rubber on our shoes.

Student Work Sample- Thinking Journal

WORLD forces.

Have you ever heard of two forces called gravity and friction? Friction is a force that causes things to stop however gravity is a force that keeps objects onto the surface of the Earth. Gravity and friction can be very important and very useful to people's lives. Gravity and friction can save people's lives too. In this page you will find out more about how gravity and friction can be useful.

In the science book, it says if you rub your two hands together, you are using friction to make heat. Friction can be used to stop a bike too. A bike causes friction when you use the brakes, the back wheel and the ground is causing the bike to slow down and stop. In the book, roller coaster, a roller coaster uses friction of the track and the wheel to stop the roller coaster from moving. Friction is on a sled too, the sled goes faster and faster as it goes down hill but as it goes to the end of the hill, it is using friction of the sled and the snow to stop the sled.

In the science book, it says that gravity keeps all objects onto the surface of the Earth. If you jumped a pencil, that is gravity pulling the pencil down. Gravity is important because if we did not have gravity, all the people and objects will float all over the place. If you jumped in the air, gravity will pull you down. But if you jump off something higher, gravity will pull you down a lot faster and stronger.

In conclusion, I talked about how gravity and friction can be useful to people's lives. Gravity is useful because if we did not have gravity, everything will float all over the place. Friction can be useful because it can save a person's life. When you are going to fast on a bike, both gravity and friction can be useful. Friction can be useful because if it is cold outside, you can use friction to rub your hands together and make heat to keep yourself warm. So I just want to talk about how gravity and friction is useful in our lives.

- Friction and Gravity -

Would it be good to float around all day? No it wouldn't and that is why we have gravity and friction. Friction and gravity are important because friction can help you slow down or stop. Gravity keeps us down on Earth's surface from floating away. Friction can slow us down or stop us. For example, if I was running and a bus was coming I could stop and not get hit. You will find out about gravity and friction.

Friction can slow us down or stop us but if we don't have rubber on the bottom of your shoe then it will be harder to stop. If you do have rubber on the bottom of your shoe it will be easier to stop, however for example rub your hands together they will be hot.

Gravity is helpful by keeping us from floating in the air. Gravity will help the people from dying in the outer space because there is no oxygen in outer space. Gravity holds us on the surface of the Earth. Gravity can hold us down on Earth and gravity can even hold us down if we go on a roller coaster in a loop and you won't fall off.

So... that is all about gravity and friction. The books that I got it from are roller coaster, Green science book, and forces that move. That is all of the information. Why do you think gravity is important.