

Mission

STEMCAP:



Tackling Biodiversity Loss

“Don't let the future fall, biodiversity for us all”

Girls Transition Center
January 13th - 28th 2020

Day 1: Framing the Challenge

Today's Goals: Understand what makes biodiversity loss a “grand challenge” and what we are going to do to address the problem throughout **Mission STEMCAP**.

- 1. List three things you learned about biodiversity today:**

- 2. Describe what you expect to learn and what you expect to do during Mission STEMCAP.**

- 3. So far, what aspect of biodiversity are you most interested in?**

Discussion Questions:

- 1. How might sustainability (or our ability to continue using resources without running out) and biodiversity relate?**
- 2. Why is biodiversity important and what are some ways we might help others see that importance and care about protecting biodiversity?**

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Day 2: *Racing Extinction* Film Discussion

Today's Goals Recognize and discuss problems and solutions relating to biodiversity loss that are presented in the film *Racing Extinction*.

- 1. What are the top 3-5 things that stuck with you from the film?**

- 2. How does the PhotoArk highlight biodiversity and how could it inspire people to care about the effects of their actions on other species?**

Discussion Questions:

- 1. What is your reaction to the film? Do you feel moved, sad, hopeless, neutral, inspired to act? Were there any scenes that made you feel particularly emotional? What about inspired to act? Why?**
- 2. What role do humans play within the narrative of the film? Can you think of any relationships between humans and the natural world that may have been left out? Why might the filmmakers have decided not to include those relationships?**
- 3. The film focusses on endangered animals and the threat of their extinction. What do you think would happen to the ecosystem where those animals live if they were to go extinct? How might other creatures be affected by the loss?**

After watching this film what questions about biodiversity loss and extinction in Utah do you have? Think of some questions you might want to ask our local scientist, Austin, tomorrow.

Write one question you want to ask Austin about biodiversity, or list one topic you want to know more about:

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Day 3: Science Right Now – Wasatch Wildlife

Today's Guest: Scientist Austin

Today's Goal: Understand the importance of citizen science and the role of science in solving real-world problems.

- 1. What was an example of problem-solving in Austin's work? How did you problem-solve during the conservation activity?**

- 2. Describe how interactions among organisms and their environment help shape ecosystems and the role that Austin's work plays in helping us understand these types of relationships.**

Discussion Question:

- 1. Austin showed us one method of answering a question to help solve a problem, but science can take many different forms. What's another method that scientists could use to try to answer a similar question?**
- 2. How can we use the problem-solving processes of science to find solutions to things going on in our own lives that we might not think of as scientific problems?**

Tomorrow you are writing a poem about biodiversity loss. What images make you feel passionate about the issue? What local species or scenes from *Racing Extinction* do you want to include in your poem? List 3 "images" (example: "photos of endangered species displayed on buildings in NYC," "The last bird of its species singing alone in a forest"):

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Day 4: Art/Science - Poetry Writing Workshop
Today's Guest: Ms. Bonnie

Today's Goal: Demonstrate a creative way to communicate about biodiversity loss that helps you reach a broader audience.

Discussion Questions:

1. Who is your imagined audience for this piece, in other words, who would you ideally like to read your poem?
2. What imagery (or descriptive language) did you include in your writing? Why?
3. What does poetry offer that a scientific article does not?
4. Think about diversity in terms of writing. How is a poem different than a novel? Using what you know about biodiversity, think about the benefits that using a diverse set of writing styles and genres could have on communicating environmental problems.
What about diversity of writers? What might you bring to this issue that scientists do not bring?
5. How could you use some of the imagery from your poem in your audio response later this week?

Poetry is a form of literary art. Tomorrow you will work on a visual art project. Think about the ways that visual art can fill the gaps that literary art might have.

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Day 5: Art/Science – Watercolor Workshop
Today's Guest: Claire

Today's Goal: Understand the role of art in helping us express ideas and engage with the world in a variety of ways.

- 1. What were some things you included in your animal's habitat that benefited that animal? Were there any elements of the habitat that could harm the animal? If your habitat was the only area left that could support your animal species do you think that population would be healthy?**

- 2. Did this art project make you think about an ecosystem differently than you have in the past? If so, how?**

Discussion Questions:

- 1. Has a work of art – a painting, a photograph, a drawing - ever inspired you in the past? In what way?**
- 2. Think back to *Racing Extinction*, what examples of art as activism (or art as a way to bring about change) do you remember from the film?**

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Day 6: Public Service Announcement and Audio Response Pre-Planning
Today's Guests: Suzi, Jiovani and Sheri

Today's Goal: Understand how public service announcements (PSAs) and spoken personal responses might help protect biodiversity in different ways.

- 1. Think about what our media expert, Suzi, taught us about the role of media. What do you think will capture people's attention in the class public service announcement? How might that be different than what captures attention in your personal piece?**

- 2. Why do you care about biodiversity?**

- 3. When you record your personal audio response, you will use a moniker (or fake name). Example: "Bobby Pin." Brainstorm some possible monikers:**

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Day 7: CorRESPONDence – Letter Writing
Today’s Guest: Ms. Bonnie

Today’s Goals: Write a letter to a non-profit organization to express your concerns about the biodiversity loss and learn more about what they are doing to prevent it.

- 1. What is a non-profit organization?**

- 2. Which organization did you write to and why did you choose that one?**

Discussion Questions:

- 1. What are some examples of other people you could send letters to in order to spread the word biodiversity loss? Aside from a non-profit, who might you write to in order to ask for help preventing biodiversity loss?**
- 2. Why is communicating with others so important in the fight against biodiversity loss?**
- 3. Working for a non-profit organization is one way you can have a job in the field of conservation, what other kind of job do you imagine you could have to help conserve biodiversity?**

Tomorrow you will be meeting a scientist who studies world languages and the decline in the diversity of languages that exist. Write down one question for her that has to do with communicating a global grand challenge such as biodiversity loss:

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Day 8: Science Right Now – Linguistic Diversity
Today's Guest: Tamrika

Today's Goal: Understand what it means for a language to go extinct, how linguistic extinction occurs, and the effects of losing linguistic diversity.

1. What does it mean to study linguistics?

2. Why are languages going extinct?

Discussion Questions:

- 1. What kinds of knowledge do you think humanity could lose by losing unique languages?**
- 2. Yesterday we talked about the importance of communicating these grand challenges to a broad and diverse group of people. What is the role of language in communicating the threats to biodiversity? How might this demonstrate the importance of including a diverse group of problem-solvers and advocates in a fight against a global problem?**
- 3. Think about the different kinds of workshops we have done. How might different genres, different forms of art, and different scientific practices act as different forms of language? What does a painting communicate that a science textbook does not?**

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Days 9: Audio Recording Session
Today's Guests: Suzi, Sheri, and Jiovani

Goal: Finish the class PSA that can be used to educate the public about biodiversity loss and your role as participants in Mission STEMCAP and finish recording your own audio response to the issue of biodiversity loss.

1. **What do you hope the audience will take away from the class PSA? What do you hope they will take away from your personal response audio pieces?**

2. **How can earth and life science literacy (or knowledge about the way the earth functions and the way living things interact and survive) help people make informed choices about how to live more sustainably?**

Discussion Questions:

1. **Now that you have spent two weeks learning about biodiversity loss and thinking about ways to help protect biodiversity, what do you think is the most important thing for people to know about this grand challenge?**
2. **How might people react differently to the PSA than to your personal audio piece you recorded about your feelings toward the issue? What about to your poem, your painting, or your letter? Which of these forms of expression do you think would have the biggest impact if all of them went viral?**
3. **What are some steps you can take going forward to continue working toward conserving biodiversity?**

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