

# CCPS Science Unit Plan

<b>Grade</b>	2nd	<b>Subject</b>	Science	<b>Unit #</b>	4
<b>Unit Name</b>	Changes in the Environment		<b>Timeline</b>	6 weeks January 7th - February 21st	
<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 abbreviation document to ensure understanding of all abbreviations used with this framework.</p> <p>■ Science Framework Abbreviations .pdf</p> <p><a href="#">CCPS Department of Science Website</a> for access to all unit frameworks</p>				
<b>Unit Overview</b>	<p>*All resources related to this Framework are embedded in this document or can be located via the Science Department website.</p> <p><b>Background Information:</b> In this Unit, students will explore how weather, plants, animals and humans cause changes to the environment and the positive and negative consequences of those modifications. Students will interact with these influences using distinct examples from the local community to construct an explanation of the cause-and-effect relationship that exists between the environment and these influences. Second graders will recognize that our environment is constantly changing in observable ways. The environment can be changed by the weather (wind, rain, seasonal changes, etc.), plants (new plant growth, invasive plants, etc.), animals (feeding on plants/other animals, waste, etc.) as well as humans. Students will use crosscutting concepts, such as stability and change, patterns, and cause and effect relationships.</p> <p><b>Prerequisites:</b> Kindergarten- Unit 4: Weather (S1E1d)</p> <p><b>By the end of this unit the student will be able to:</b></p> <ul style="list-style-type: none"> <li>ask questions to obtain information about major changes to the environment in your community</li> <li>construct an explanation of the causes and effects of a change to the environment in your community</li> </ul> <p><b>By the end of this unit the teacher should:</b></p> <ul style="list-style-type: none"> <li>guide students in asking questions to gather information about significant environmental changes in their community.</li> <li>assist students in explaining the causes and effects of an environmental change in their community.</li> </ul> <p>■ Science-2nd-Teacher-Notes.pdf</p>				
<b>Lesson Plan guidance document and template</b>	<p>■ Copy of Department of Science CCPS Lesson Plan Guidance Document .pdf</p>				
	<a href="#">GSE</a>		<a href="#">Science and Engineering Practices</a>	<a href="#">Crosscutting Concepts</a>	

<b>Standards</b>	<p><b>S2E3. Obtain, evaluate, and communicate information about how weather, plants, animals, and humans cause changes to the environment.</b> (Clarification statement: Changes should be easily observable and could be seen on school grounds or at home.)</p> <p>a. Ask questions to obtain information about major changes to the environment in your community.</p> <p>b. Construct an explanation of the causes and effects of a change to the environment in your community</p>	<p><b>Asking Questions and Defining Problems</b> A practice of science is to ask and refine questions that lead to descriptions and explanations of how the natural and designed world works and which can be empirically tested.</p> <p><b>Constructing Explanations and Designing Solutions</b> The products of science are explanations and the products of engineering are solutions.</p> <p><b>Developing and Using Models</b> A practice of both science and engineering is to use and construct models as helpful tools for representing ideas and explanations. These tools include diagrams, drawings, physical replicas, mathematical representations, analogies, and computer simulations</p>	<p><b>Cause and Effect</b> Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.</p> <p><b>Systems and System Models</b> A system is an organized group of related objects or components; models can be used for understanding and predicting the behavior of systems.</p> <p><b>Stability and Change</b> For both designed and natural systems, conditions that affect stability and factors that control rates of change are critical elements to consider and understand.</p>

<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="#">S2E3a.pdf</a>	Students will ask questions to obtain information about major changes to the environment in your community
<a href="#">S2E3b.pdf</a>	Students will construct an explanation of the causes and effects of a change to the environment in their community.

**Weekly Lesson Tasks**

Navigation: [Week 1](#) | [Week 2](#) | [Week 3](#) | [Week 4](#) | [Week 5](#) | [Week 6](#) | [Return to top](#) | [Additional Resources](#)

<b>Week 1</b>	
Standards   Phenomenon   Weekly Lessons	
<b>GSE: S2E3.a.</b>	<b>Focused Concept:</b> Ask questions to obtain information about major changes to the environment in your community.
<b>Learning Targets:</b>	Students will ask questions to obtain information about major changes to the environment in your community.

<b>Lab Safety and Materials:</b>	<a href="#">General Safety Practices</a>			
<b>SEP Teacher Tip: (Day 1 and 3)</b> To support students with the science and engineering practices for this week, follow the guidance in this protocol:	<a href="#">Developing model construction questions</a> <a href="#">Provide constructive feedback for building a model</a> <a href="#">Student back pocket questions</a>			
<b>Phenomenon:</b> <a href="#">S2E3a Phenomenon Card</a>			<b>DQ:</b> What happens to the animals when the land is cleared?	
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> Show students the phenomenon card : <a href="#">S2E3a Phenomenon Card</a> <a href="#">Clearing Land Video Link</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 about the phenomenon card and the video link. 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> <a href="#">Changes in the Environment Slides</a> (Teacher Use)</p>	<p><b>Introduce the Driving Question: (7-10 minutes)</b> Have students review the driving question: <i>How did the popcorn change?</i> 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. <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</p>	<p><b>Graphic Organizer and Materials (2-3 minutes)</b></p> <p><b>GaDOE Inspire</b> Students will need and will use the student lab and lab handout.  </p> <p><a href="#">Land Change Investigation (editable)</a></p> <p><b>Materials</b> Digital Camera Clipboards Pencils</p> <p><b>Investigation Facilitation (25-30 minutes)</b></p> <p><b>Objective:</b> Students will identify changes that they see in the environment.</p> <p>The teacher should use the following instructional segment plan.  </p>	<p><b>Text Annotation Strategy (30-45 minutes)</b> Have students read and annotate the following text: <a href="#">Humans in the Community</a></p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy: <a href="#">K-2 Annotation Protocol</a></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></p> <p><a href="#">Text Annotation Student Document PDF</a></p> <p>During the teacher-led discussion, the teacher should ask the following questions: <i>What are ways humans can cause harm?</i></p>	<p><b>Claim-Evidence-Reasoning (15-25 minutes)</b></p> <p>Students will write a response to the following driving question in the CER format. <i>What happens to the animals when the land is cleared?</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: <a href="#">K-2 Claim-Evidence-Reasoning Sentence Starters</a></p> <p>Have students write their claim-evidence-reasoning <b>writing a claim</b> Have students develop a claim which is their answer to the driving question, claim. Students should use all their knowledge from the phenomenon, inquiry activity, investigation, and information</p>

[Environment Student Task](#)  
(Student Use)

**Activity 1**

**Objective:** Students will ask questions to obtain information about major changes to the environment.

The teacher will show the students the Changes in the Environment slides. The teacher will ask students to identify and discuss the changes that have occurred in each environment.

Students should develop questions as they progress through the Changes in the Environment slides.

The teacher should record the questions of the students throughout the activity on chart paper.

**Activity 2:**

The teacher will show and read aloud the following story to the students:

**[Butterfly](#)**

Students will complete the following task after class discussion and generating questions:

[Environment Student Task](#)

Have students work in groups to discuss “What would happen to butterflies if their environment was changed by one of these pictures?”

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.

**[Student Sample](#)**

**\*\*TEACHER NOTE:**

[Student Sample](#)  
Share with students from a CER your students have completed. Be sure to remove or hide student names. Ask your students to analyze their peers' work during this week’s unit to review the C-E-R strategy.

The teacher or students should

*Ask Students:*

*What evidence is in the environment to indicate a change?*

*How will these changes affect the environment?*

*Is there any evidence of any additional changes happening in this environment?*

**\*\*TEACHER NOTE:**

The teacher should actively monitor students’ progress through the task. Students should complete the drawings and the graphic organizer as they work through the hunt.

*Look around your environment. What changes have people made?*

**\*\*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 Strategy (10-15 minutes)**

**Vocabulary Words:**

environment  
change  
harmful

**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

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 student 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?*

**[Assessment for Learning](#)**  
**(10-15 minutes)**

*Ask:  
How are the butterflies impacted if the flowers are removed to build homes?*

*How are the butterflies impacted if the trees fall on top of the flowers?*

*How are the butterflies impacted if a flood (water) washes the garden out?*

**\*\*TEACHER NOTE:**

Consider giving students time to problem solve and discuss possible solutions for solving the problems listed. Students may choose to extend this activity with further research.

**Materials:**

Paper  
pencil  
lab handout

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 Record Observation Document 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 Questions](#)

**\*\*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

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.

[Changes in Surroundings](#)

**Week 2**

**GSE: S2E3.a.**

**Focused Concept:** Ask questions to obtain information about major changes to the environment in your community.

**Learning Targets:**

Students will ask questions to obtain information about major changes to the environment in your community.

**Lab Safety and Materials:**

[General Safety Practices](#)

**SEP Teacher Tip: (Day 1 and 3)**

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](#)

**Phenomenon:** [Clearing Land](#)

**DQ:** *What happens to the animals when land is cleared?*

**Day 1: Opening**

**Day 2 : Guided Practice/  
Transition**

**Day 3: Independent Practice**

**Day 4: Independent Practice**

**Day 5: Assessment / Summary**

**Phenomenon Introduction**  
(5-7 minutes)

Show students the phenomenon card : [Clearing Land](#)

Use the [see, think wonder strategy](#) to guide student thinking. 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.

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

**Introduce the Guiding Question:**  
(7-10 minutes)

*What happens to the animals when land is cleared?*

Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.

Use the strategy to support students with making connections and understanding the driving question (DQ).

**Graphic Organizer and Materials**  
(2-3 minutes)

Students will need and will use the student lab sheet provided in their consumable book or access to the student handout. [How do organisms change the environment?](#)

**Investigation Facilitation**  
(25-30 minutes)

**Objective:** Students will determine how clearing the land affects animals.

**Materials**

**Text Annotation Strategy**  
(30-45 minutes)

Have students read and annotate the following text: [Animals in the Community](#)

The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy: [K-2 Annotation Protocol](#)

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

[K-2 Text Annotation Student](#)

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

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

*What happens to the animals when land is cleared?*

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](#)

## Animal and Plant Connection

The teacher should record the observations of the students throughout the activity on chart paper.

**Objective:** Students will ask questions to obtain information about major changes in the environment.

Have students follow the procedure provided in the lab.

Activity 1:

Objective:

How are these things connected?

Students will watch a video of a butterfly drinking nectar from a flower.

[Beautiful Rainforest Butterflies](#)

*Ask students to generate questions about what they saw. How did the butterfly get what it needed? How do plants and animals work together? How do animals make changes to their environment? Do plants and animals help or hurt the environment? How are a worm and a caterpillar alike and different? Do they grow in the same ways?*

**\*\*TEACHER NOTE:**

Students should share student responses at their table groups and evaluate each answer. Students may need to do research to find out if a worm and a caterpillar grow in the same ways.

## Visualizing the Driving 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 (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

handout

pencil

*Ask Students:*

*Did you find changes to the environment from each change agent?*

*Were there changes from weather, animals, people, and plants?*

*If there were no changes from one of the change agents, why do you think no change occurred?*

**\*\*TEACHER NOTE:**

In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.

Students may need additional time to complete their assignment. 2. The teacher should be sure to provide multiple ways for the students to communicate their knowledge of the material. This could include labeling images, drawing pictures, writing or verbally explaining.

## Document (editable)

[Text Annotation Student Document PDF](#)

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

*How can animals change the environment?*

*What questions could you ask to find out about major changes to the environment where you live?*

**\*\*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 Strategy (10-15 minutes)**

**Vocabulary Words:**

add another vocab word here environment

### **Vocabulary Strategy: 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.

Have students write their claim-evidence-reasoning

### **writing a claim**

Have students develop a claim which is their answer to the driving question, claim. 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:

In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.

### **Materials**

student handout  
pencil

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.

### **Student Sample**

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 Record Observation Document 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.*

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.

*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?*

### **Assessment for Learning (10-15 minutes)**

Have students complete the following assessment.  
CER



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

[Claim-Evidence-Reasoning Questions](#)

**\*\*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.

Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.

**Week 3**

**GSE: S2E3.a.**

**Focused Concept:** Ask questions to obtain information about major changes to the environment in your community.

**Learning Targets:**

Students will ask questions to obtain information about major changes to the environment in your community.

**Lab Safety and Materials:**

[General Safety Practices](#)

**SEP Teacher Tip: (Day 1 and 3)**

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](#)

Phenomenon: <a href="#">Clearing Land</a>		DQ: <i>What happens to the animals when land is cleared?</i>		
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) Show students the phenomenon card :</p> <p><a href="#">Clearing Land</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>Have students follow the procedures laid out in the following activity:</p> <p>The teacher should record the observations of the students throughout the activity on chart paper.</p> <p>Link Slides Here -Environmental Slides or Animal Effects</p> <p><a href="#">Help or Harm</a></p> <p>Have students follow the procedures laid out in the following activity:</p>	<p><b>Introduce the Guiding Question:</b> (7-10 minutes)</p> <p><i>What happens to the animals when land is cleared?</i></p> <p>Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.</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</p>	<p><b>Graphic Organizer and Materials</b> (2-3 minutes)</p> <p>Students will need and use the student lab and lab sheet.</p> <p><a href="#">Animal Homes PDF</a> <a href="#">Animal Homes (editable)</a></p> <p><b>Investigation Facilitation</b> (25-30 minutes)</p> <p><b>Objective:</b> Students will determine how people affect the environment and the impact it may have on the animals.</p> <p><b>Materials</b></p> <p>handout pencil</p> <p>Teacher should ask the following question: <i>What would happen if a company decided that they wanted to fill in the pond and build a new building? What would happen to the life cycle? What are the options for the tadpole's home? How would this affect the bird's life cycle?</i></p>	<p><b>Text Annotation Strategy</b> (30-45 minutes)</p> <p>Have students read and annotate the following text:</p> <p><a href="#">Plants in the Community PDF</a></p> <p>The text for this week's lesson can be found on the Savvas platform and in the link above.</p> <p>View the following facilitation directions:</p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy: <a href="#">K-2 Annotation Protocol</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="#">Text Annotation Student Document PDF</a></p> <p>During the teacher-led discussion, the teacher should ask the following questions:</p> <p><i>How can plants change the environment?</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>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: <a href="#">K-2 Claim-Evidence-Reasoning Sentence Starters</a></p> <p>Have students write their claim-evidence-reasoning</p> <p><a href="#">writing a claim</a></p> <p>Have students develop a claim which is their answer to the driving question, claim. Students should use all their knowledge from the phenomenon, inquiry activity, investigation, and information analysis protocol to develop an answer to the question.</p> <p><a href="#">writing evidence</a></p> <p>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.</p> <p><a href="#">writing the reasoning</a></p>

The teacher should record the observations of the students throughout the activity on chart paper.

Objective: Students will ask questions to obtain information about major changes to the environment. Students will draw a picture and write a sentence about how weather, plants, animals, and humans help and harm the environment. Students may use their handouts.

Have students follow the procedure provided in the lab.

Ask:  
*How do animals make changes to their environment? Do plants and animals help or hurt the environment?*

**\*\*TEACHER NOTE:**

In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.

activity, investigation, text or video protocol and vocabulary strategy to develop a response in the claim-evidence-reasoning format.

### **Claim-Evidence-Reasoning (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.

### **Student Sample**

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

**\*\*TEACHER NOTE:**

In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.

The teacher should be sure to provide multiple ways for the students to communicate their knowledge of the material. This could include labeling images, drawing pictures, writing or verbally explaining. Students may need additional time to complete their assignment.

*What are some of the effects of kudzu?*

**\*\*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 Strategy (10-15 minutes)**

#### **Vocabulary Words:**

change  
environment

#### **Vocabulary Strategy: 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

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?*

### **Assessment for Learning: (10-15 minutes)**

Have students complete the following assessment.  
[Changing the Environment Assessment](#)

CER observations chart to complete the following analysis protocol:

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

[Claim-Evidence-Reasoning Record Observation Document 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 Questions](#)

**\*\*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.

Students will use all knowledge gathered from the phenomenon strategy, inquiry activity,

complete the four square strategy for the other vocabulary terms.

	investigation and text protocol to develop a claim-evidence-reasoning for the driving question.			
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**Week 4**

<b>GSE: S2E3b.</b>	<b>Focused Concept:</b> Construct an explanation of the causes and effects of a change to the environment in their community.
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<b>Learning Targets:</b>	Students will construct an explanation of the causes and effects of a change to the environment in their community.
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<b>Lab Safety and Materials</b>	<a href="#">General Safety Practices</a>
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**SEP Teacher Tip: (Day 1 and 3)**  
To support students with the science and engineering practices for this week, follow the guidance in this protocol:

<b>Phenomenon:</b> <a href="#">Beavers change the river</a>	<b>DQ:</b> <i>How do plants and animals change the environment?</i>
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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="#">Beavers change the river</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</p>	<p><b>Introduce the Driving Question: (7-10 minutes)</b></p> <p><i>How do plants and animals change the environment?</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 and Materials (2-3 minutes)</b></p> <p>Students will need and will use the student lab handout. <a href="#">Building a Dam Activity</a></p> <p><b>Investigation Facilitation (25-30 minutes)</b></p> <p><b>Objective:</b> Students will work in groups to construct a beaver</p>	<p><b>Text Annotation Strategy (30-45 minutes)</b></p> <p>Have students read and annotate the following text: <a href="#">The Busy Beaver's Backyard</a></p> <p>The text for this week’s lesson can be found at Get Epic digital platform. The link has been provided above.</p>	<p><b>Claim-Evidence-Reasoning (15-25 minutes)</b></p> <p>Students will write a response to the following driving question in the CER format.</p> <p>Review the <a href="#">claim-evidence-reasoning poster</a> with the students</p>

record students' observations on chart paper and refer back to initial student ideas throughout the week.

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

Have students follow the procedures laid out in the following activity:

#### [Plant Changes](#)

The teacher should record the observations of the students throughout the activity on chart paper.

Objective: Students will construct an explanation of the causes and effects of a change to the environment in their community.

Have students follow the procedure provided in the lab.

Ask:

*How do plants cause changes in our environment? What happened? What questions can you ask to determine the cause of the change? How did the plants push through the sidewalk? Are any parts of the plant being pulled?*

#### [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** (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

dam.

### **Materials** [student handout](#)

one large aluminum baking pan (per group)  
one bucket of sand (per group)  
one bucket of water (per group)  
one bag of pea gravel (per class to be distributed evenly among groups)  
one bucket of rocks (per class to be distributed evenly among groups)  
30 craft sticks (per group)

Teacher should ask the following question:

*How do beavers change their environment to create shelter?*

**\*\*TEACHER NOTE:** In this [lab](#), group students who need more guided practice together and spend more time with them as they go through the investigation. Upon completion of their beaver dam, students will answer the questions on their handout.

View the following facilitation directions:

The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy: [K-2 Annotation Protocol](#)

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

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

[Text Annotation Student Document PDF](#)

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

*What are some changes that animals can make to the environment?*

*Why are beavers important to the environment?*

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

**Vocabulary Words:**  
change  
environment

**Vocabulary Strategy:**  
**Four Square**

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

**\*\*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, claim. 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

<p><b>**TEACHER NOTE:</b></p> <p>In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.</p> <p>Materials: handout pencil</p>	<p>science ideas.”</p> <p>Review the <a href="#">claim-evidence-reasoning poster</a> with students.</p> <p>As a class or in student groups, provide students with this week’s claim-evidence-reasoning sample.</p> <p><b>Student Sample</b></p> <p>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:</p> <p><a href="#">Claim-Evidence-Reasoning Record Observations Document</a> (google doc)</p> <p><a href="#">Claim-Evidence-Reasoning Record Observation Document PDF</a></p> <p><i>1. Identify the student's claim in the sample and have the teacher or students write their observations or questions.</i></p> <p><i>2. Identify the student's evidence in the sample and have the teacher or students write their observations or questions.</i></p> <p><i>3. Identify the student's reasoning in the sample and have the teacher or students write their observations or questions.</i></p> <p>Ask the following questions to</p>		<p>Use a Think Aloud to demonstrate how to use the graphic organizer with one of the provided vocabulary words.</p> <p>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.</p> <p>Have students collaborate to complete the four square strategy for the other vocabulary terms.</p>	<p>claim-evidence-reasoning on Day 2. Have students compare their writing to those students’ samples. Ask the following questions:</p> <p><i>How are your thoughts or understanding similar to another writer on the topic?</i></p> <p><i>How are your thoughts or understanding different to another writer on the topic?</i></p> <p><i>What would you like to learn more about? Why?</i></p> <p><b>Assessment for Learning: (10-15 minutes)</b></p> <p><a href="#">CER</a></p>
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	<p>students as they analyze the student samples:</p> <p><a href="#">Claim-Evidence-Reasoning Questions</a></p> <p><b>**Teacher Note:</b> 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.</p> <p>Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.</p>			
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**Week 5**

**GSE: S2E3b.**

**Focused Concept:** Construct an explanation of the causes and effects of a change to the environment in their community.

**Learning Target:**

Students will construct an explanation of the causes and effects of a change to the environment in their community.

**Lab Safety:**

[General Safety Practices](#)

**Phenomenon:** [Beavers change the river](#)

**DQ:** *How do plants and animals change the environment?*

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></p> <p>Show students the phenomenon card : <a href="#">Beavers change the</a></p>	<p><b>Introduce the Guiding Question:</b></p> <p><i>How do plants and animals</i></p>	<p><b>Graphic Organizer and Materials</b></p> <p>Students will need and will use</p>	<p><b>Text Annotation Strategy</b></p> <p>Have students read and annotate the following text:</p>	<p><b>Claim-Evidence-Reasoning</b></p> <p>Students will write a response to the following driving question</p>



## river

Use the [see, think wonder strategy](#) to guide student thinking.

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 activity on chart paper.

### **Inquiry Activity**

Have students follow the procedures laid out in the following activity:

[Animal Pictures](#)  
[Animal Effects](#)

The teacher should record the observations of the students throughout the activity on chart paper.

Objective: Students will determine how the animals changed the environment?

Have students follow the procedure provided in the lab.

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

In this lab, the teacher should ask the students about the changes they noticed. Consider showing the students before the animal made the change to see what they think their image may

## *change the environment?*

Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.

### **Claim-Evidence-Reasoning**

Student work sample to analyze

claim-evidence-reasoning protocol; directions in the protocol on how to teach students to develop this writing

the student lab and lab

Help or Harm  
GA DOE Inspire

**Objective:** Students will recognize how some environmental changes affect plants and/or animals.

### **Materials**

Student handout

pencil

Teacher should ask the following questions:

What are some ways animals can help the environment?

Can you think of some ways animals can harm the environment?

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

In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.

### **Scaffolded Tasks**

Beavers backyard wildlife

The text for this week's lesson can be found on the Get Epic platform.

View the following facilitation directions:

The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy: [K-2 Annotation Protocol](#)

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

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

[Text Annotation Student Document PDF](#)

### **Vocabulary Strategy**

#### **Vocabulary Words:**

flood  
dam  
change  
environment

#### **Vocabulary Strategy:**

**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.

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, claim. 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)

be. The last slide can be a drag and match slide.

**Materials**

glue  
pictures  
scissors

**Lesson Practices and Concepts**

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.

[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?*

**Assessment for Learning:**

Have students complete the following assessment.

**Week 6**

**GSE: S2E3b.**

**Focused Concept:** Construct an explanation of the causes and effects of a change to the environment in their community

**Learning Target:**

Students will construct an explanation of the causes and effects of a change to the environment in their community.

**Lab Safety:**

[General Safety Practices](#)

**SEP Teacher Tip: (Day 1 and 3)**

To support students with the

[Developing model construction questions](#)

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

science and engineering practices for this week, follow the guidance in this protocol:

[Student back pocket questions](#)

**Phenomenon:** [Beavers change the river](#)

**DQ:** *How do plants and animals change the environment?*

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> Show students the phenomenon card : <a href="#">Beavers change the river</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>Inquiry Activity (10-15 minutes)</b></p> <p>Have students follow the procedures laid out in the following activity:</p> <p>Add Environment Hunt here</p> <p>GA DOE Inspire The teacher should record the observations of the students throughout the activity on chart paper.</p> <p>Objective: Students will</p>	<p><b>Introduce the Guiding Question: (7-10 minutes)</b></p> <p><i>How do plants and animals change the environment?</i></p> <p>Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.</p> <p><b>Claim-Evidence-Reasoning (10-12 minutes)</b></p> <p><b>Objective:</b> 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.</p> <p>The teacher should state the following to students:</p> <p>“Claim-Evidence-Reasoning or CER is a way of writing that helps students understand and</p>	<p><b>Graphic Organizer and Materials (2-3 minutes)</b></p> <p><a href="#">Causes and Effect in the Environment</a></p> <p>Students will need and will use the student lab and lab handout.</p> <p><b>Investigation Facilitation (25-30 minutes)</b></p> <p><b>Objective:</b></p> <p>Students will be able to identify various examples of environmental changes.</p> <p><b>Materials</b></p> <p>Handout pencils</p> <p>Teacher should ask the following question:</p> <p><i>What changes do you notice?</i></p> <p><i>How do you think the change occurred?</i></p>	<p><b>Text Annotation Strategy (30-45 minutes)</b></p> <p>Have students read and annotate the following text:</p> <p>Changes in the Environment</p> <p>The text for this week’s lesson can be found in the link below. <a href="#">Changes in the Environment</a></p> <p>View the following facilitation directions:</p> <p>The teacher should facilitate the following process. Have the students follow the text protocol facilitation directions provided in the following strategy: <a href="#">K-2 Annotation Protocol</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="#">Text Annotation Student Document PDF</a></p> <p>During the teacher-led discussion, the teacher should</p>	<p><b>Claim-Evidence-Reasoning (15-25 minutes)</b></p> <p>Students will write a response to the following driving question in the CER format.</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: <a href="#">K-2 Claim-Evidence-Reasoning Sentence Starters</a></p> <p>Have students write their claim-evidence-reasoning</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: <a href="#">K-2 Claim-Evidence-Reasoning Sentence Starters</a></p> <p>Have students write their claim-evidence-reasoning</p>

determine how the animals changed the environment?

Students will look at previous entries, after the walk to see if there are similarities and differences from Week 1.

Have students follow the procedure provided in the lab.

**\*\*TEACHER NOTE:**

In this lab, the teacher should ask the students about the changes they noticed.

**Materials:**

pencil  
handout

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.

[The teacher will pull students samples from earlier in the unit for peer review. Be sure to hide student names.](#)

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 Record Observation Document 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*

*What prediction can you make about our future exploration?*

**\*\*TEACHER NOTE:**

In this lab, group students who need more guided practice together and spend more time with them as they go through the investigation.

ask the following questions:  
*How can people change their environment?*

*What are some ways animals can change their environment?*

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

**Vocabulary Words:**

change  
environment

**Vocabulary Strategy: 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, claim. 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:

*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 Questions

**\*\*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.

Students will use all knowledge gathered from the phenomenon strategy, inquiry activity, investigation and text protocol to develop a claim-evidence-reasoning for the driving question.

*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?*

**Assessment for Learning: (10-15 minutes)**

Have students complete the CER.

**Labs / Investigations**

Mandatory Labs	Explore Learning Science 4 Us	Mystery Science
<p>Environment Hunt</p> <p>Cause or Effect</p> <p>Animal Homes</p> <p>How do organisms change the environment?</p>	<p>Part 2-Extreme Weather (Engage)</p>	<p>Rocks, Sand, and Erosion</p>

## Additional- Resources/Tasks

<b>Supplemental Labs</b>	Changes in the Environment Building a Dam
<b>Culminating Performance Task</b>	Claim Evidence Reasoning
<b>STEM Activities</b>	UEngineer-Fix the Dam!
<b>Guidance Document</b>	Link the following : <a href="https://drive.google.com/file/d/1dDFitw1NesctodMZ9XAr7zc0-S5GZKPB/view?usp=drive_link">https://drive.google.com/file/d/1dDFitw1NesctodMZ9XAr7zc0-S5GZKPB/view?usp=drive_link</a>