

# Climate Change

SLIDE NAVIGATION

1

2

3

4

5

6

Next

## 1. Question & Research Task

- Massive super storms destroying cities
- Mega droughts causing famine
- Massive firestorms destroying acres of land and homes
- Melting polar ice caps
- Sea level rising worldwide
- Warming temperatures destroying coral reefs
- Increased carbon dioxide due to human activity

Sound like a worst-case scenario, or a script for a made-for-TV disaster movie? Unfortunately, all these events are happening now. Almost every day, scientists share new data that reveals both the causes and consequences of climate change. For example, NASA has documented [images of climate change](#) from the perspective of space, and these powerful images document loss. Scientists say that we do not have a decade to wait to consider the problem; we must act now to have any hope of mitigating the consequences of climate change.



Image Source: NASA

**In this Slam Dunk, you will conduct brief, focused research to respond to the inquiry question:**

How can we manage current and future human activities to mitigate the consequences of climate change for the East Coast?

## 2. Information Sources

You will use the websites below to help complete the Student Activity on the next slide.

- Use the databases and websites below as you research.
- Click on the image on the right to view a video about climate change.

### Digital resources:

- [BCPS Digital Content Access](#)
  - Click the link. Then search for the following Digital Content links:  
(May need to see LMS for usernames and passwords)
    - Gale in Context: High School
    - Scholastic GO!
    - SIRS Discoverer
    - SIRS Issue Researcher
- [Climate Change](#)
- [Climate Central](#)
- [E.P.A. Climate Change Indicators](#)
- [Climate Change on the Northeast](#)
- [The Causes of Climate Change](#)
- [East Coast Shatters Temperature Records, Offering Preview to a Warming World](#)



***Click on the picture to view video on the impact of climate change on polar bears.***

(Access video through Discover Education in Apps Portal)

Image Source: Discovery Education



### 3. Student Activity

**Step 1:** Your teacher will place you into teams of three. Each of you will research one of the following climate change questions and record your findings [in this chart](#):

- What are the **causes** of climate change?
- What are the **effects** of climate change on the East Coast?
- **What can you do as an individual** to impact climate change?

**Step 2:** Each member will share their findings with the rest of the group.

**Step 3:** Provide the name of the sources you used to answer each question. Alternately, your teacher may ask you to cite your sources in [MLA format](#).



Image Source: Public Domain

## 4. Assessment Activity

How can we manage current and future human activities to mitigate the consequences of climate change for the East Coast?

### Create an Individual Action Plan

Use the thoughts and ideas you gathered from your research and the discussion with your group to create your final product. You will create an [Individual Action Plan](#) that addresses the causes of climate change. Tailor your action plan so that it relates to the specific consequences of climate change on the East Coast.

Optional: After you have finished your Action Plan, write a [1-minute paper](#) reflecting on your learning.

Your teacher may choose to use this [Individual Action Plan Checklist](#) to reflect on your learning and assess your assignment.

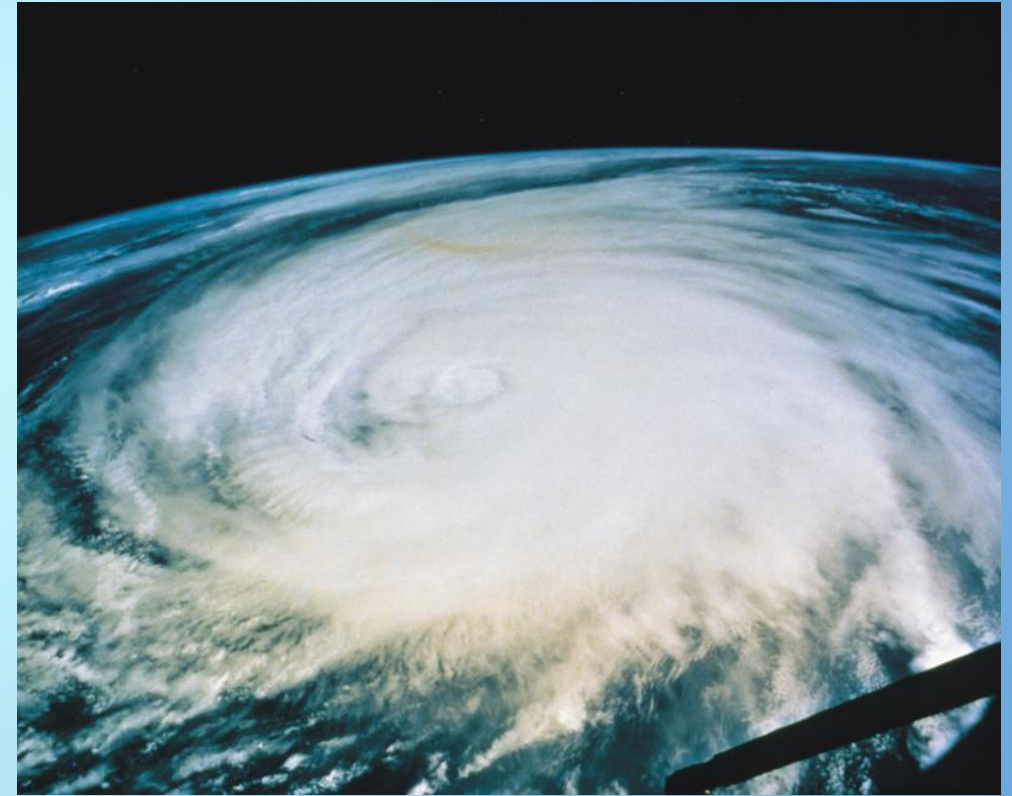


Image Source: [clipart.com](https://www.clipart.com) by subscription



## 5. Enrichment Activities

SLIDE NAVIGATION

1

2

3

4

5

6

Next

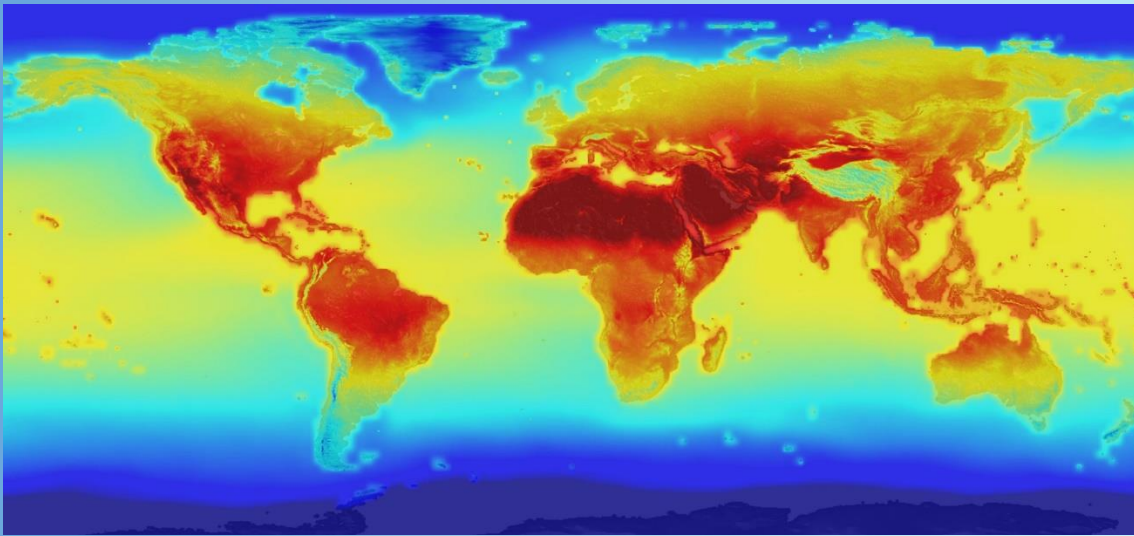


Image Source: NASA

Based on what you have learned, what do you think the weather and climate will be like in Maryland in 10 years? Write a fictitious news report about a climate change-related event. Consider using [this website](#) for ideas about what to say.

# 6. Teacher Resources

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
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Grade 9 Content Area: Science Unit:

Time Frame: 1 90-minute class period

Differentiation strategies for this lesson:

- Direct students to use comprehension tools included in databases, such as: audio read-aloud, labeled reading levels, and embedded dictionaries.
- Put students in groups of three for research and discussions.

Notes to the teacher:

- Collaborate with your school library media specialist to plan and implement this lesson.
- Provide students with login information as needed to authenticate BCPS Digital Content. Login information is on the **BCPS Digital Content** page in the [Apps Portal](#).
- Consider using the [Schoolology Assignment App](#) feature to assign Google Docs for students to access, edit, and submit through Schoolology.

## Learning Standards Alignment

### Content Learning Standards

#### [Next Generation Science Standards](#)

HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.

HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.

#### [MCCR ELA Standards for Grades 9-12](#)

**Reading: 1.** Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

**Writing: 7.** Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

**AASL Standards Framework for Learners** Inquire: Build new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems.

Think: Learners display curiosity and initiative by:

I.A.2 Recalling prior and background knowledge as context for new meaning.

Create: Learners engage with new knowledge by following a process that includes:

I.B.1 Using evidence to investigate questions. I.B.3 Generating products that illustrate learning.

Share: Learners adapt, communicate, and exchange learning products with others in a cycle that includes:

I.C.1 Interacting with content presented by others.

Grow: Learners participate in an ongoing inquiry-based process by:

I.D.2 Engaging in sustained inquiry.

#### [P21 Framework: 21<sup>st</sup> Century Student Outcomes](#)

**3. Information, Media & Technology Skills: Information Literacy:** Access information efficiently and effectively; Use information accurately and creatively for the issue or problem at hand.

**ICT Literacy:** Use technology as a tool to research, organize, evaluate and communicate information.