



## Project Essential Questions

- What common objects are attracted to magnets?
- What are characteristics of objects that are attracted to magnets?
- How can music be used to dramatize the concept of magnetism?

### PROJECT DESCRIPTION

In this project, students will integrate their knowledge of magnets to create and perform a rap. Students will use music, rhythm, and verses to dramatize objects that do and don't have magnetic pulls. They will do this using a sixteen measure, four-beats per measure composition to create their verses. Students will use actions, emotions, and voice to perform their rap.

### LEARNING TARGETS

"I Can..."

- Classify objects that are and are not magnetic
- Create a sixteen-measure verse, with four beats per measure, that demonstrates my understanding of magnets
- Perform my rap using actions, emotion, and voice



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Units provide differentiated ideas and activities aligned to a sampling of standards.

The units do not necessarily imply mastery of standards, but are intended to inspire and equip educators.

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Cherokee County (GA) School District and ArtsNow, Inc.

**DURATION: 2-3 days**

Project Description	Learning Targets
<p>In this project, students will integrate their knowledge of magnets to create and perform a rap. Students will use music, rhythm, and verses to dramatize objects that do and don't have magnetic pulls. They will do this using a sixteen measure, four-beats per measure composition to create their verses. Students will use actions, emotions, and voice to perform their rap.</p>	<p>"I Can...":</p> <ul style="list-style-type: none"> <li>● Classify objects that are and are not magnetic</li> <li>● Create a sixteen-measure verse, with four beats per measure, that demonstrates my understanding of magnets</li> <li>● Perform my rap using actions, emotion, and voice</li> </ul>

**ESSENTIAL QUESTIONS**

<ul style="list-style-type: none"> <li>● What common objects are attracted to magnets?</li> <li>● What are characteristics of objects that are attracted to magnets?</li> <li>● How can music be used to dramatize the concept of magnetism?</li> </ul>
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**STANDARDS**

Curriculum Standards	Arts Standards
<p><b>S3P2</b> Students will investigate magnets and how they affect other magnets and common objects.  <b>a.</b> Investigate to find common objects that are attracted to magnets.</p> <p><b>ELA.W.3.2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p><b>MGSE3.OA.3</b> Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. See Glossary: <i>Multiplication and Division Within 100</i></p>	<p><b>M3GM.1</b> Singing, alone and with others, a varied repertoire of music.  <b>a.</b> Sing melodies in the range of an octave using appropriate head voice accompanied and unaccompanied.</p> <p><b>M3GM.2</b> Performing on instruments, alone and with others, a varied repertoire of music.  <b>a.</b> Perform rhythmic patterns using body percussion as well as a variety of instruments with appropriate technique.</p>

**KEY VOCABULARY**

Content Vocabulary
<ul style="list-style-type: none"> <li>● Magnet</li> <li>● Magnetic</li> <li>● Non-magnetic</li> <li>● Attract</li> <li>● Repel</li> <li>● Opposite</li> <li>● Poles</li> <li>● Metal</li> <li>● Non-Metal</li> </ul>

<ul style="list-style-type: none"> <li>● Informational</li> </ul>
<b>Art Vocabulary</b>
<ul style="list-style-type: none"> <li>● Beat: the pulse underlying music</li> <li>● Measure: the space between two bar lines</li> <li>● Collaboration: two or more people working together in a joint intellectual effort</li> <li>● Diction: using a “crisp &amp; clear” actor voice that can be understood by everyone watching and listening</li> </ul>

**TECHNOLOGY INTEGRATION**

<ul style="list-style-type: none"> <li>● iPad: students will record their group performances on the iPad. Performances will be used as a summative assessment.</li> </ul>
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**ASSESSMENTS**

Formative	Summative
<ul style="list-style-type: none"> <li>● Student rap template – one 16-measure verse, with 4 beats per measure, about objects that are attracted to magnets, one 16-measure verse, with 4 beats per measure, about objects that are not attracted to magnets.</li> </ul>	<ul style="list-style-type: none"> <li>● Recorded rap</li> <li>● Completed rap writing</li> </ul>

**MATERIALS**

<p>IPad, garageband application, rap template, wooden pitch frogs, plastic egg shakers</p>
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<b>Activating Strategy (5-10 min)</b>
<ul style="list-style-type: none"> <li>● Teacher will sing and perform the chorus of The Magnet Rap using Garage Band app.</li> <li>● Teacher will distribute instruments and have the class perform the chorus.</li> <li>● Discuss: <i>How will creating a rap help you remember what objects are and are not magnetic?</i></li> </ul>
<b>Main Activity</b>
<p><b>Part 1</b></p> <ul style="list-style-type: none"> <li>● Teacher will show the chorus of the Magnet Rap on the promethean board. Teacher will demonstrate (sing) the 16-measure, 4-beats per measure verse. Teacher will model to students how to use the Magnet Rap Template to write their two verses. (One verse for magnetic objects, one verse for non-magnetic objects)</li> <li>● Teacher will also use the measure and beats of the rap to correlate the creation of the rap to multiplication and division skills.</li> </ul> <p><b>Part 2</b></p> <ul style="list-style-type: none"> <li>● Student groups will create two verses of The Magnet Rap. Students will use the template to create their verses. Teacher will circulate while groups are working and assist where needed.</li> <li>● Students will use instruments and/or body percussion to perform the rap.</li> <li>● Students will use 16 measures, with 4 beats per measure, to write and perform their rap.</li> </ul> <p><b>Part 3</b></p>

- Students will practice their rap to bring it to performance level
- Student groups will perform their rap using instruments and/or body percussion.
- Students will perform their rap using actions, emotions, and voice.

**Classroom Tips:**

- Teacher will pre-select student groups that will work well together.
- Teacher will pre-select areas for the groups to work together on their rap.
- Teacher will discuss group work expectations using the **Magnetic Rap rubric** (See Downloads)

**REFLECTION****Reflection Questions**

- *How did creating a rap help me remember common objects that are magnetic and non-magnetic?*
- *How did using the 16-measure, 4-beats per measure pattern help my group write the rap?*
- *What math skills were utilized to write the rap?*
- *How did math help you write and perform the rap?*

**DIFFERENTIATION****Accelerated:**

- These students could turn the rap into a music video with different sounds and video features.
- They could also design an album cover, keeping in mind to use certain colors for magnetic objects (perhaps warm) and other colors for non-magnetic objects (perhaps cool).

**ADDITIONAL RESOURCES****Books**

- *Magnets: Pulling Together, Pushing Apart* by N. Rosinsky

**APPENDIX (See Downloads)**

- **Magnetic Rap Rubric**
- **Magnetic Rap Written Reflection**

**CREDITS**

U.S. Department of Education  
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### Magnetic Rap Rubric

Task	4	3	2	1
<b>Accuracy of Science Content</b>	Student demonstrates a thorough understanding of magnets and how they work. Their rap consistently includes factual information and science vocabulary.	Student mostly demonstrates an understanding of magnets and how they work. Their rap mostly includes factual information and science vocabulary.	Student somewhat demonstrates an understanding of magnets and how they work. Their rap somewhat includes factual information and science vocabulary.	Student rarely demonstrates an understanding of magnets and how they work. Their rap rarely includes factual information and science vocabulary.
<b>Organization of Rap</b>	Magnet rap consists of 16 measures, with 4 beats per measure. Rap includes 4 lines of 4 measures each with lines 1 & 2 rhyming and lines 3 & 4 rhyming.	Magnet rap consists of 16 measures, with 4 beats per measure. Rap includes 4 lines of 4 measures but only one pair of sentences rhymes.	Magnet rap consists of 8 measures, with 4 beats per measure. Rap did include at least one sentence pair of rhyming words.	Magnet rap consists of 8 or less measures, and no rhyming words.
<b>Student collaboration</b>	Student worked well with their partner throughout the entire project. Student gave positive feedback to peers.	Student worked well with their partner most of the time. Student gave positive feedback to their peer most of the time.	Student worked well with their partner some of the time. Student gave positive feedback to their peer some of the time.	Student did not work well with their partner. Student did not give positive feedback to their peer.
<b>Performance Skills</b>	Student consistently uses a loud, clear, expressive voice to perform his or her rap. Facial expressions and body movement is integrated fully. Student consistently speaks in rhythm, maintaining the beat.	Student most of the time uses a loud, clear, expressive voice to perform his or her rap. Facial expressions and body movement is integrated most of the time. Student mostly speaks in rhythm, maintaining the beat.	Student somewhat uses a loud, clear, expressive voice to perform his or her rap. Facial expressions and body movement is somewhat integrated. Student somewhat speaks in rhythm, maintaining the beat.	Student rarely uses a loud, clear, expressive voice to perform his or her rap. Facial expressions and body movement is rarely integrated. Student rarely speaks in rhythm, maintaining the beat.

Total Score: \_\_\_\_\_

**Written Reflection – Magnetic Rap**

1. How did creating a rap help me remember common objects that are magnetic and non-magnetic?

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2. How did using the 16-measure, 4-beats per measure pattern help my group write the rap?

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3. What math skills were utilized to write the rap?

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4. How did math help you write and perform the rap?

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