CLIMATE PROJECT COURSE PLAN

## CP Course Objectives

1. Examine the facts, impacts, and promising solutions to better understand the climate crisis.
2. Advance awareness, interest, and the skills needed to address climate change through civic action, education, and career readiness.
3. Evaluate information to engage in constructive discussion and move past pessimism and inaction.

## Suggested Pacing

|  |  |
| --- | --- |
| Unit  | Estimated Duration |
| 1—Introduction to Climate Change | 2 weeks |
| 2—The Impacts of Climate Change | 2 weeks |
| 3—Adaptation and Innovation | 3 weeks |
| 4—Decarbonization | 3 weeks |
| 5: Taking Action Note: this unit offers multiple options for students to show their understanding and participate in climate action. You’ll want to review the unit before starting instruction to determine the deliverable that make the most sense for your classroom.  | 2-4 weeks |

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## Unit 1—Introduction to Climate Change

**Unit Problem:** What is climate change and how can we accurately evaluate the information surrounding it?

**Unit Objectives**

1. Understand the basics of climate change including its causes and effects.
2. Use claim-testing skills to critically analyze and evaluate information surrounding climate change.
3. Assess reasons for optimism in the face of climate change.
4. Analyze the strengths and challenges of international climate targets.

### Lesson 1.1—Understanding Climate Change

**Driving Question:** What is climate change?

#### Lesson Objectives

1. Define climate change.
2. Explain the main causes of climate change.
3. Analyze historical data and trends that demonstrate climate change over time.
4. Apply claim-testing skills to evaluate data and people’s perceptions about climate change.

#### Lesson Materials

1. **Opener:** Understanding Climate Change
	1. Climate Change Is…
2. What Do We Mean When We Talk About Climate Change?
	1. **Video:** “What is Climate Change?”
	2. **Activity:** Defining Climate Change
3. Parts Per Million
4. **Infographic:** *Small Parts Big Impacts*
5. Fact or Fiction?
	1. **Activity:** Introduction to Claim Testers
6. The Climate Pioneer
	1. **Graphic Biography**: Eunice Foote
7. The Evidence of Climate Change
	1. **Article:** *How Do We Know Climate Change Is Real?*
	2. **Activity:** Claim Testing: Earth’s Climate Record
8. Current Events
	1. **Article**: Climate Currents Newsletter
9. **Closer:** Understanding Climate Change
	1. Climate Change Will…

### Lesson 1.2— Climate Disagreement

**Driving Question:** Why can it be so difficult to agree when it comes to climate change?

#### Lesson Objectives

1. Analyze why disagreement and misinformation about climate change exists.
2. Identify what makes a source of information credible.
3. Critically evaluate common climate-change claims.

#### Lesson Materials

1. **Opener:** Climate Disagreement
	1. Claim Tester Review
2. Why Do We Still Disagree?
3. **Article**[:](https://onworldhistory.wpcomstaging.com/activity-claim-testing-introduction-3/) *Understanding Climate Change* Disagreement
4. Who Can You Trust?
5. **Activity:** Claim Testing: Evaluating Authority
6. **Closer:** Climate Disagreement
7. Exploring Climate Disagreement

### Lesson 1.3—The Case for Climate Optimism

**Driving Question:** Why should we be optimistic when it comes to climate change?

#### Lesson Objectives

1. Evaluate evidence in support of climate optimism.
2. Build and communicate your own perspective about climate change.

#### Lesson Materials

1. **Opener:** The Case for Climate Optimism
2. Worst Day Ever?
3. Climate Optimism
	1. **Video:** “A Case for Optimism”
	2. **Activity:** Optimism Quote Analysis
4. Optimist or Doomer?
	1. **Article:** *The Need for Climate Optimists*
	2. **Activity:** How Optimistic Are You?
5. Perspective Writing
6. **Activity:** Optimism Personal Statement
7. **Closer:** The Case for Climate Optimism
8. A New Perspective

### Lesson 1.4— International Climate Goals

**Driving Question:** How can setting effective goals help us address climate change?

#### Lesson Objectives

1. Understand the need for international collaboration in addressing climate change.
2. Evaluate the successes and failures of previous climate policies.
3. Identify strategies to make climate goals more effective

#### Lesson Materials

1. **Opener:** International Climate Goals
2. Data Investigation
3. Who Should Act?
	1. **Infographic**[:](https://onworldhistory.wpcomstaging.com/read-the-americas-1200-1450/) *Who Caused Climate Change?*
	2. **Activity:** Investigating Global Perspectives
4. Global Policy Record
	1. **Video:** “International Climate Agreements”
	2. **Activity:** Global Policy Exploration
5. International Warming Targets
	1. **Article:** *Understanding 1.5° C*
6. How Can We Meet Our Goals?
7. **Activity:** From Policy to Action
8. **Closer:** International Climate Goals
9. Setting Effective Goals
10. **DBQ**: Introduction to Climate Change (Unit 1)
	1. **Pre–Writing Activity:** Introduction to Climate Change
	2. **DBQ Sources**: Introduction to Climate Change
	3. **Writing** **Activity:** Introduction to Climate Change

## Unit 2—The Impacts of Climate Change

**Unit Problem:** What are the impacts of climate change?

**Unit Objectives**

1. Describe direct and indirect climate impacts
2. Analyze the impact of climate change on ecosystems and people across various regions.
3. Define key climate-related terms and understand their usage in context.

### Lesson 2.1— Evaluating Climate Impacts

**Driving Question:** How will climate change affect us?

#### Learning Objectives

1. Distinguish between the direct and indirect impacts of climate change.
2. Understand that the impacts on natural and human systems are connected.
3. Assess how the impacts of climate change are experienced differently

#### Lesson Materials

1. **Opener:** Evaluating Climate Impacts
2. Climate Impacts Brainstorm
3. Current and Future Climate Effects
	1. **Video:** “How Will Climate Change Continue to Affect Us?”
	2. **Activity:** Impacts Personal Inventory
4. Understanding Climate Impacts
	1. **Article:** *The Impacts of Climate Change*
	2. **Activity:** Climate Ripple Effects
5. Climate Impacts Case Study
	1. **Activity:** Climate Change Impacts Around the World
	2. **Visual Aid**: Climate Change Impacts Profiles
6. **Closer:** Evaluating Climate Impacts
7. Individual Impacts

### Lesson 2.2— Direct Impacts of Climate Change

**Driving Question:** How is climate change affecting natural systems?

#### Learning Objectives

1. Identify and describe direct impacts of climate change.
2. Analyze a direct impact to understand it’s effects and potential future consequences.
3. Explain why small amounts of warming are significant when it comes to climate impacts

#### Lesson Materials

1. **Opener:** Direct Impacts of Climate Change
	1. Direct Impacts Review
2. Measuring Impacts
	1. **Infographic:** *Does Half a Degree Really Matter?*
	2. **Activity:** Writing: Does It Matter?
3. Climate Impacts Data
	1. **Article:** *Climate Impacts: Sea–Level Rise*
	2. **Activity:** Direct Impacts Research
4. Climate Maps
5. **Activity:** Mapping a Climate Future
6. **Closer:** Direct Impacts of Climate Change
7. Direct Impacts and You

### Lesson 2.3— Indirect Impacts of Climate Change

**Driving Question:** How is climate change affecting people?

#### Learning Objectives

1. Identify and describe indirect impacts of climate change.
2. Analyze how climate impacts vary depending on factors such as geography, health, and income.
3. Evaluate evidence to understand the effects of climate change on humans.

#### Lesson Materials

1. **Opener:** Indirect Impacts of Climate Change
2. Expanding Impacts
3. Exploring Risks
4. **Activity:** Climate Vulnerability
5. Assessing Correlation and Causation
6. **Activity:** Correlation vs Causation
7. Climate and Human Health
8. **Activity:** The Health Impacts of Climate Change
9. Exploring Climate Justice
	1. **Activity:** What is Climate Justice?
	2. **Video:** “Are Natural Disasters Actually Natural?”
10. Climate and Disease
	1. **Infographic*:*** *This Bites!*
	2. **Activity:** Climate and Health: What’s the Evidence?
11. **Closer:** Indirect Impacts of Climate Change
12. The Billion Dollar Problem
13. **DBQ**: The Impacts of Climate Change (Unit 2)
	1. **Pre–Writing** **Activity:** The Impacts of Climate Change
	2. **DBQ Sources:** The Impacts of Climate Change
	3. **Writing Activity:** The Impacts of Climate Change

### Lesson 2.4— Climate Vocabulary

**Driving Question:** What vocabulary do we need to talk about climate change?

#### Learning Objectives

1. Define common climate vocabulary terms.
2. Understand how climate vocabulary terms are used.
3. Understand common misconceptions about climate vocabulary terms.

#### Lesson Materials

1. **Opener:** Climate Vocabulary
2. Word Mismatch
3. Vocab Games
4. **Activity:** Climate Vocab Word Wheel
5. Test Your Knowledge
6. **Activity:** Climate Vocab Trivia
7. **Closer:** Climate Vocabulary
8. Climate Mad Libs
9. Extension Material: Vocab Organizer
	1. **Activity:** Climate Vocab Tracker

## Unit 3—Adaptation and Innovation

**Unit Problem:** How can we leverage innovation and action to respond to climate change?

**Unit Objectives**

1. Describe the difference between adaptation and mitigation solutions and assess the need for each in responding to climate change.
2. Evaluate different adaptation strategies and advocate for one that will be most impactful.
3. Evaluate the role of innovation in reaching climate goals.
4. Describe how individuals, businesses, and governments can effectively address climate change.
5. Understand the concept of the green premium as a tool for climate action.

### Lesson 3.1— Evaluating Climate Solutions

**Driving Question:** How can we respond to climate change?

***Learning Objectives***

1. Describe the difference between adaptation efforts and mitigation solutions.
2. Assess the need for different types of climate solutions.
3. Evaluate the efficacy of different climate solutions.

***Lesson Materials***

1. **Opener:** Evaluating Climate Solutions
2. Categorizing Climate Solutions
3. Addressing Climate Causes and Impacts
	1. **Article:** How Can We Take on Climate Change?
	2. **Activity:** Evaluating Strategies
4. Adaptation or Mitigation?
5. **Activity:** Exploring Climate Solutions
6. What is Geoengineering?
	1. **Podcast**: “Smog Cloud Silver Linings”
	2. **Activity:** Geoengineering Debate
7. **Closer:** Evaluating Climate Solutions
8. Funding Climate Solutions

### Lesson 3.2— Climate Change Adaptation

**Driving Question:** How can we adapt to climate change?

#### Learning Objectives

1. Evaluate different adaptation strategies.
2. Identify solutions that will benefit the most people.
3. Research and advocate for an adaptation strategy

#### Lesson Materials

1. **Opener:** Climate Change Adaptation
2. Adaptation Brainstorm
3. Where Can We Adapt?
	1. **Activity:** Adaptation Areas
	2. **Visual Aid**: Unpacking Adaptation Areas
4. How Should We Adapt?
	1. **Article:** *Adaptation Solutions*
	2. **Activity:** Evaluating Adaptation Solutions
5. Weather Intelligence
	1. **Video:** “Why Fish Farmers Need a Better Weather Forecast”
	2. **Activity:** Claim Testing: Practicing Authority
6. Adapting Urban Spaces
	1. **Infographic:** *Resilient Cities*
	2. **Activity:** Urban Design Challenge
7. Investigating Adaptation Solutions
8. **Activity:** Adaptation Solution Research
9. **Closer:** Climate Change Adaptation
10. Community Solutions

### Lesson 3.3— The Need for Climate Innovation

**Driving Question:** What’s the role of innovation?

#### Learning Objectives

1. Identify existing climate solutions.
2. Evaluate the role of innovation in reaching climate goals.
3. Research and assess an innovative climate solution.

#### Lesson Materials

1. **Opener:** The Need for Climate Innovation
	1. A History of Innovation
2. Defining Innovation
3. **Activity:** What is Innovation?
4. Progress Report
	1. **Article:** *The Solutions We Have and the Innovations We Need*
	2. **Activity:** What are the Most Important Solutions?
5. Climate Innovation
	1. **Video**: “The Need for Climate Innovators”
	2. **Activity:** Climate Innovation Research
6. **Closer:** The Need for Climate Innovation
7. Climate Innovation Recap

### Lesson 3.4— Effective Climate Action

**Driving Question:** What does effective action to climate change look like?

#### Learning Objectives

1. Describe how individuals, businesses, and government can effectively address climate change.
2. Evaluate obstacles facing these groups and describe strategies for overcoming them.

#### Lesson Materials

1. **Opener:** Effective Climate Action
	1. Climate Action Sort
2. Where Can Action Happen?
	1. **Article:** *Working the Levers of Climate Action*
	2. **Activity**: Analyzing Climate Action
3. Effective Action
	1. **Video:** “How Can We Respond to Climate Change?”
4. Climate Action Investigation
	1. **Graphic Biographies**: Levers of Power
	2. **Activity:** Exploring the Levers of Power
5. **Closer:** Effective Climate Action
6. Overcoming Obstacles

### Lesson 3.5— The Green Premium

**Driving Question:** How can we manage the costs of decarbonization?

#### Learning Objectives

1. Define the term *green premium*.
2. Explain the relationship between green premiums and behavior, policy, and innovation.

#### Lesson Materials

1. **Opener:** The Cost of Decarbonizing
	1. What’s It Worth?
2. Why Does Money Matter?
3. **Article:** Understanding the Green Premium
4. What Does the Green Premium Tell Us?
5. **Infographic:** What’s a Green Premium?
6. The Cost of Decarbonizing
	1. **Video:** “Green Premiums: The Extra Cost to Decarbonize”
	2. **Activity:** Exploring the Green Premiums
7. Policy Analysis
8. **Activity**: Exploring the IRA
9. **Closer:** The Cost of Decarbonizing
10. Product Pitch
11. **DBQ**: Innovation and Adaptation (Unit 3)
	1. **Pre–Writing** **Activity:** Innovation and Adaptation
	2. **DBQ Sources**: Innovation and Adaptation
	3. **Writing** **Activity:** Innovation and Adaptation

## Unit 4—Decarbonization

**Unit Problem:** What are the challenges of and solutions to decarbonization?

**Unit Objectives**

1. Understand the primary sources of carbon emissions
2. Identify and assess the solutions most important to reducing emissions.
3. Understand the role of global, national, and local policy in reducing emissions.
4. Evaluate the potential future impact of climate change on areas such as health, food, and transportation

### Lesson 4.1— The Grand Challenges

**Driving Question:** What are the Grand Challenges?

#### Learning Objectives

1. Identify the five Grand Challenges.
2. Explain the obstacles to reducing emissions in each Grand Challenge.
3. Understand how the Grand Challenges are connected.

#### Lesson Materials

1. **Opener:** The Grand Challenges
2. Emissions Image Sort
3. Why Do We Release So Many Greenhouse Gases?
	1. **Article:** *Grand Challenge Overview*
	2. **Activity:** Grand Challenge Image Sort
4. The Five Categories of Emissions
	1. **Infographic:** *The Grand Challenges*
	2. **Visual Aid:** Unpacking the Grand Challenges
	3. **Activity**: Categorizing Emissions
5. **Closer:** The Grand Challenges
	1. Personal Emissions

### Lesson 4.2— Decarbonization Solutions

**Driving Question:** How can we reduce emissions?

#### Learning Objectives

1. Evaluate decarbonization strategies.
2. Identify the solutions most valuable to emissions reduction.
3. Research a decarbonization strategy based on a limited set of criteria and advocate for its implementation

#### Lesson Materials

1. **Opener:** Decarbonization Solutions
2. Solutions Sort
3. Reducing Emissions
	1. **Article:** Solutions to the Grand Challenges
	2. **Activity:** Evaluating Solutions to the Grand Challenges
4. Can We Capture Emissions?
	1. **Infographic:** *Vacuum the Sky: Direct Air Capture*
	2. **Activity:** Direct Air Capture Evaluation
5. Carbon–Free Electricity
	1. **Video:** Can We Make Electricity Without Fossil Fuels?
6. Investigating Decarbonization Solutions
7. **Activity:** Grand Challenge Solutions Research
8. **Closer:** Decarbonization Solutions
9. Solutions Claim Writing
10. **DBQ**: Climate Solutions
	1. **Pre–Writing** **Activity:** Climate Solutions
	2. **DBQ Sources:** Climate Solutions: Nuclear Energy
	3. **DBQ Sources:** Climate Solutions: Plant–Based Meat
	4. **DBQ Sources:** Climate Solutions: Tree Planting
	5. **Writing** **Activity:** Climate Solutions

### Lesson 4.3— Implementing Decarbonization Strategies

**Driving Question:** How should we implement decarbonization strategies?

#### Learning Objectives

1. Explain the need for international collaboration in addressing climate change.
2. Evaluate the successes and failures of previous climate policies.
3. Identify strategies to make climate goals more effective

#### Lesson Materials

1. **Opener:** Implementing Decarbonization Strategies
2. Action Levels Preview
3. What’s the Role of Government?
	1. **Video:** “Why Does Policy Matter?”
	2. **Activity:** Strategy Analysis
4. The Path to Decarbonization
	1. **Article:** *Decarbonization Goals*
	2. **Activity:** Decarbonization Policy Exploration
5. Investigating Decarbonization Policies
6. **Activity:** Implementation Plan
7. **Closer:** Implementing Decarbonization Strategies
8. Climate Policy News

### Lesson 4.4— A Climate Future

**Driving Question:** How will climate change shape our future?

#### Learning Objectives

1. Evaluate the potential impact of climate change on health, jobs, and human systems.
2. Identify personal actions that can have an impact on climate change

#### Lesson Materials

1. **Opener:** A Climate Future
	1. Data Warm–Up
2. Envisioning a Climate Future
	1. **Article:** A Climate Future: Health
	2. **Article:** A Climate Future: Food Systems
	3. **Article:** A Climate Future: Transportation
	4. **Activity:** Data Investigation: Health
	5. **Activity:** Data Investigation: Food Systems
	6. **Activity:** Data Investigation: Transportation
3. Investigating Climate Careers
	1. **Activity:** Climate Expert Exploration
4. **Closer:** A Climate Future
	1. Climate Future Journal Entry
5. **DBQ**: Decarbonization (Unit 4)
	1. **Pre–Writing** **Activity:** Decarbonization
	2. **DBQ Sources**: Decarbonization
	3. **Writing** **Activity:** Decarbonization

## Unit 5—Taking Action

**Driving Question: Unit Problem:** How can you take action to respond to climate change?

**Unit Objectives**

1. Use climate-change knowledge to identify a medium and target audience for a civic-action campaign.
2. Apply argumentation, writing, and communication skills to evaluate opportunities for civic action.

### Lesson 5.1— Climate Action: Career Plan

**Driving Question:** What careers will help us address climate change?

#### Learning Objectives

1. Understand the ways climate change will impact various careers.
2. Investigate careers working to address climate change.
3. Research a career and present to a target audience

#### Lesson Materials

1. **Opener:** Careers
	1. Career Interests Exploration
2. Jobs of the Future
	1. **Article:** A Climate Workforce
	2. **Activity:** Climate Impacts and Careers
3. Career Investigation
	1. **Activity:** Climate Career Exploration
	2. **Activity:** Climate Career Presentation
4. **Closer:** Careers
	1. Career Reflection

### Lesson 5.2— Climate Action: Climate Solution Presentation

**Driving Question:** Which climate solution matters most, and how can you persuade others to support it?

#### Learning Objectives

1. Evaluate the strengths and challenges of a climate solution.
2. Build and deliver an educational presentation.

#### Lesson Materials

1. **Opener:** Solutions Presentation
	1. What Have I Learned?
2. What Matters to Your Community?
	1. **Activity:** Climate Impacts Interview
3. Solutions Investigation
	1. **Activity:** Climate Solutions Research
	2. **Activity:** Climate Solutions Presentation
4. **Closer:** Solutions Presentation
	1. Solutions Investing

### Lesson 5.3— Climate Action: Policy

**Driving Question:** How can policy help us address climate change?

#### Learning Objectives

1. Evaluate the importance of government policy when it comes to climate action.
2. Research and assess a climate policy that will help address climate change.
3. Write a letter to advocate for a climate policy.

#### Lesson Materials

1. **Opener:** Policy
	1. Policy Exploration
2. Understanding Government Policy
	1. **Video:** “Why Does Policy Matter?”
	2. **Activity:** Strategy Analysis
3. Policy Investigation
	1. **Activity:** Climate Policy Analysis
	2. **Activity:** Policy Letter Writing
4. **Closer:** Policy
	1. Policy Reflection

### Lesson 5.4— Climate Action: Civic Action

**Driving Question:** What actions will make a difference in my community?

#### Learning Objectives

1. Evaluate climate action campaigns.
2. Create a plan for civic action.

#### Lesson Materials

1. **Opener:** Civic Action
	1. Climate Action Evaluation
2. Student Action Case Study
	1. **Graphic Biographies**: Civic Action
	2. **Activity:** Exploring Action Projects
3. Civic Action Investigation
	1. **Activity:** Civic Action Plan
	2. **Activity:** Community Climate Action Plan
4. **Closer:** Civic Action
	1. Civic Action Reflection