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**Purpose**

In this activity, you’ll investigate the solutions we have and the innovations we need to combat climate change by evaluating a climate innovation of your choice. By further exploring the purpose, opportunities, and obstacles presented by a single innovation, you’ll better understand that addressing the problem of climate change will require even more innovation.

## Process

1. Your teacher will break up the class into pairs or small groups of three or four. Review the list of potential innovations in Part 1 of the Climate Innovations worksheet with your group. From the list or additional research, select one innovation to focus on for your research.

1. Working in your group, conduct internet research on your innovation and complete the chart in Part 1 of the worksheet.
2. Finally, complete the questions in Part 3. Be prepared to share your responses.

**Part 1**

**Potential innovations:**

|  |  |  |
| --- | --- | --- |
| * Hydrogen produced without emitting carbon
* Grid-scale electricity storage
* Electrofuels
* Advanced biofuels
* Zero-carbon cement
* Zero-carbon steel
 | * Plant- and cell-based meat and dairy products
* Next-generation nuclear fission
* Nuclear fusion
* Direct air carbon capture
* Zero-carbon plastics
 | * Pumped hydro
* Thermal storage
* Drought- and flood-tolerant crops
* Zero-carbon alternatives to palm oil
* Alternative coolants
* Alternative feed for livestock
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**Innovation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Why is this innovation promising?** | Describe how it will contribute to reducing greenhouse gas emissions or lessening the impacts of climate change.  |
| **What’s the current status of this innovation?** | Describe the current status of the technology including cost, existing obstacles, and how it’s currently being used. |
| **What needs to happen for this innovation to start making a difference?** | Describe the role of government, businesses, or individuals in promoting this innovation.  |
| **Other variables** | Are there other important factors to consider when evaluating this innovation? *Consider obstacles such as usage, public perception, policies, and equity.* |
| **Analysis** | 1. Which claim testers did you use to evaluate this innovation?
2. In your opinion, why is this solution valuable?
3. How does this climate solution compare to others you’ve encountered so far?
 |

**Part 3**

1. Based on your analysis, would you advocate for the development of this innovation? Why or why not?

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1. How does your research support, extend, or challenge what you previously knew about the need for innovation when it comes to solving climate change?

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