

# CCPS Science Unit Plan

<b>Grade</b>	Kindergarten	<b>Subject</b>	Science	<b>Unit #</b>	1
<b>Unit Name</b>	Unit 1: Physical Attributes		<b>Timeline</b>	5 weeks	
<b>How to use the Framework</b>	<p>This Framework should be used to implement daily science instruction. The resources and instructional strategies reflected in the Framework will provide a foundation for effective implementation and student mastery of standards.</p> <p>Please see the hyperlinked <a href="#">abbreviation document</a> to ensure understanding of all abbreviations used with this framework.</p> <p><a href="#">CCPS Department of Science Website</a> for access to all unit frameworks</p>				
<b>Unit Overview</b>	<p><b>The Big Idea for Kindergarten Science is “How we Classify Things” Students will ask questions to compare and sort objects. Students will begin to use their 5 senses and science tools to classify objects based on attributes. Students will use this information to plan and carry out an investigation predicting whether objects will sink or float.</b></p> <p><b>Throughout this unit, the student will:</b></p> <ul style="list-style-type: none"> <li>• obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes.</li> <li>• ask questions to compare and sort objects made of different materials (e.g., clay, cloth, plastic, wood, paper, metal).</li> <li>• use senses and science tools to classify common objects (e.g., buttons, cloth swatches) by physical attributes (color, size, shape, weight, texture).</li> <li>• plan and carry out an investigation to predict and observe whether objects will sink or float based on their physical attributes.</li> </ul> <p><b>Throughout this unit the teacher should:</b></p> <ul style="list-style-type: none"> <li>• ensure students can describe objects in terms of the materials they are made of and their physical attributes.</li> <li>• guide students to ask questions and compare and sort objects made of different materials (e.g., clay, cloth, plastic, wood, paper, metal).</li> <li>• support students in using their senses and science tools to classify common objects (e.g., buttons, cloth swatches) by physical attributes (color, size, shape, weight, texture).</li> <li>• help students plan and carry out investigations to predict and observe whether objects will sink or float based on their physical attributes.</li> </ul> <p>■ <a href="#">Science-Kindergarten-Teacher-Notes.pdf</a></p>				
<b>Standards</b>	<b><u>GSE</u></b>		<b><u>Science and Engineering Practices</u></b>		<b><u>Crosscutting Concepts</u></b>
	<p><b>SKP1: Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes.</b></p> <p>a. Ask questions to compare and sort objects made of different materials. (Common materials include clay, cloth, plastic, wood, paper, and metal.)</p> <p>b. Use senses and science tools to classify common objects, such as buttons or</p>		<p><b>Asking questions and defining problems</b> Ask questions based on observations to find more information about the designed world.</p> <p><b>Plan and carry out an investigation</b> Make observations (firsthand or from media) to collect data that can be used to make comparisons.</p>		<p><b>Patterns</b> Patterns in the natural world and human designed world can be observed and used as evidence.</p> <p><b>Structure and Function</b> The shape and stability of structures of natural and designed objects are related to their function/s.</p>

	<p>swatches of cloth, according to their physical attributes (color, size, shape, weight, and texture).</p> <p>c. Plan and carry out an investigation to predict and observe whether objects, based on their physical attributes, will sink or float.</p>	<p><b>Obtain, evaluate, and communicate information</b></p> <p>Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.</p>	
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<b>NGSS Alignment</b>	<a href="#">NGSS Alignment to Disciplinary Core Ideas</a>
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**The Phenomenon Protocol**

Anchoring Phenomena	Learning Targets
<a href="#">SKPL.a</a>	The students will ask questions to compare and sort objects made of different materials (e.g., clay, cloth, plastic, wood, paper, metal).
<a href="#">SKPL.b</a>	The students will use senses and science tools to classify common objects (e.g., buttons, cloth swatches) by physical attributes (color, size, shape, weight, texture).
<a href="#">SKPL.c</a>	The students will plan and carry out an investigation to predict and observe whether objects will sink or float based on their physical attributes.

**Weekly Lesson Tasks**

Navigation: [Week 1](#) | [Week 2](#) | [Week 3](#) | [Week 4](#) | [Week 5](#) | [Additional Resources](#)

**Week 1**

[Standards](#) | [Phenomenon](#) | [Weekly Lessons](#)

<b>GSE:</b> SKP1.b	<b>Focused Concept:</b> Objects have many observable physical attributes, including color, size, shape, weight, and texture.
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<b>Learning Target</b>	The students will ask questions to compare and sort objects made of different materials
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<b>Lab Safety Protocol and Materials</b>	<a href="#">W</a> General Safety Practices for the Elementary Science Classroom- TOC.docx
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**SEP TEACHER TIP:**  
To support students with the Science & Engineering Practices for this week, follow the guidance in this protocol: [Ask Questions and Define Problems.pdf](#)

<b>Phenomenon:</b> <a href="#">Coin Sorting Machine</a>	<b>Driving Question:</b> How can I use the physical attributes of objects to sort them?
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<b>Day 1: Opening</b>	<b>Day 2 : Guided Practice/</b>	<b>Day 3: Independent Practice</b>	<b>Day 4: Independent Practice</b>	<b>Day 5: Assessment / Summary</b>
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	Transition			
<p><b>Phenomenon Introduction (5-7 minutes)</b> Show students the phenomenon card : <a href="#">Coin Sorting Machine</a></p> <p>Use the <a href="#">see, think wonder strategy</a> to guide student thinking.</p> <p>The teacher should provide students opportunities to share observations and develop questions. The teacher should record students' observations on chart paper and refer back to initial student ideas throughout the week.</p> <p><b>Inquiry Activity (10-15 minutes)</b></p> <p><b>uConnect Lab</b> <a href="#">What is the Object?</a></p> <p><b>Objective:</b> Students will use their senses to make observations about objects hidden in a bag in order to identify the objects?</p> <p><b>Materials:</b> bag, small classroom objects, <a href="#">placemat organizer</a></p> <p><b>Procedure:</b> Have students follow the procedure provided in the lab.</p> <p>If students need more direction on this lab, use the following procedure.</p> <ol style="list-style-type: none"> <li>1. <i>Look at this object. What do you think it is?</i></li> </ol>	<p><b>Introduce the Driving Question: (7-10 minutes)</b> Have students review the driving question:</p> <p><i>How can I use the physical attributes of objects to sort them?</i></p> <p>Use the strategy to support students with making connections and understanding the driving question (DQ).</p> <p><a href="#">Visualizing the Driving Question</a></p> <p>Click here to access <a href="#">question words reference chart</a></p> <p>The process can be recorded on chart paper with the students or the teacher can complete the graphic organizer.</p> <p>Be sure to create a reference for students to have throughout the week.</p> <p><b>**TEACHER NOTE:</b> Students should not answer the driving question at this time. Students will need to collect information, data and understanding from the phenomenon strategy, inquiry activity, investigation, text or video protocol and vocabulary strategy to develop a response in the claim-evidence-reasoning format.</p> <p><b>Claim-Evidence-Reasoning (CER) (10-12 minutes)</b></p> <p><b>Objective:</b> Expose students to claim-evidence-reasoning (CER)</p>	<p><b>Graphic Organizer (2-3 minutes for students to access)</b> Students will need and will use the student lab sheet for “How does it feel?” provided in their consumable book or the access to the <a href="#">student handout for “How does it feel?”</a></p> <p><b>Materials:</b> index cards, pencil or, chromebook, objects (rock, stuffed animal, sandpaper, can), <a href="#">lab placement organizer</a> <i>Alternative Materials: Cotton balls, sponges, and burlap cloth can also be used as objects in this lab.</i></p> <p><b>Investigation Facilitation (20-25 minutes)</b></p> <p><a href="#">uInvestigation lab</a></p> <p><b>How does it feel?</b></p> <p><b>Objective:</b> Students will explore using their sense of touch with different objects.</p> <p><b>Procedure:</b> Students will need to work in partner pairs. The teacher should assign partners prior to the beginning of the lesson.</p> <p>Have students follow the procedure provided in the lab.</p> <p>Before the lab, <i>ask students to notice how different things feel. Have students describe how their desks feel.</i>(smooth,</p>	<p><b>Text Annotation Strategy (30-45 minutes)</b> Have students read and annotate the following text: <a href="#">The World of Matter</a></p> <p>The text for this week’s lesson can be found in Savvas. The teacher should log in to Savvas before clicking the link. This reader discusses some everyday examples of matter and their properties.</p> <p>View the following facilitation directions: The text is designed to be projected or copied onto chart paper for a shared and interactive reading experience. More advanced students may benefit from following along on a paper copy.</p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy:  <span style="background-color: #e0e0e0;">■ K-2 Text Annotation Prot...</span></p> <p>Students should complete the following student handout as they work through the text annotation protocol:  <a href="#">K-2 Text Annotation Student Document (editable)</a>  <span style="background-color: #e0e0e0;">■ K-2 Text Annotation Stu...</span></p> <p>During the teacher-led discussion, the teacher should ask the following questions: <i>Matter is anything that takes up</i></p>	<p><b>Review the Phenomenon (5-7 minutes)</b></p> <p>Allow students to review the initial observations and questions from see, think, wonder strategy on Day 1.</p> <p>Have students review initial ideas. Ask students: <i>Have any of your ideas about the phenomenon changed? How?</i></p> <p>Have students review their initial questions. Ask students: <i>What questions generated on Day 1 can you answer, now? What are your answers to those questions?</i></p> <p><b>Assessment for Learning: (10-15 minutes)</b> Have students complete the following <a href="#">assessment</a>.</p> <p><b>**TEACHER NOTE:</b> Assessments may be administered to the whole group or small group. Provide each student with a copy of the assessment. Display the assessment for students to track as the teacher reads each question. The teacher will read each question and the responses. Instruct the student to mark or circle the correct answer.</p>

2. Put the object in the bag.
3. *Ask a partner to ask questions about the object. You answer yes or no to the questions.*
4. Have a partner guess the object.
5. Give a partner a turn.

**\*\*TEACHER NOTE:** Consider using classroom objects that students are familiar with to ensure they can contribute to the discussion of how to describe an object. Provide students with a color and shape chart. Consider presenting and describing the objects prior to placing objects in the bag.

Additional guided inquiry steps to support students in this lab can be found in the teacher's edition.

Have students organize their thinking using the provided placemat sheet.

Students will probably be familiar with the feely bag game. This is a great activity that can be used to teach problem-solving, prediction, and analysis. Students may or may not be familiar with the selected objects. For students who have difficulty describing objects they cannot see, consider presenting and describing the objects to students in advance of the activity.

*As students consider objects in the feely bag, challenge them*

student samples below to review and understand their peers' thoughts on the topic, initiating the process of developing skills for effective argumentation.

The teacher should state the following to students:

“Claim-Evidence-Reasoning or CER is a way of writing that helps students understand and explain what they learn in science investigations and science ideas.”

Review the [claim-evidence-reasoning poster](#) with students.

As a class or in student groups, provide students with this week's claim- evidence-reasoning sample.

[Week 1 Physical Attributes work samples](#)

The teacher or students should read over student sample(s) to analyze claim-evidence-reasoning protocol. Ask students to use the CER observations chart to complete the following analysis protocol:

[Claim-Evidence-Reasoning Record Observations Document](#) (google doc)

**Claim-Evidence-Reasoning...** (PDF)

*1. Identify the student's claim in the sample and have the teacher or students write their observations or questions.*

*2. Identify the student's evidence*

hard, cold). Explain to the students that they have just made an observation. *Ask students how their hair feels.* (soft, stringy, warm) Tell them this is another observation. *Ask students how their desks feel different from their hair.* (The desk feels hard; hair feels soft.) Discuss with students how to compare their observations.

**\*\*TEACHER NOTE:** In this lab, students will begin to notice that objects feel different. Students will brainstorm words that describe how objects feel. Teachers will need to support students with brainstorming words and record the words on chart paper for their reference.

Have students organize their thinking using the provided placemat sheet.

*space. What are some examples of matter? Can you name some things that you can touch and hold? What are some of your favorite toys? Do they take up space?*

**\*\*TEACHER NOTE:** Read and review the annotation protocol prior to providing this lesson to students. Students will need to be placed in groups or have an understanding of how the groups will change to limit time used for transitioning.

**Vocabulary Words:** attributes, color, size, shape

**Vocabulary Strategy:** (10-15 minutes)

**Four Square** Provide students with the [graphic organizer \(editable\)](#) or [pdf handout](#), explaining its four sections: word, meaning, picture, and sentence.

Use a Think Aloud to demonstrate how to use the graphic organizer with one of the provided vocabulary words.

Allow students to work in collaborative groups. Actively monitor and facilitate small group discussions and review various artifacts (pictures, images, primary sources, charts) to build knowledge of the term.


Have students collaborate to complete the four square strategy for the other vocabulary terms.

to think carefully about how they can use their senses to come up with questions to ask.

in the sample and have the teacher or students write their observations or questions.

3. Identify the student's reasoning in the sample and have the teacher or students write their observations or questions.

Ask the following questions to students as they analyze the student samples:

 Claim-Evidence-Reasoning...

**\*\*TEACHER NOTE:** As students review the student samples, they will begin to see or read vocabulary. Begin or continue a reference chart of questions or observations about vocabulary. Students will explicitly learn vocabulary on Day 4.

Monitor student progress, sharing new ideas for class discussion, and help students distinguish essential from non-essential characteristics.

Allow groups to share their thinking through academic dialogue and compare their completed task with members of other groups.

## Week 2

[Standards](#) | [Phenomenon](#) | [Weekly Lessons](#)

GSE:SKP1.b

### Focused Concept:

Students will explore their senses to make observations. Objects have many observable physical attributes, including color, size, shape, weight, and texture.

### Learning Target

The students will ask questions to compare and sort objects made of different materials.

### Lab Safety Protocol and Materials

 General Safety Practices for the Elementary Science Classroom- TOC.docx

### SEP TEACHER TIP:

To support students with the Science & Engineering Practices for this week, follow the guidance in this protocol:  Ask Questions and Define Problems.pdf

### Phenomenon:

[Coin Sorting Machine](#)

### DQ:

How can I use the physical attributes of objects to sort them?

Day 1: Opening	Day 2 : Guided Practice/ Transition	Day 3: Independent Practice	Day 4: Independent Practice	Day 5: Assessment / Summary
<p><b>Phenomenon Introduction</b> (5-7 minutes)</p> <p>Show students the phenomenon card : <a href="#">Coin Sorting Machine</a></p> <p>Use the <a href="#">see, think wonder strategy</a> to guide student thinking.</p> <p>The teacher should provide students opportunities to share observations and develop questions. The teacher should record students' observations on chart paper and refer back to initial student ideas throughout the week.</p> <p><b>Inquiry Activity</b> (10-15 minutes)</p> <p>In this Engage activity, "<a href="#">Observing Matter</a>," students are guided by their host, Freddy.</p> <p>During the animated video, students have various opportunities to observe matter. Complete this activity with partner pairs or in a group. The activity consists of four distinct parts.</p> <p><b>Objective:</b> Students will activate prior knowledge regarding qualitative and quantitative observations.</p> <p><b>**TEACHER NOTE:</b> Use these</p>	<p><b>Introduce the Driving Question:</b> (7-10 minutes)</p> <p>Have students review the driving question:</p> <p><i>How can I use the physical attributes of objects to sort them?</i></p> <p>Use the strategy to support students with making connections and understanding the driving question (DQ).</p> <p><a href="#">Visualizing the Driving Question</a></p> <p>Click here to access <a href="#">question words reference chart</a></p> <p>The process can be recorded on chart paper with the students or the teacher can complete the graphic organizer.</p> <p>Be sure to create a reference for students to have throughout the week.</p> <p><b>**TEACHER NOTE:</b> Students should not answer the driving question at this time. Students will need to collect information, data and understanding from the phenomenon strategy, inquiry activity, investigation, text or video protocol and vocabulary strategy to develop a response in the claim-evidence-reasoning format.</p>	<p><b>Graphic Organizer</b> (2-3 minutes for students to access)</p> <p>Students will need and will use the student lab sheet for “Matter Detective” provided here <a href="#">“Matter Detective”</a></p> <p><b>Materials</b> Observable objects around classroom or outside, 3” x 5” index cards with one property printed and/or illustrated on each card including shapes, color words, textures, size, and weight, <a href="#">Lab placemat</a></p> <p><b>Investigation Facilitation</b> (30-35 minutes)</p> <p><b>Investigation lab</b></p> <p><a href="#">Matter Detectives</a></p> <p><b>Objective:</b> To demonstrate that the properties of matter can be described through quantitative and qualitative observations.</p> <p>Students will need to work in partner pairs. The teacher should assign partners prior to the beginning of the lesson.</p> <p>Have students follow the procedure provided in the lab.</p> <p><i>“What are the properties of matter we can observe?”</i> <i>“Were you surprised to find so</i></p>	<p><b>Text Annotation Strategy</b> (30-45 minutes)</p> <p>Have students read and annotate the following text: <a href="#">Your Five Senses</a></p> <p>The text for this week’s lesson can be found <a href="#">here</a>.</p> <p>View the following facilitation directions: The text is designed to be projected or copied onto chart paper for a shared and interactive reading experience. More advanced students may benefit from following along on a paper copy.</p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy:</p> <p>■ K-2 Text Annotation Prot...</p> <p>Students should complete the following student handout as they work through the text annotation protocol:</p> <p><a href="#">K-2 Text Annotation Student Document (editable)</a></p> <p>■ K-2 Text Annotation Stu...</p> <p>During the teacher-led discussion, the teacher should ask the following questions:</p> <p><i>How many senses do people</i></p>	<p><b>Review the Phenomenon</b> (5-7 minutes)</p> <p>Allow students to review the initial observations and questions from see, think, wonder strategy on Day 1.</p> <p>Have students review initial ideas. Ask students: <i>Have any of your ideas about the phenomenon changed? How?</i></p> <p>Have students review their initial questions. Ask students: <i>What questions generated on Day 1 can you answer, now? What are your answers to those questions?</i></p> <p><b>Claim-Evidence-Reasoning</b> (15-25 minutes)</p> <p>Students will write a response to the following driving question in the CER format.</p> <p><i>How can I use the physical attributes of objects to sort them?</i></p> <p>Review the <a href="#">claim-evidence-reasoning poster</a> with the students</p> <p><b>**TEACHER NOTE:</b> Provide students with sentence starters by sharing on the board:</p> <p>■ K-2 Claim-Evidence-Rea...</p> <p>Have students write their claim-evidence-reasoning</p>



questions and suggested student responses to facilitate a discussion that introduces the concept of qualitative and quantitative observations.

*In what ways did you observe senses being used? Hint: Why did the brother think the dog was the "biggest"?*  
*In what ways did you observe tools being used?*

*Hint: How did the brothers know they were waiting for only 30 minutes for the ice cream truck?*

*Why might it be important to use both types of observations?*

*Hint: Think about when you're sick and your mom feels your forehead to see if you're warm. What does she do next to find out what your temperature is?*

## **Claim-Evidence-Reasoning (CER)**

**(10-12 minutes)**

**Objective:** Expose students to claim-evidence-reasoning (CER) student samples below to review and understand their peers' thoughts on the topic, initiating the process of developing skills for effective argumentation.

The teacher should state the following to students:

"Claim-Evidence-Reasoning or CER is a way of writing that helps students understand and explain what they learn in science investigations and science ideas."

Review the [claim-evidence-reasoning poster](#) with students.

As a class or in student groups, provide students with this week's claim-evidence-reasoning sample.

[Week 2 Physical Attributes work samples](#)

The teacher or students should read over student sample(s) to analyze claim-evidence-reasoning protocol. Ask students to use the CER observations chart to complete the following analysis protocol:

[Claim-Evidence-Reasoning Record Observations Document](#) (google doc)

[Claim-Evidence-Reasoning \(PDF\)](#)

*many examples around us? Why or why not?"*

**\*\*TEACHER NOTE:**

In this lab, students will be able to demonstrate that matter is found all around us and can be observed, identified, and classified by properties. At the conclusion of the lesson, remember to review the following key points:

Read the process skill to your students and have them compare what they did to what professional scientists do. Scientists learn through observations.

Direct observation of objects in their surroundings is more meaningful and adds validity to the concept being taught. Scientists compare and contrast what they observe. Conducting follow-up with all teams provides a valuable extension of the observation activity as students will learn from other teams' findings as well as their own.

Have students organize their thinking using the provided placemat sheet.

*have?*

*What part of your body picks up smells?*

*What sense do your eyes bring you?*

**\*\*TEACHER NOTE:** Read and review the annotation protocol prior to providing this lesson to students. Students will need to be placed in groups or have an understanding of how the groups will change to limit time used for transitioning.

## **Vocabulary Words**

weight, texture

**Vocabulary Strategy: (10-15 minutes)**

## **Four Square**

Provide students with the [graphic organizer \(editable\)](#) or [pdf handout](#), explaining its four sections: word, meaning, picture, and sentence.

Use a Think Aloud to demonstrate how to use the graphic organizer with one of the provided vocabulary words.

Allow students to work in collaborative groups. Actively monitor and facilitate small group discussions and review various artifacts (pictures, images, primary sources, charts) to build knowledge of the term.

Have students collaborate to complete the four square strategy for the other vocabulary terms.

## **writing a claim**

Have students develop a claim which is their answer to the driving question. Students should use all their knowledge from the phenomenon, inquiry activity, investigation, and information analysis protocol to develop an answer to the question.

## **writing evidence**

Students should provide observational or numerical data as their evidence from their investigation and write a short caption or brief description of the data they provide to support their claim.

## **writing the reasoning**

Students will use textual evidence from the "text annotation graphic organizer" to generate the reasoning or justification in the CER format.

Have students use the following template to write their claim-evidence-reasoning (CER)

[K-2 Student Writing Template \(editable\)](#)

[K-2 Student Writing Template \(pdf\)](#)


**\*\*TEACHER NOTE:** Have students review the student sample(s) of claim-evidence-reasoning on Day 2. Have students compare their writing to those students' samples. Ask the following questions:

1. Identify the student's claim in the sample and have the teacher or students write their observations or questions.

2. Identify the student's evidence in the sample and have the teacher or students write their observations or questions.

3. Identify the student's reasoning in the sample and have the teacher or students write their observations or questions.

Ask the following questions to students as they analyze the student samples:

 Claim-Evidence-Reasoni...

**\*\*TEACHER NOTE:** As students review the student samples, they will begin to see or read vocabulary. Begin or continue a reference chart of questions or observations about vocabulary. Students will explicitly learn vocabulary on Day 4.

Monitor student progress, sharing new ideas for class discussion, and help students distinguish essential from non-essential characteristics.

Allow groups to share their thinking through academic dialogue and compare their completed task with members of other groups.

*How are your thoughts or understanding similar to another writer on the topic? How are your thoughts or understanding different to another writer on the topic? What would you like to learn more about? Why?*

### Week 3

[Standards](#) | [Phenomenon](#) | [Weekly Lessons](#)

GSE:SKP1. a

**Focused Concept:**

Objects can be described by the physical attributes of the materials from which they are made, and those attributes can be used to separate or sort a group of objects or materials.

**Learning Target**

The students will use senses and science tools to ask questions and classify common objects by physical attributes.

**Lab Safety Protocol and**

 General Safety Practices for the Elementary Science Classroom- TOC.docx



**Materials****SEP TEACHER TIP:**

To support students with the Science & Engineering Practices for this week, follow the guidance in this protocol: [Ask Questions and Define Problems.pdf](#)

**Phenomenon:**

[Recycling Center Sorts Recyclables](#)

**DQ:**

How can I use the physical attributes of objects to sort them?

Day 1: Opening	Day 2 : Guided Practice/ Transition	Day 3: Independent Practice	Day 4: Independent Practice	Day 5: Assessment / Summary
<p><b>Phenomenon Introduction</b> (5-7 minutes)</p> <p>Show students the phenomenon card: <a href="#">Recycling Center Sorts Recyclables</a></p> <p>Use the <a href="#">see, think wonder strategy</a> to guide student thinking.</p> <p>Teachers should provide students opportunities to share observations and develop questions. The teacher should record students' observations on chart paper and refer back to initial student ideas throughout the week.</p> <p><b>Inquiry Activity</b> (10-15 minutes)</p> <p>Interactivity Have students complete the <a href="#">How can you sort objects? digital activity</a>.</p> <p><b>Objective:</b> This activity provides students with opportunities to sort objects based on properties.</p> <p>Have students complete the</p>	<p><b>Introduce the Driving Question:</b> (7-10 minutes)</p> <p>Have students review the driving question:</p> <p><i>How can I use the physical attributes of objects to sort them?</i></p> <p>Use the strategy to support students with making connections and understanding the driving question (DQ).</p> <p><a href="#">Visualizing the Driving Question</a></p> <p>Click here to access <a href="#">question words reference chart</a></p> <p>The process can be recorded on chart paper with the students or the teacher can complete the graphic organizer.</p> <p>Be sure to create a reference for students to have throughout the week.</p> <p><b>**TEACHER NOTE:</b> Students should not answer the driving question at this time. Students</p>	<p><b>Graphic Organizer</b> (2-3 minutes for students to access)</p> <p>Students will need and will use the student lab sheet for <a href="#">“How are objects the same?”</a> provided in their consumable book or the access to the student handout for <a href="#">“How are objects the same?”</a></p> <p><b>Materials:</b> various Objects, pencil or chromebook, <a href="#">placemat organizer</a></p> <p><b>Investigation Facilitation</b> (30-35 minutes)</p> <p><b>uInvestigation lab</b> <a href="#">How are the objects the same</a></p> <p><b>Objective:</b> Students describe and sort objects</p> <p>Students will need to work in partner pairs. The teacher should assign partners prior to the beginning of the lesson.</p> <p>Have students follow the procedure provided in the lab.</p> <p>If students need more direction on this lab, use the following procedure.</p>	<p><b>Text Annotation Strategy</b> (30-45 minutes)</p> <p>Have students read and annotate the following text: (<a href="#">What is an Attribute? By: Nancy Allen. Get Epic books</a>) The teacher should log in to Get Epic Books first before clicking the link.</p> <p>View the following facilitation directions: The text is designed to be projected or copied onto chart paper for a shared and interactive reading experience.</p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy:</p> <p><a href="#">K-2 Text Annotation Prot...</a></p> <p>Students should complete the following student handout as they work through the text annotation protocol:</p> <p><a href="#">K-2 Text Annotation Student Document (editable)</a></p> <p><a href="#">K-2 Text Annotation Stu...</a></p>	<p><b>Review the Phenomenon</b> (5-7 minutes)</p> <p>Allow students to review the initial observations and questions from see, think, wonder strategy on Day 1.</p> <p>Have students review initial ideas. Ask students: <i>Have any of your ideas about the phenomenon changed? How?</i></p> <p>Have students review their initial questions. Ask students: <i>What questions generated on Day 1 can you answer, now? What are your answers to those questions?</i></p> <p><b>Assessment for Learning:</b> (10-15 minutes)</p> <p>Have students complete the following assessment.</p> <p><a href="#">Objects Quiz</a></p> <p><b>**TEACHER NOTE:</b> Assessments may be administered to the whole group or small group. Provide each student with a copy of the assessment. Display the assessment for students to track</p>

How can you sort objects?digital activity.

**What it is** An interactivity for sorting objects based on different properties

**What it does** Provides students with opportunities to sort objects based on properties

**How to use it**

Have students watch the animation about sorting objects.

Have students complete the activity by thinking of another way to sort the objects

**\*\*TEACHER NOTE:** Have students watch the video about sorting objects. Have students complete the activity by thinking of another way to sort objects.

Additional scaffolded questions to support students in this activity can be found in the teacher's edition.

Ask the students the following:  
*Identify Which objects on the page have the same color?*

*Classify If someone wanted to add a photo of a red apple, which group would you put it in? Why?*

*Compare Choose one object from each of two of the groups. Are the objects the same in any*

will need to collect information, data and understanding from the phenomenon strategy, inquiry activity, investigation, text or video protocol and vocabulary strategy to develop a response in the claim-evidence-reasoning format.

**Claim-Evidence-Reasoning (CER)**  
**(10-12 minutes)**

**Objective:** Expose students to claim-evidence-reasoning (CER) student samples below to review and understand their peers' thoughts on the topic, initiating the process of developing skills for effective argumentation.

The teacher should state the following to students:

“Claim-Evidence-Reasoning or CER is a way of writing that helps students understand and explain what they learn in science investigations and science ideas.”

Review the [claim-evidence-reasoning poster](#) with students.

As a class or in student groups, provide students with this week's claim-evidence-reasoning sample.

[Week 3 Physical Attributes work samples](#)

The teacher or students should read over student sample(s) to analyze claim-evidence-reasoning protocol.

1. Choose six objects with a partner.
2. Sort the objects into two groups.
3. *Have a partner ask questions about the objects. You answer them.*
4. *Tell how the objects in each group are alike.*
5. Switch roles.

**\*\*TEACHER NOTE:** In this lab, students will observe that each object has more than one property. Help them understand that the objects do not need to share all the same properties to be sorted together.

There are additional guided inquiry steps found in the teacher edition that the teacher may follow to support students in this inquiry lab.

During the teacher-led discussion, the teacher should ask the following questions:

*What two cars are alike?  
Describe how they are alike?  
What two cars are different?*

**\*\*TEACHER NOTE:** Read and review the annotation protocol prior to providing this lesson to students. Students will need to be placed in groups or have an understanding of how the groups will change to limit time used for transitioning.

**Vocabulary Words**  
attributes, clay, cloth, plastic,

**Vocabulary Strategy:**  
**(10-15 minutes)**

**Four Square**  
Provide students with the [graphic organizer \(editable\)](#) or [pdf handout](#), explaining its four sections: word, meaning, picture, and sentence.

Use a Think Aloud to demonstrate how to use the graphic organizer with one of the provided vocabulary words.

Allow students to work in collaborative groups. Actively monitor and facilitate small group discussions and review various artifacts (pictures, images, primary sources, charts) to build knowledge of the term.

Have students collaborate to complete the four square strategy for the other vocabulary terms.

as the teacher reads each question. The teacher will read each question and the responses. Instruct the student to mark or circle the correct answer.

*way? How? Are they different in any way? How?*

Ask students to use the CER observations chart to complete the following analysis protocol:

[Claim-Evidence-Reasoning Record Observations Document](#)  
(google doc)

■ Claim-Evidence-Reasoni...  
(PDF)

*1. Identify the student's claim in the sample and have the teacher or students write their observations or questions.*

*2. Identify the student's evidence in the sample and have the teacher or students write their observations or questions.*

*3. Identify the student's reasoning in the sample and have the teacher or students write their observations or questions.*

Ask the following questions to students as they analyze the student samples:

■ Claim-Evidence-Reasoni...

**\*\*Teacher Note:** As students review the student samples, they will begin to see or read vocabulary. Begin or continue a reference chart of questions or observations about vocabulary. Students will explicitly learn vocabulary on Day 4.

Monitor student progress, sharing new ideas for class discussion, and help students distinguish essential from non-essential characteristics.

Allow groups to share their thinking through academic dialogue and compare their completed task with members of other groups.

Week 4

[Standards](#) | [Phenomenon](#) | [Weekly Lessons](#)

GSE:SKP1. a

**Focused Concept:**

Objects can be described by the physical attributes of the materials from which they are made, and those attributes can be used to separate or sort a group of objects or materials.

**Learning Target**

The students will use senses and science tools to ask questions to help classify common objects by physical attributes.

**Lab Safety Protocol and Materials**

[W](#) General Safety Practices for the Elementary Science Classroom- TOC.docx

**SEP TEACHER TIP:**

To support students with the Science & Engineering Practices for this week, follow the guidance in this protocol: [Ask Questions and Define Problems.pdf](#)

**Phenomenon: Loaded**  
[Recycling Center Sorts Recyclables](#)

**DQ:**

How can I use the physical attributes of objects to sort them?

Day 1: Opening	Day 2 : Guided Practice/ Transition	Day 3: Independent Practice	Day 4: Independent Practice	Day 5: Assessment / Summary
<p><b>Phenomenon Introduction</b> (5-7 minutes)</p> <p>Show students the phenomenon card : <a href="#">Recycling Center Sorts Recyclables</a></p> <p>Use the <a href="#">see, think wonder strategy</a> to guide student thinking.</p> <p>Teachers should provide students opportunities to share observations and develop questions. The teacher should record students' observations on chart paper and refer back to initial student ideas throughout the week.</p> <p><b>Inquiry Activity</b> (10-15 minutes)</p> <p>Students will carry out the following hands-on</p>	<p><b>Introduce the Driving Question:</b> (7-10 minutes)</p> <p>Have students review the driving question:</p> <p><i>How can I use the physical attributes of objects to sort them?</i></p> <p>Use the strategy to support students with making connections and understanding the driving question (DQ).</p> <p><a href="#">Visualizing the Driving Question</a></p> <p>Click here to access <a href="#">question words reference chart</a></p> <p>The process can be recorded on chart paper with the students or the teacher can complete the</p>	<p><b>Graphic Organizer</b> (2-3 minutes for students to access)</p> <p>Students will need and will use the student lab sheet for “How can you observe and sort objects?” provided in their consumable book or the access to the student handout for “<a href="#">How can you observe and sort objects?</a>”</p> <p><b>Materials:</b> box of objects, tools for observing, such as a scale and hand lens, <a href="#">placemat organizer</a></p> <p><b>Investigation Facilitation</b> (30-35 minutes) “How can you observe and sort objects?”</p> <p><b>Objective:</b> Students will use</p>	<p><b>Text Annotation Strategy</b> (30-45 minutes)</p> <p>Have students read and annotate the following text: <a href="#">Reading Science: Read Aloud - Cleaning Day</a></p> <p>The text for this week’s lesson can be found at the link above.</p> <p>View the following facilitation directions: The text is designed to be projected or copied onto chart paper for a shared and interactive reading experience. More advanced students may benefit from following along on a paper copy.</p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy:</p>	<p><b>Review the Phenomenon</b> (5-7 minutes)</p> <p>Allow students to review the initial observations and questions from see, think, wonder strategy on Day 1.</p> <p>Have students review initial ideas. Ask students: <i>Have any of your ideas about the phenomenon changed? How?</i></p> <p>Have students review their initial questions. Ask students: <i>What questions generated on Day 1 can you answer; now? What are your answers to those questions?</i></p> <p><b>Claim-Evidence-Reasoning</b> (15-25 minutes)</p> <p>Students will write a response to the following driving question</p>

investigation to obtain information about the properties of different materials.

**Objective:** Students will group materials with similar attributes and create a classification system for sorting these objects.

**Materials:** Teachers will provide a small group (2-4) students with a large zip-top bag full of a variety of different materials. Examples of these materials include paper, metal, plastic, cloth, foam, wood, and clay.

**Procedure:** Provide each group a sheet of chart paper. (Draw a vertical line down the center of the paper, then draw three equally spaced horizontal lines across to create six boxes). Without giving students sorting guidelines, *ask them to sort the materials into different categories*. Once students have completed this sort, *ask students to repeat the activity several more times using a DIFFERENT way to sort them each time*.

**\*\*TEACHER NOTE:** When choosing materials to put in the bag, try to select materials that show variety. For example, you could put several different types of paper in the bag: a piece of white paper, a piece of yellow construction paper, a piece of colorful wrapping paper, a piece of a brown paper bag, a piece of newspaper, etc. Repeat this for each type of material. Teacher captures sorted objects.

graphic organizer.

Be sure to create a reference for students to have throughout the week.

**\*\*TEACHER NOTE:** Students should not answer the driving question at this time. Students will need to collect information, data and understanding from the phenomenon strategy, inquiry activity, investigation, text or video protocol and vocabulary strategy to develop a response in the claim-evidence-reasoning format.

### Claim-Evidence-Reasoning (CER) (10-12 minutes)

**Objective:** Expose students to claim-evidence-reasoning (CER) student samples below to review and understand their peers' thoughts on the topic, initiating the process of developing skills for effective argumentation.

The teacher should state the following to students:

“Claim-Evidence-Reasoning or CER is a way of writing that helps students understand and explain what they learn in science investigations and science ideas.”

Review the [claim-evidence-reasoning poster](#) with students.

As a class or in student groups, provide students with this week's claim-

their senses to observe and sort objects.

**Procedure:** Students will work independently. Have students follow the procedure provided in the lab.

Students choose one object from the objects presented and identify different ways to observe and sort the object using their senses. Students draw or write their observations in the space provided.

Have students repeat steps with multiple objects.

**\*\*TEACHER NOTE:** Instructions for differentiated instruction is located in the teacher edition. After students choose an object, go through each of the five senses one by one and ask: *Can you use your sense of \_\_\_\_ to observe it?* If the answer is yes, ask: *What does it \_\_\_\_ like?* Suggest that struggling students draw their observations.

### K-2 Text Annotation Prot...

Students should complete the following student handout as they work through the text annotation protocol:

[K-2 Text Annotation Student Document \(editable\)](#)

### K-2 Text Annotation Stu...

During the teacher-led discussion, the teacher should ask the following questions:

*Using the reading, what is one way that Emma could sort her crayons?* Shape  
*What can the reader tell about Emma's buttons?* Some are heavy, and some are light.  
*What are two ways Emma could sort her markers?* Color and smell

**\*\*TEACHER NOTE:** Read and review the annotation protocol prior to providing this lesson to students. Students will need to be placed in groups or have an understanding of how the groups will change to limit time used for transitioning.

### Vocabulary Words

wood, paper, metal

### Vocabulary Strategy: (10-15 minutes)

#### Four Square

Provide students with the [graphic organizer \(editable\)](#) or [pdf handout](#), explaining its four sections: word, meaning, picture, and sentence.

in the CER format.

*How can I use the physical attributes of objects to sort them?*

Review the [claim-evidence-reasoning poster](#) with the students

**\*\*TEACHER NOTE:** Provide students with sentence starters by sharing on the board:

**K-2 Claim-Evidence-Rea...**

Have students write their claim-evidence-reasoning

### writing a claim

Have students develop a claim which is their answer to the driving question. Students should use all their knowledge from the phenomenon, inquiry activity, investigation, and information analysis protocol to develop an answer to the question.

### writing evidence

Students should provide observational or numerical data as their evidence from their investigation and write a short caption or brief description of the data they provide to support their claim.

### writing the reasoning

Students will use textual evidence from the “text annotation graphic organizer” to generate the reasoning or justification in the CER format.



Save images. Show photos on day 5.

Following the first sort and the second round of sorting, the teacher should ask the following questions and record student responses on chart paper:

*How did you decide where to put each object? What makes object 'A' different from object 'B'? Describe what they look like that makes them different.*

**Second Sort** *Did you find that some objects could be grouped with something that they were separated from before? Find two objects*

evidence-reasoning sample.

[Week 4 Physical Attributes work samples](#)

The teacher or students should read over student sample(s) to analyze claim-evidence-reasoning protocol. Ask students to use the CER observations chart to complete the following analysis protocol:

[Claim-Evidence-Reasoning Record Observations Document](#) (google doc)

Claim-Evidence-Reasoning... (PDF)

1. Identify the student's claim in the sample and have the teacher or students write their observations or questions.

2. Identify the student's evidence in the sample and have the teacher or students write their observations or questions.

3. Identify the student's reasoning in the sample and have the teacher or students write their observations or questions.

Ask the following questions to students as they analyze the student samples:

Claim-Evidence-Reasoning...

**\*\*TEACHER NOTE:** As students review the student samples, they will begin to see or read vocabulary. Begin or continue a reference chart of questions or observations about vocabulary. Students will

Use a Think Aloud to demonstrate how to use the graphic organizer with one of the provided vocabulary words.

Allow students to work in collaborative groups. Actively monitor and facilitate small group discussions and review various artifacts (pictures, images, primary sources, charts) to build knowledge of the term.

Have students collaborate to complete the four square strategy for the other vocabulary terms.

Monitor student progress, sharing new ideas for class discussion, and help students distinguish essential from non-essential characteristics.

Allow groups to share their thinking through academic dialogue and compare their completed task with members of other groups.

Have students use the following template to write their claim-evidence-reasoning (CER)

[K-2 Student Writing Template \(editable\)](#)

[K-2 Student Writing Template \(pdf\)](#)

**\*\*TEACHER NOTE:** Have students review the student sample(s) of claim-evidence-reasoning on Day 2. Have students compare their writing to those students' samples. Ask the following questions:

*How are your thoughts or understanding similar to another writer on the topic?*

*How are your thoughts or understanding different to another writer on the topic? What would you like to learn more about? Why?*



explicitly learn vocabulary on Day 4.

**Week 5**

[Standards](#) | [Phenomenon](#) | [Weekly Lessons](#)

GSE:SKP1. c

**Focused Concept:**

The physical attributes of an object can contribute to whether the object sinks (drops below the surface of to the bottom of a liquid) or floats (rises to the surface of a liquid).

**\*\*TEACHER NOTE:** The emphasis should not be on students understanding why objects sink or float; rather it should be testing whether they do or not.

**Learning Target**

The students will plan and carry out an investigation to predict and observe whether objects will sink or float based on their physical attributes.

**Lab Safety Protocol and Materials**

[W](#) General Safety Practices for the Elementary Science Classroom- TOC.docx

**Phenomenon:**  
[Ships Can Float](#)

**DQ:**How can I use physical attributes to predict if an object will sink or float?

Day 1: Opening	Day 2 : Guided Practice/ Transition	Day 3: Independent Practice	Day 4: Independent Practice	Day 5: Assessment / Summary
<p><b>Phenomenon Introduction (5-7 minutes)</b></p> <p>Show students the phenomenon card : <a href="#">Ships Can Float</a></p> <p>Use the <a href="#">see. think wonder strategy</a> to guide student thinking.</p> <p>Teachers should provide students opportunities to share observations and develop questions. The teacher should record students' observations on chart paper and refer back to initial student ideas throughout</p>	<p><b>Introduce the Driving Question: (7-10 minutes)</b></p> <p>Have students review the driving question:</p> <p><i>How can I use physical attributes to predict if an object will sink or float?</i></p> <p>Use the strategy to support students with making connections and understanding the driving question (DQ).</p> <p><a href="#">Visualizing the Driving</a></p>	<p><b>Graphic Organizer (2-3 minutes for students to access)</b></p> <p>Students will need and will use the student lab sheet for “Will these objects sink or float??” provided in their consumable book or the access to the student handout for <a href="#">“Will these objects sink or float?”</a></p> <p><b>Materials</b> paper clips, pennies, feathers, leaves, rubber ducks, inflated balloons, wood blocks, deflated balloons, containers of water,</p>	<p><b>Text Annotation Strategy (30-45 minutes)</b></p> <p>Have students read and annotate the following text: <a href="#">What Floats?</a></p> <p>The text for this week’s lesson can be found at <a href="#">GaDOE Shared Reading: What Floats?</a></p> <p>View the following facilitation directions: The text is designed to be projected or copied onto chart paper for a shared and interactive reading experience. More advanced</p>	<p><b>Review the Phenomenon (5-7 minutes)</b></p> <p>Allow students to review the initial observations and questions from see, think, wonder strategy on Day 1.</p> <p>Have students review initial ideas. Ask students: <i>Have any of your ideas about the phenomenon changed? How?</i></p> <p>Have students review their initial questions. Ask students: <i>What questions generated on Day 1 can you answer, now?</i></p>

the week.

### **Inquiry Activity** (10-15 minutes)

#### **SEP Teacher Tip:**

To support students with the science and engineering practices for this week, follow the guidance in this protocol:

[Developing model construction questions](#)

[Provide constructive feedback for building a model](#)

[Student back pocket questions](#)  
Have students complete the **“Will these objects sink or float?”**

The inquiry activity on this day has two parts. Be sure to have students complete both Activity 1 and Activity 2.

**Objective:** Students will predict which objects will sink or float.

**Materials:** paper clips, pennies, feathers, leaves, rubber ducks, inflated balloons, wood blocks, deflated balloons, containers of water, Sink, [Will It Float? recording sheet](#)

**Activity 1:** Predict: Sink or Float?

#### **\*\*TEACHER NOTE:**

Generate a list of experiences students have had with sinking and floating and questions students may have. Display the objects that will be tested today.

### [Question](#)

Click here to access [question words reference chart](#)

The process can be recorded on chart paper with the students or the teacher can complete the graphic organizer.

Be sure to create a reference for students to have throughout the week.

**\*\*TEACHER NOTE:** Students should not answer the driving question at this time. Students will need to collect information, data and understanding from the phenomenon strategy, inquiry activity, investigation, text or video protocol and vocabulary strategy to develop a response in the claim-evidence-reasoning format.

### **Claim-Evidence-Reasoning (CER)** (10-12 minutes)

The teacher or students should read over student sample(s) to analyze claim-evidence-reasoning protocol. Ask students to use the CER observations chart to complete the following analysis protocol:

[Claim-Evidence-Reasoning Record Observations Document](#) (google doc)

[Claim-Evidence-Reasoning \(PDF\)](#)

1. *Identify the student's claim in the sample and have the teacher or students write their observations or questions.*

Sink, [Will It Float? recording sheet](#)

### **Investigation Facilitation** (30-35 minutes) **SEP Teacher Tip:**

To support students with the science and engineering practices for this week, follow the guidance in this protocol:

[Developing model construction questions](#)

[Provide constructive feedback for building a model](#)

[Student back pocket questions](#)  
**Investigation lab**

#### **Sink or Float?**

**Objective:** During the inquiry activity, students predicted whether objects would sink or float; now, students will test these objects to determine the accuracy of their predictions and observe the actual outcomes.

Students will work in small groups or partners. The teacher should assign small groups/partners prior to the beginning of the lesson.

**\*\*TEACHER NOTE:** Students work in small groups or partnerships to “test” the objects on their recording forms using small tubs or pails of water. Each group should have a pail of water and a set of the everyday objects to test their

students may benefit from following along on a paper copy.

The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy:

[K-2 Text Annotation Protocol](#)

Students should complete the following student handout as they work through the text annotation protocol:

[K-2 Text Annotation Student Document \(editable\)](#)

[K-2 Text Annotation Student Handout](#)

During the teacher-led discussion, the teacher should ask the following questions:

*When have you experienced sinking or floating? (pool, tub, etc.)*

*Why does a rock sink? Why does a larger pool raft float?*

*Can you name other objects that are light or heavy for their size?*

*Does all metal sink in water?*

*What makes a boat float?*

*Why does a filled balloon/rubber duck float?*

*What are some objects that are small but would sink? Name some objects that are very large but would float. Explain why these things would happen.*

**\*\*TEACHER NOTE:** Read and review the annotation protocol prior to providing this lesson to

*What are your answers to those questions?*

### **Claim-Evidence-Reasoning** (15-25 minutes)

Students will write a response to the following driving question in the CER format.

*How can I use physical attributes to predict if an object will sink or float?*

Review the [claim-evidence-reasoning poster](#) with the students

**\*\*TEACHER NOTE:** Provide students with sentence starters by sharing on the board:

[K-2 Claim-Evidence-Reasoning Sentence Starters](#)

Have students write their claim-evidence-reasoning

#### **writing a claim**

Have students develop a claim which is their answer to the driving question. Students should use all their knowledge from the phenomenon, inquiry activity, investigation, and information analysis protocol to develop an answer to the question.

#### **writing evidence**

Students should provide observational or numerical data as their evidence from their investigation and write a short caption or brief description of the data they provide to support their claim.

#### **writing the reasoning**

(A sample list is below.) Use the [Will It Float? recording sheet](#) for students to predict which objects on the list will sink and which will float. Fold the paper into thirds, so that the students do not see the “check” column until later. Introduce the words sink and float, and their initial letters and sounds. Point those words out on the page. Students circle sink or float to record their predictions. Discuss reasons students made the predictions that they did.

Questions to pose during the discussion include:

*What are the objects made of?  
Are the objects heavy or light?  
What made you choose sink or float?  
Have you ever floated in water?  
What objects have you seen sink or float before?*

Sample objects: paper clip, penny, feather, leaf, rubber duck, inflated balloon, wood block, deflated balloon

### **Activity 2: Check: Sink or Float?**

Students work in small groups or partnerships to “test” the objects on their recording forms using small tubs or pails of water. Each group should have a pail of water and a set of the everyday objects to test their predictions. Fold the [recording sheet](#) into thirds again, showing only the check column and the object. Direct students to record whether each object sinks or

2. *Identify the student's evidence in the sample and have the teacher or students write their observations or questions.*

3. *Identify the student's reasoning in the sample and have the teacher or students write their observations or questions.*

Ask the following questions to students as they analyze the student samples:

#### **Claim-Evidence-Reasoni...**

**\*\*TEACHER NOTE:** As students review the student samples, they will begin to see or read vocabulary. Begin or continue a reference chart of questions or observations about vocabulary. Students will explicitly learn vocabulary on Day 4.

predictions. Fold the recording sheet into thirds again, showing only the check column and the object. Direct students to record whether each object sinks or floats by circling the word. Meet back in a whole group. Compare student prediction to actual findings. Discuss findings and questions students have about why objects sank/floated. Generate a list of questions students have to be answered during the reading.

*Which objects sank? What is alike about these objects? (light, heavy, hollow, etc.)  
Which objects floated? What is alike about these objects?  
What is different about the objects that sank from those that floated?  
Which objects did you predict correctly and incorrectly?  
Were all of the objects that floated/sank the same in some way? What way?  
Were the objects that floated/sank different from one another in some way? How?*

students. Students will need to be placed in groups or have an understanding of how the groups will change to limit time used for transitioning.

#### **Vocabulary Words**

sinks (drops below the surface of to the bottom of a liquid)  
floats (rises to the surface of a liquid).

#### **Vocabulary Strategy: (10-15 minutes)**

#### **Four Square**

Provide students with the [graphic organizer \(editable\)](#) or [pdf handout](#), explaining its four sections: word, meaning, picture, and sentence.

Use a Think Aloud to demonstrate how to use the graphic organizer with one of the provided vocabulary words.

Allow students to work in collaborative groups. Actively monitor and facilitate small group discussions and review various artifacts (pictures, images, primary sources, charts) to build knowledge of the term.

Have students collaborate to complete the four square strategy for the other vocabulary terms.

Monitor student progress, sharing new ideas for class discussion, and help students distinguish essential from non-essential characteristics.

Allow groups to share their

Students will use textual evidence from the “text annotation graphic organizer” to generate the reasoning or justification in the CER format.

Have students use the following template to write their claim-evidence-reasoning (CER)

[K-2 Student Writing Template \(editable\)](#)

[K-2 Student Writing Template \(pdf\)](#)

**\*\*TEACHER NOTE:** Have students review the student sample(s) of claim-evidence-reasoning on Day 2. Have students compare their writing to those students' samples. Ask the following questions:

*How are your thoughts or understanding similar to another writer on the topic?  
How are your thoughts or understanding different to another writer on the topic?  
What would you like to learn more about? Why?*

floats by circling the word.  
 Meet back in a whole group.  
 Compare student prediction to actual findings. Discuss findings and questions kids have about why objects sank/floated.  
 Generate a list of questions students have to be answered during the reading.

*Which objects sank? What is alike about these objects? (light, heavy, hollow, etc.)*

*Which objects floated? What is alike about these objects?*

*What is different about the objects that sank from those that floated?*

*Which objects did you predict correctly and incorrectly?*

*Were all of the objects that floated/sank the same in some way? What way?*

*Were the objects that floated/sank different from one another in some way? How?*

thinking through academic dialogue and compare their completed task with members of other groups.

### Labs / Investigations

Mandatory Labs	Explore Learning	Mystery Science
<p>How does it feel?            Matter Detective            How are objects the same?            How can you observe and sort objects?            Will these objects sink or float?</p>	<p>Science 4 Us Observing Matter Module</p>	<p>Mini-lesson: Could you build a real house out of cookies and candy?            Mini-lesson: How do erasers erase?</p>

### Additional- Resources/Tasks

Supplemental

<b>Labs</b>	
<b>Culminating Performance Task</b>	“How can I use the physical attributes of objects to sort them?” CER task “How can I use the physical attributes of objects to sort them?” CER task “How can I use physical attributes to predict if an object will sink or float?” CER  ■ K-2 Claim-Evidence-Reasoning Sentence Starters.pdf
<b>STEM Activities</b>	<a href="#">uDemonstrate Lab- How is one object different?</a> <a href="#">GaDOE Cargo Ship Build</a>
<b>Lesson Plan guidance document and template</b>	■ Copy of Department of Science CCPS Lesson Plan Guidance Document .pdf