



Marietta City Schools

District Unit Planner

Grade 1 Science

Theme	Unit 3 Magnets Planner	Unit duration	4 weeks
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Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

GaDoE Standards/3D Science Elements

S1P2. Obtain, evaluate, and communicate information to demonstrate the effects of magnets on other magnets and other objects.

a. Construct an explanation of how magnets are used in everyday life.

(Clarification statement: Everyday life uses could include refrigerator magnets, toys, magnetic latches, and name tags.)

b. Plan and carry out an investigation to demonstrate how magnets attract and repel each other and the effect of magnets on common objects.

Unit Objectives:

Students will explore how magnets are used in everyday life.

Students will investigate how magnets attract and repel one another.

Students will explore how various objects will be affected by a magnet.

Students will observe that motion is dependent on the strength of the push or pull to move objects attracted by magnets.

Unit Phenomena:

Magnets can attract (pull) and repel (push) other magnets. Some objects move only when you touch them while others move without being touched. Move an object without letting students see the magnet. Allow students to freely explore with different magnets and objects. Let them generate questions. Narrow in on a few that can be investigated in the classroom.

Page Keeley Probes: These probes are a perfect way to introduce a topic. They are intended to elicit student understanding about science concepts. Starting a unit or lesson with a probe will help you uncover misconceptions and see what students already know about a topic. Using a probe at the beginning of a lesson and then at the end of the lesson serves the purposes of pretesting and then formatively evaluating student thinking. Below is a list of probes from Page Keeley's book *Uncovering Student Ideas in Primary Science*, that are appropriate for this unit. This book has been purchased for your grade level by the Office of Academic Achievement and can be found in your media center. **Big and Small Magnets**

Science & Engineering Practices:

Disciplinary Core Ideas:

Crosscutting Concepts:

- Asking questions and defining problems
- Planning and carrying out investigations
- Developing and using models
- Constructing explanations and designing solutions

- When objects touch or collide, they push on one another and can change motion or shape.
- A bigger push or pull makes things go faster. Faster speeds during a collision can cause a bigger change in shape of the colliding objects.

- Patterns
- Cause and Effect
- System and System Models

Misconceptions:

All metals are attracted to a magnet.

All silver-colored items are attracted to a magnet.

Magnets repel nonmetals

Magnets only attract to iron

Magnetism causes the objects to attract and repel.

Magnetism does not go through objects.

Math/ELA Connections/STEM Connections

ELAGSE1SL1 Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).

b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges.

c. Ask questions to clear up any confusion about the topics and texts under discussion.

ELAGSE1SL2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

ELAGSE1SL3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

STEM: *Picture-Perfect STEM Lessons, K-2 – Chapter 8 – Robots Everywhere* – you will need to add magnets to your materials list.

Discovery Education Science Techbook Resources: *(You will need to be logged into Discovery Education using your Google credentials to access these resources)* You will find center activities on the **Engage** page of each Techbook unit.

[Investigating Magnets](#)

[The Attraction is Mutual Exploration](#)

GPB Resources – Each of these resources includes video clips, student sheets, and student activities.

[Fun with Magnets](#) – short video and activity

[Will It Stick? Everyday Learning](#) – short video clip, activity, questions, and connections

Hands-on Activities

[Magnetic Poles](#)

[Making a Compass](#)

[Magnets](#)
[A Clean Sweep with Magnets](#)

[Tellus Science Museum](#) - Magnet Mania Field Trip
[High Touch High Tech](#) – in school field trips

Essential Questions

Factual—

What is a magnet?

Why are magnets able to attract some objects but not others?

What determines the strength of a magnet?

Inferential—

How are magnets used in everyday life?

Critical Thinking-

How can we further investigate magnetic repulsion and attraction?

Tier II Words- High Frequency Multiple Meaning

push, pull, move, motion, object

Tier III Words- Subject/ Content Related Words

force, magnetism, distance, gravity, positive charge, negative charge, magnetic poles

Assessments

Magnets Constructed Response

Magnets Assessment

The Anticipation Guide can be edited to fit the needs of your students.

Teachers may access assessment documents in the OAA Course in the grade level folder.

Objective or Content	Learning Experiences	Differentiation Considerations
S1P2. Obtain, evaluate, and communicate information to demonstrate the effects of magnets on other magnets and other objects.	GaDOE Instructional Segment This segment will introduce students to magnets. They will use various magnets to demonstrate that magnets push and pull other magnets and can move and pull magnetic objects. This leads to understanding that magnets attract and repel.	Student Choice Performance Tasks Reflection and Goal Setting Learning Stations Choice Boards Formative Probes Science Journaling Multi-sensory activities Assistive Technology Flexible Grouping Multiple Means of Representation
S1P2. Obtain, evaluate, and communicate information to demonstrate the effects of magnets on other magnets and other objects.	Magnetic Maze This activity provides a fun way to explore magnetism. It involves the simple task of using a magnet to guide a coin through a maze drawn on the side of a plastic bottle. There are plenty of opportunities to think and talk about how magnetism works, and why magnets only attract certain materials. Magnetic Stations	Student Choice Performance Tasks Reflection and Goal Setting Learning Stations Choice Boards Formative Probes Science Journaling Multi-sensory activities Assistive Technology Flexible Grouping Multiple Means of Representation
Recommended High Quality Complex Text By Lexile Band		
<i>Magnet Max</i> ~ Monica Lozano Hughes <i>Magnetic and Nonmagnetic</i> ~ Angela Royston <i>All Aboard Science Reader</i> :~ Magnets ~ Anne Schreiber <i>The Shivers in the Fridge</i> ~ Fran Manushkin		

A Look at Magnets ~ Barbara Alpert
The Magic School Bus – Amazing Magnetism
Magnets Push, Magnets Pull ~ David A. Adler
What Magnets Can Do ~ Alan Fowler
Magnets: Pulling Together, Pushing Apart ~ Natalie Rosinsky
What Makes a Magnet? ~ Franklyn Branley