



OFFICE OF K-12 SCIENCE & PLANETARIUM

SCIENCE PARENT NEWSLETTER

THIRD GRADE

UNIT 1

PHYSICAL SCIENCE

IN SCHOOL...

In Unit 1, students are able to determine the effects of balanced and unbalanced forces on the motion of an object and the cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. They are then able to apply their understanding of magnetic interactions to define a simple design problem that can be solved with magnets.

STUDENTS WILL KNOW...

- Forces can be balanced or unbalanced.
- Electric and magnetic forces have a relationship.
- There are direct cause and effect relationships among forces.

STUDENTS WILL BE ABLE TO...

- Ask questions that can be investigated based on patterns such as cause and effect relationships
- Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.
- Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.

AT HOME...

ASK YOUR STUDENTS...

- What causes an object to have motion?
- How can an object's motion change?
- How do equal and unequal forces on an object affect the object?
- How can magnets be used?

ENGAGE YOUR STUDENTS...

- There are patterns to the motion of objects and predictions on future motion can be predicted.
- Resting objects have multiple forces acting on them but the object has a net force of zero.
- Forces that do not sum to zero can cause a change in the object speed or direction of motion.
- Electric and magnetic forces between a pair of objects do not require the object be in contact.
- The sizes of forces depend on the properties of the object and their distance from each other.



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IN THE COMMUNITY...

- Identify how different materials are used to reduce sound in public places
- The next time you are on the playground think about what your body is doing. Are you still or in motion? How does that relate to balanced and unbalanced forces?
- Organize a neighborhood tug of war. When are you balanced? What happens when you are unbalanced.
- Make a T Chart of balanced and unbalanced forces and walk around your community. List as many examples of each as you can find. Are there more examples of balanced forces or unbalanced forces? Do you notice any other patterns in the list like size, being alive?

U46 STEM Expo....

- Do an investigation/demonstration on balanced and unbalanced forces.
- Do an investigation/demonstration that determines the cause and effect relationship of electric / magnetic interactions.
- Determine how scientist use evidence to predict future movements of tectonic plates or other natural phenomenon.