

Vertical Team Science Planning -- Magnetism

Standard	Key Science Concepts	Activities	Methods	Cross curricular SOLs	Objectives	Resources	Time frame	Assessment
K.3	<p>a. magnetism and its effects; and</p> <p>b. useful applications of magnetism</p>	<p>1. Explore the room, playground and other parts of school to find magnetic/nonmagnetic objects.</p> <p>2 .Make observations</p> <p>3.Graph the things that are magnetic and nonmagnetic</p>	<p>Read about magnets, highlight vocabulary, model with magnetic and nonmagnetic objects.</p>	<p>Reading: K. 1a,b,c,K2b,d,e,f,g,K. 3f,K.6a,K.8a,f</p> <p>Read: <u>Brown Bear, Brown Bear</u> and use a workmat and a bear with a paperclip on the back to track the sequence of the story.</p>	<p>The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications.</p>	<p><u>Pizza, Pizza, Pizza With Magnets</u> by Dorthea Deprisco</p> <p>Brainpop Jr.com discoveryeducation.com</p> <p>Smartboard activity:</p> <p>Song: Magnet's Rock! (to the tune of 'Skip to My Lou' (See separate sheet)</p>	1 hour	<p>The children will be given a container of magnetic and nonmagnetic objects along with a sheet with pictures of the objects. They will use the magnet with each object and circle the pictures of things that are attracted to or are moved by the magnet without touching it.</p>

1.2	<p>a. objects may have straight circular, and back-and forth motions;</p> <p>c. pushes or pulls can change the movement of an object</p>	<p>1. Begin push/pull and with magnet activities.</p> <p>2. Explore with a number of objects to show how things can be pushed, pulled or moved in different directions by repelling with the same poles.</p> <p>3. Make inferences.</p> <p>4. Enter drawings in their science journals and write a sentence about it in their Science journal.</p> <p>5. Use magnets to move a variety of objects.</p> <p>6. Test the strength of different magnets by counting how many paperclips each can pick up.</p> <p>7. Graph the things that are magnetic and nonmagnetic</p>	<p>Read about magnets, highlight vocabulary, model movement with different kinds of magnets. Observe their explorations and ask questions</p>	<p>Reading: 1.1a,d, 1.2a,b,c,1.3a,b,c,d, 1.6a-h,1.7c,d, Writing: 1.11a,b, 1.12a-g</p> <p>1. Use the garden workmat and a bee with a paperclip on back and they make the bee fly from flower to flower with the magnet on a stick underneath.</p> <p>Math:1.1a,1.10a B,1.14,1.15</p>	<p>The student will investigate and understand that moving objects exhibit different kinds of motion.</p>	<p><u>First Science Experiments</u> :<u>Magnet Power!</u> By Shar Levine</p> <p><u>Magnets: Pulling Together, Pushing Apart</u> by N Rosinsky</p> <p>Brainpop Jr.com discoveryeducation.com</p> <p>Use a slinky on a table to show how sound waves spread out and they echo off the other end.</p> <p>Smartboard activity: Songs:</p>	1 hour	<p>The children will do a sort with pictures of things that move back and forth, up and down, or in a circular motion.</p>
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2.2	<p>a. magnetism iron, magnetic/nonmagnetic, poles, attract/repel; and;</p> <p>b. important applications of magnetism</p>	<p>1. Use iron filings to show magnetic fields. Research where magnets naturally occur and how they are used.</p> <p>2. Enter drawings and explanations of their drawings of their activities in their Science journals.</p>	<p>Read about magnets, highlight vocabulary</p>	<p>1. Use a picture of a small boat with a paperclip taped to the back. Put the boat on a map of China or Egypt and use the magnet on a stick under the map to move the boat to pertinent places on the map</p> <p>2. Use a compass with a magnet because the compass was invented in China.</p>	<p>The student will investigate and understand that natural and artificial magnets have certain characteristics and attract specific types of metals.</p>	<p>Book: Magnets: Sticking Together by Wendy Sadler</p> <p>Brainpop Jr.com discoveryeducation.com</p> <p>Smartboard activity:</p>	1 hour	<p>The children will go on a magnet hunt and make a list of ten things that are magnetic and ten that are nonmagnetic.</p>
3.2	<p>a. purpose and function of simple machines;</p> <p>b. types of simple machines;</p> <p>c. compound machines; and</p> <p>d. examples of simple and compound machines found in the school, home, and work environments</p>	<p>1. Invent a simple machine using a magnet and various materials that can simulate simple machines.</p>	<p>1. Read about magnets,</p> <p>2. highlight and discuss vocabulary</p>		<p>The student will investigate and understand simple machines and their uses.</p> <p>The student will investigate and understand different sources of energy.</p>	<p><u>Magnets to Generators(Hands on Science)</u> by Peter Lafferty</p> <p>What Makes a Magnet? By Franklyn M. Branley</p> <p>Brainpop Jr.com. discoveryeducation.com</p> <p>Smartboard activity:</p>	1 hour	<p>Project: Invent a simple machine that uses magnetism as part of it and write out an explanation of how it works and can be useful to people.</p>