**Purpose**

In this activity, you’ll explore the *direct impacts* of climate change: measurable effects caused directly by rising global temperatures. These are impacts including sea-level rise, drought, and glacial retreat. By examining these direct impacts, you’ll come to understand that climate change is not a problem for the future, but one that is already affecting human and natural systems. It’s important for you to have a clear understanding of the direct impacts of climate change before you examine how these effects then lead to the *indirect impacts* affecting humans and their environment, including health, food security, and where they’re able to live.

## Process

1. Your teacher will hand out or have you download and print the Direct Impacts of Climate Change worksheet.
2. Complete Part 1 of the worksheet: Choose three direct impacts from the provided list. Keep in mind that this is not an exhaustive list of climate change impacts (the website you’ll use for research lists 50!) but provides a sample of some of the impacts already having a significant effect.
3. Next, visit the website Climate Change Indicators at [www.epa.gov/climate-indicators/view-indicators](http://www.epa.gov/climate-indicators/view-indicators). Use the information on the site to fill out the worksheet for your chosen areas.
4. Answer the questions in Part 2 based on your research. Be prepared to share your answers with the class.

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**Directions:** Following the instructions for Parts 1 and 2. Be prepared to discuss your research with the class.

**Part 1**: Choose **three** direct impacts from the list below to research on the EPA’s Climate Change Indicators website at [www.epa.gov/climate-indicators/view-indicators](http://www.epa.gov/climate-indicators/view-indicators). As you research, fill in the chart below for each of your chosen impacts.

* Sea-level rise
* Extreme weather events
* Droughts
* Plant and animal habitat changes
* Ocean acidification
* Glacial retreat
* Sea ice melting
* Extreme heat
* Lengthening wildfire season
* Changes in precipitation patterns

| **Direct impact** | **Describe how climate change is affecting this area** | **What evidence do we have that this is happening?** | **Making predictions: What are potential “domino effects” this direct impact could have on other human or natural systems?** |
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**Part 2:** Answer the following questions based on the information you gathered in Part 1.

1. What conclusions can you draw about how climate change the impacts of climate change are distributed in different regions of the world?

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1. Think about the “domino effect” predictions you made in Part 1. How do those predictions impact your understanding of why it’s important to address the impacts of climate change?

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1. How does the information you encountered in your research support, extend, or challenge what you already knew about climate change?

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