

Innovation and the Future of Climate Tech

Opening Activity: Which Innovation Am I?

Notes:

The Big Question

How do innovation and creative thinking help us reach our climate goals in Massachusetts?

My Climate Goals

1. Identify examples of how innovation has advanced Massachusetts's climate solutions
2. Identify and describe innovations that will accelerate the creation of new solutions to climate change
3. Describe how research and design contribute to innovation in climate solutions.

Notes:

Climate Innovation Maps (Trees)

Instructions

Work with your group to complete your climate innovation map and identify as many potential effects of an innovation of your chosen innovation on your community as possible. You may choose an innovation discussed in class or something completely new. Consider benefits, disruptions or challenges, and additional applications. Use the prompts on the next page, and be prepared to share highlights of your map with the class.

Step 1: Identify a Climate Challenge

What is the problem you want to address?

Every innovation begins with a question or a challenge. Write a brief description of the challenge your group has selected at the top of your map. Some examples include:

- Reducing carbon emissions in transportation
- Improving energy efficiency in buildings
- Managing waste and recycling more effectively

Step 2: Choose an Innovation

What innovation will you focus on?

Write the name and a brief description of your group's chosen innovation. The innovation should somehow address the climate challenge from Step 1. Some examples include:

- Electric vehicles (EVs)
- Vertical farming
- Bio-based packaging

Step 3: Explore the Impacts

Create branches on your map or tree that explore these categories:

1. Benefits: What are the positive effects of implementing this innovation?
2. Disruptions or Challenges: What difficulties or unintended consequences might occur?
3. Other Applications: How else could this innovation be used to address related challenges?

Climate Innovation Map

Challenge and description:

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Innovation and description:

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Benefits

Challenges

Other Applications

Benefits	Challenges	Other Applications

Lesson Key Points

- Innovation drives clean energy progress
- Historical technologies can have modern applications
- Energy innovations create diverse career paths
- Adaptability and curiosity fuel innovation

Additional key points:

Closing Activity

What is one climate-related problem or question that needs a solution?

What is one climate-related innovation that has had a significant impact on MA's energy transition?

Careers of interest you heard about in this lesson: