

### **Supplement 3. Team Assignment Worksheets**

#### **Hypothesis Worksheet**

Hypotheses are used to guide a research study, and are an important part of the scientific method. Specifically, the scientific method requires that hypotheses be testable, and typically hypotheses are phrased such that they offer an educated explanation for the phenomenon that is under investigation.

As a team, please answer the questions below.

1. List the possible hypotheses that your team discussed during your meeting. Next to each hypothesis indicate both the character and real-life name of the person that offered that hypothesis for consideration.
2. What hypothesis did your team think was the best? Why? (2 to 4 sentences or more)
3. Walk us through why and how your team decided on that hypothesis. Be sure to comment on any difficulties that your team faced and how you overcame these challenges. (6 or more sentences)
4. Is your best hypothesis testable? Yes or No? (Hint: your hypothesis must be testable!)
5. How do you know that your hypothesis is testable? In other words, what makes it testable? (1 to 3 sentences or more)
6. Does your best hypothesis offer an educated explanation for the phenomenon of destruction of the Amazon rainforest? Yes or No?
7. Does your best hypothesis include human impacts on the rainforest? Yes or No?
8. If your best hypothesis does not include human impacts on the forest, why not? If your hypothesis does include human impacts on the rainforest, describe why you included these impacts? (1 to 3 sentences or more)
9. Describe why each of you might prefer a different hypothesis than the other stakeholders on your team. Remember to stay in character and include both the character and real-life name of the person associated with each part of your response (2 to 3 sentences per teammate's response)

### **Final Hypothesis Worksheet**

Scientists spend a considerable amount of time considering and refining research hypotheses to ensure that their hypotheses are testable and phrased such that they offer an educated explanation for the phenomenon that is under investigation.

As a team, please answer the questions below.

1. What was your team's best hypothesis from the Hypothesis Worksheet (question #2)? (1 sentence)
2. Walk us through how your team improved your previous hypothesis to come up with your final hypothesis for this week. Be sure to comment on any difficulties that your team faced and how you overcame these challenges. (6 or more sentences)
3. How did your team use the PICOT model to shape your final hypothesis? Please provide specifics for each of the five PICOT components (5 to 7 sentences or more) (Hint: See The Hypothesis in Science Writing resource under the weekly Discussion Materials for more information about the PICOT model)
4. What is your team's final hypothesis? (1 sentence that is testable)
5. Is your team's final hypothesis testable? How do you know it is testable? (2 to 3 sentences or more) (Hint: your hypothesis must be testable!)
6. Does your team's final hypothesis offer an educated explanation for the phenomenon of destruction of the Amazon rainforest? Yes or No?
7. Does your team's final hypothesis include human impacts on the rainforest? Yes or No?
8. How did your team reach a consensus about the final hypothesis given the differing opinions of each person's assigned character? (2 to 4 sentences or more)
9. Provide one current example from the news of a team/group of people with differing opinions that must work together to identify a common solution. Please be specific in your response and include a link to the source(s) of your information. (4 to 5 sentences or more)

### Ecosystem Services Worksheet

Once your team has met formally through your video conference to review the three assigned ecosystem services articles and you have reached a consensus, please work as a team to fill in the table questions below.

Article	What was the main point of the article? (2 or 3 sentences or more for each article)	What is one weakness of the evidence provided in the article? (3 or 4 sentences or more for each article)	What makes the evidence and the source of evidence in the article a credible source of information? (1 or 2 sentences or more for each article)	How do each of your characters react to the information presented in the articles? (4 or 5 sentences or more for each article)	How easy was it to read and understand the article? Circle one. (1=extremely difficult, 5=extremely easy)
Casado and Londoño (2019)					1 2 3 4 5
Holzman (2012)					1 2 3 4 5
Ehrlich and Wilson (1991)					1 2 3 4 5

### Source Credibility Worksheet (aka the C.R.A.P. Test)

Anyone can write anything and publish it online these days. In order to be informed consumers of information, we must carefully evaluate media sources and identify if information is credible or not. Once you find a news article that relates to the topic of our class, complete this worksheet.

One way to evaluate sources of information is to use something called the “C.R.A.P. Test.” Using the C.R.A.P. Test, you can identify the following attributes of an article:

- Currency      Relevance      Authority      Purpose

Evaluate your selected article using the C.R.A.P. criteria in the table below:

Attribute	Question	Response
	What is the URL for the article?	
Currency	When was the article published? (Please provide the specific date.)	
Relevance	Is the information in the article still relevant today?	
	Are there links to any other sites within the article? If so, how many?	
	What type of article is it? An editorial? A personal blog? A wiki?	
Authority	Who authored the article? Is there a byline? Is it a person or an institution?	
	What are the website's/publication's credentials? How do you know this author is an expert?	
	Using Google, look up the author and/or institution. What	

	do others say about the author/institution?	
	What is the author's and/or institution's bias? (The Oxford Dictionary defines bias as "inclination or prejudice for or against one person or group, especially in a way considered to be unfair.")	
Purpose	Why was this article published? Is it intended to persuade or inform?	
	Who is the intended audience? The general public? College students? Other groups?	
	Are there advertisements attached to the site where the article is published? If so, how many? And how do the ads relate to the content?	
Bottom Line	Is this source credible? Why or why not?	

This worksheet was developed with content from:

<https://kscinfolit.wordpress.com/2011/07/12/c-r-a-p-test-map-worksheet-and-handout/>

<https://scholarsphere.psu.edu/resources/76c558da-b7f9-4704-a7b1-54559d0bdd20>

<https://blogs.agu.org/geoedtrek/2016/02/24/crap-test/>

### **Rainforest Value Worksheet**

Once your team has met formally through your video conference to discuss this assignment and you have reached a consensus, please work as a team to answer the questions below.

1. Overall, how much is the Amazon rainforest worth? (2 to 4 sentences or more)
2. How much is the Amazon rainforest worth to Brazil? (2 to 4 sentences or more)
3. How much is the Amazon rainforest worth to the health of the planet? (2 to 4 sentences or more)
4. How did you come up with these values? (4 to 6 sentences or more)
5. What scholarly sources (e.g., books, articles, etc.) did you consult to help you with your value estimates? (please list a minimum of 3 sources)
6. What is really at stake if rainforest deforestation in the Amazon is allowed to continue? What environmental health hazards or risks are associated with Amazon rainforest deforestation? (6 to 9 sentences or more)
7. Who (individuals, communities, regions, countries) stands to gain or lose from Amazon rainforest deforestation? What are the social costs of Amazon rainforest deforestation (i.e., the costs to society)? (8 to 12 sentences or more)
8. In what ways are the stakeholders that you mention in your answer to Question 7 being impacted by deforestation in the Amazon rainforest? (4 to 6 sentences or more)
9. From each of your characters' perspectives, what is worrying them the most about Amazon rainforest loss due to deforestation? (5 or more sentences)

### **Bending the Curve Worksheet**

Once your team has met formally through your video conference to discuss this assignment and you have reached a consensus, please work as a team to answer the questions below.

1. What is the role of a public university, such as the University of X system, when it comes to “bending the curve”? (4 to 6 sentences or more)
2. Why would the University of X get involved with efforts to bend the curve? (4 to 6 sentences or more)
3. How many cities in the United States have joined the Global Covenant of Mayors for Climate & Energy (Hint: use this link to search for this information: <https://www.globalcovenantofmayors.org/global-covenant-cities-data/>) (1 sentence)
4. Has the city of Y signed on to the Global Covenant of Mayors for Climate & Energy? Why do you think this is the case? (2 to 3 sentences or more)
5. In the year 2050, what is the expected reduction in emissions below the business as usual (BAU) scenario in North America due to efforts by the Global Covenant of Mayors for Climate & Energy? (please give your answer in metric tons of carbon dioxide equivalent or MtCO<sub>2e</sub>) (Hint: use this link to search for this information using the interactive graphs and figures): <https://www.globalcovenantofmayors.org/impact2022/>) (1 sentence)
6. In the year 2050, what is the Global Covenant target emissions level for North America (please give your answer in MtCO<sub>2e</sub>)? (1 sentence)
7. How many MtCO<sub>2e</sub> will be cumulatively avoided across all participating cities by 2050 because of the Global Covenant of Mayors for Climate & Energy? (1 sentence)
8. Which cities in Z County have adopted the Paris Climate Agreement? (Hint: use this link to search for this information: <http://climatemayors.org>) Why is the Paris Agreement important to these cities? (4 to 6 sentences or more)
9. How many cities in North Dakota and South Dakota have adopted the Paris Climate Agreement? Why do you think this is the case? (4 to 6 sentences or more)
10. What can communities do to support efforts to bend the curve? (3 to 4 sentences or more)
11. How can you help to bend the curve? (3 to 4 sentences or more)

12. Considering everything that you have learned this week about local efforts to curb global warming, do you think that local and state governments in the U.S. are more capable or less capable of bending the curve compared to the U.S. federal government? Why? (4 to 6 sentences or more)



### Decision-Making Worksheet

Once your team has met formally through your video conference to discuss this assignment and you have reached a consensus, please work as a team to answer the questions below.

1. Who are the experts that you would involve in the policy-making process to prevent further deforestation in the Amazon (give at least two specific examples of experts and explain their credentials)? (4 to 6 sentences or more)
2. Given the scientific evidence on global climate change, do you think that policy makers should invoke the Precautionary Principle (Hint: see p. 69 in the textbook) when it comes to policymaking? (4 to 6 sentences or more)
3. What role do so-called "Internet experts," or climate change deniers have when it comes to rainforest policymaking in Brazil? In the world? For a summary of recent research on climate change denial, check out this article - <https://www.washingtonpost.com/news/energy-environment/wp/2016/02/22/science-confirms-it-denial-of-climate-change-is-all-about-the-politics/> (4 to 6 sentences or more)
4. Do the stakeholders on your team agree about the need to address Amazon rainforest deforestation by creating new policies? Please explain. (4 to 6 sentences or more)
5. Given what you know about the 2015 Paris Climate Summit agreement and given how your team has interacted in this class, do you think your team could have been as successful as the world leaders and nations were at reaching this historic climate agreement? Please explain. (4 to 6 sentences or more)
6. Do the stakeholders on your team support the recent actions taken by governors (e.g., California, New York, Washington, Hawaii) and mayors (e.g., Austin, Pittsburg, Los Angeles, San Francisco) in the US to uphold the Paris Climate Summit agreement after President Donald J. Trump stated that the US would pull out of the agreement? Please explain why or why not. (4 to 6 sentences or more)
7. Do the stakeholders on your team agree about the impacts that rainforest deforestation in the Amazon has on global climate change? Please explain. (4 to 6 sentences or more)
8. Describe one solution to the problem of deforestation in the Amazon rainforest. (4 to 6 sentences or more)
9. Why is it important that we solve the problem of deforestation in the Amazon rainforest? (4 to 6 sentences or more)