

Student Discussion Worksheet

Directions: After reading the online *Science News* article "[The new UN Climate change report shows there's no time for denial or delay](#)," discuss the first set of questions with your class. Then, discuss and answer the second set of questions with a partner. Your teacher will assign you an extreme condition to focus on when completing the third set of questions. A version of the article, "Earth cannot avoid a warmer future," appears in the September 11, 2021 issue of *Science News*.

So many scenarios

1. What are climate scenarios?
2. What do the four scenarios outlined in the "Feeling the heat" chart in the *Science News* article represent?
3. Why do you think scientists look at more than one scenario in climate change studies? Think about what determines how much climate will change in the future.
4. How might understanding different climate scenarios and their impacts benefit policy makers around the world?
5. Why do you think it is important for you to understand how scientists use climate change scenarios? Explain.

Data dive

1. Look at the chart titled "Feeling the heat" in the *Science News* article. In your own words, describe what the chart shows. Make sure to state any units of measurement used, and compare your answer with your partner's answer.
2. Choose two data points off the chart for your partner and have them explain the meaning of the points to you. Make sure your chosen points are different than the points your partner chooses. Take time to think through your answers before taking turns explaining them to each other.

3. Look at the climate impacts for the +1.5 degrees Celsius scenario and the +2 degrees C scenario. Based on the chart and the rest of the *Science News* article, how does half a degree of warming affect the severity of extreme events? Use one extreme event given in the chart as an example to help explain your reasoning. Think about differences in severity relative to preindustrial times and relative to now.

Diagram the data

1. Check in with your teacher to determine which extreme weather event you and your partner should explore. State which extreme event you are investigating. What geographic regions do you think will be most affected by changes in the severity of that event?

2. Draw a diagram to represent the relative data for your assigned extreme event under each of the four climate scenarios in the “Feeling the heat” chart. Make sure that your data visualization correctly represents the relative changes in severity for the different scenarios.

3. Explain how you could determine the rate of change in severity of your extreme event.

