



Climate Change Lesson Plan: Grade 7

Grade Level: **Seventh Grade** | Duration: **Two days, 30 minutes per lesson**

Objective

In this lesson, seventh graders use BrainPOP resources to discover causes of climate change and signs that the climate is changing.

Students will:

1. Build Background Knowledge:

- Watch the BrainPOP Climate Change movie.

2. Think and Do:

- Vocabulary: Define vocabulary and use in a sentence.
- Worksheet: Analyze a line graph of carbon dioxide concentrations recorded at Hawaii's Mauna Loa Observatory from May 2012—March 2015.

3. Assess:

- Take the Climate Change quiz.

Preparation


- Preview the BrainPOP movie [Climate Change](#) to plan for any adaptations.
- Create and schedule Day 1 assignment: [Climate Change movie](#) and [Vocabulary](#).
- Create and schedule Day 2 assignment: [Climate Change movie](#), [Worksheet](#), and [Quiz](#).

Before the Lesson




Background knowledge helps students make sense of new ideas and experiences. To activate prior knowledge, ask these questions:

- *What is the weather like outside today? What do you think is the difference between weather and climate?*
- *We hear about climate change in the news all the time! What do you think climate change means?*


DAY 1: Build Background (10 minutes)

Lesson Steps	Offline Modifications	Modifications for Diverse Learners	ELL/Language Development
<div style="text-align: center;">  </div> <p>1. Watch the Climate Change movie.</p> <p>Click pause at noted time codes to discuss key ideas:</p> <p>Timecode 1:26: What's the connection between global warming and your local weather?</p> <p>Timecode 2:34: How do fossil fuels influence climate change?</p> <p>Timecode 3:21: What are two ways protecting our forests can fight against climate change?</p> <p>Timecode 4:50: How might rising sea levels cause problems for coastal cities?</p>	<ul style="list-style-type: none"> • Print the movie transcript and highlight evidence that answers each of the discussion questions. • Two students act out the transcript, one as Tim and the other as Moby. 	<ul style="list-style-type: none"> • Set a specific viewing purpose for individual students or small groups based on lesson objectives and student readiness. For example, have students focus on how we know Earth's climate is changing, or effects of global climate change. • Pause at two key points and prompt students to summarize. • Support recall by having students draw one or two key ideas from the movie. 	<ul style="list-style-type: none"> • Pause for new vocabulary. Use the word in a sentence. Prompt students to say the word and repeat the sentence. Invite them to draw a picture of the word. • Create a word wall with vocabulary and the drawing. • Pause at key points and ask the discussion questions in the student's home language or English.



DAY 1: Think & Do (20 minutes)

Lesson Steps	Offline Modifications	Modifications for Diverse Learners	ELL/Language Development
<div style="text-align: center;">  <p>Vocabulary</p> </div> <p>2. Students open their Vocabulary assignment. Or, if not using Assignment Builder, model how to open Vocabulary.</p> <p>Students click Flip All or each term individually. To hear a term read aloud, click the speaker icon.</p> <div style="text-align: center;">  </div> <p>Students type a definition and sentence for each term.</p> <p>When they finish, students click the Submit To Teacher button and/or print out.</p>	<ul style="list-style-type: none"> • Print Vocabulary. <div style="text-align: center;">  </div> <ul style="list-style-type: none"> • Students write a definition and sentence for each term. 	<ul style="list-style-type: none"> • Assign appropriately challenging words to individual students. • Assign a few of the six terms to individual students to define and use in a sentence. • As a challenge, students can add two additional terms, writing a definition and sentence for each. 	<ul style="list-style-type: none"> • Say the term(s) in students' home language. Then say the words in English. Have the student repeat in English. • Use the term in a sentence. Prompt students to say the word and repeat the sentence. • Click the speaker icon to hear the term read aloud.

DAY 2: Build Background (5 minutes)

Lesson Steps	Offline Modifications	Modifications for Diverse Learners	ELL/Language Development
 <p>3. Watch the Climate Change movie again.</p> <p>Prompt students to find a fact or something new that they didn't notice the first time.</p>		<ul style="list-style-type: none"> Students return to their drawings of key concepts from the first viewing and add new details. As a challenge, invite students to identify more than one new fact. 	

DAY 2: Think & Do (20 minutes)

Lesson Steps	Offline Modifications	Modifications for Diverse Learners	ELL/Language Development
 <p>4. Students open their Worksheet assignment. Or, if not using Assignment Builder, model how to open the Worksheet.</p> <p>Students interpret line-graph data showing carbon dioxide concentrations over time.</p> <p>When they finish, students click the Submit To Teacher button and/or print out.</p>	<ul style="list-style-type: none"> Print the Worksheet.  Students interpret line-graph data showing monthly average carbon dioxide concentrations over time in Hawaii. 	<ul style="list-style-type: none"> Students speak their response and brainstorm what they will write for each question. Model how to analyze the graph by reviewing the axes and units. Think aloud what the graph's title could be. Assign one or two questions to individual students. Support recall by prompting students to revisit the drawings they made after watching the movie. 	<ul style="list-style-type: none"> Say each question in students' home language or English. Have them repeat it in English. Before students write, have them use their home language or English to discuss what they plan to write.

DAY 2: Assess (5 minutes)

Lesson Steps	Offline Modifications	Modifications for Diverse Learners	ELL/Language Development
<div data-bbox="494 331 615 464" data-label="Image"> </div> <p data-bbox="252 477 806 574">5. Students open their Quiz assignment. Or, if not using Assignment Builder, model how to open the quiz.</p> <p data-bbox="298 620 790 753">If you assigned the quiz, you will see students' results in your Dashboard. If not assigned, students click the Submit to Teacher button.</p>	<ul data-bbox="889 331 1389 358" style="list-style-type: none"> • Print the quiz for students to complete. 	<ul data-bbox="1470 331 1924 613" style="list-style-type: none"> • Read aloud the questions and answers. • Reduce the number of questions and/or possible answers (using the Quiz Mixer). • Support recall by revisiting movie drawings. 	<ul data-bbox="2034 331 2475 613" style="list-style-type: none"> • Read aloud the quiz in students' home language. • Highlight the key vocabulary in a printable version of the quiz. • Support recall by having students review drawings they made during the movie.