

# Mission

# STEMCAP:



“Be a part of the solution, not a part of the pollution”

**Slate Canyon Youth Center**  
**Summer 2020**

“Be a part of the solution, not a part of the pollution”



## **Day 2: *Sonic Sea* Film Discussion**

**Today's Goals** Recognize and discuss problems and solutions relating to pollution that are presented in the film *Sonic Sea*.

- 1. What are the top 3-5 things that stuck with you from the film?**
  
  
  
  
  
  
  
  
  
  
- 2. How does sound pollution affect sea life? Where does it come from?**

### **Discussion Questions:**

- 1. What is your reaction to the film? Do you feel moved, sad, hopeless, inspired to act? Were there any scenes that made you feel particularly emotional or inspired? Why?**
- 2. Sound pollution is a big problem for a lot of ocean species, but it is also a problem in cities and other land-based environments. How might sound pollution affect species here in Utah?**
- 3. The ocean feels far away from where we live, but we still have an effect on the ocean. What are some ways we negatively impact the ocean even from Utah? How might we contribute to ocean sound pollution remotely?**

Tomorrow you will be writing a letter to a local non-profit organization to learn more about what they are doing to help stop pollution in Utah and how you can get involved. Think about any questions you have about non-marine species, including humans that are struggling because of pollution. Write one question you that you have on your mind about pollution in Utah or what can be done to fight local pollution issues:

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**Day 3: CorRESPONDence – Letter Writing**  
**Today's Guest: Patty from the Sierra Club**

**Today's Goals:** Write a letter to a non-profit organization to express your concerns about pollution and learn more about what they are doing to prevent it.

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

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

- 2. Which organization did you write to and what is the main thing you wanted them to know or you wanted them to tell you?**

**Discussion Questions:**

- 1. Working for a non-profit organization is one way you can have a job that works toward preventing environmental issues like pollution, what other kind of job do you imagine you could have that could help stop or mitigate pollution?**
- 2. What are some other groups or people you could write to in the future as a way to contribute to the fight against pollution?**

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## **Day 4: Science Right Now – How Noise Affects Arch Stability**

### **Today's Guest: Scientist Jeff**

**Today's Goal:** Understand the way that sound produces vibrations and the negative effect those vibrations have on arches.

- 1. How does Jeff study vibrations in arches?**
  
  
  
  
  
  
  
  
  
  
- 2. What did you learn from the demonstrations? How did the instruments help you understand the dynamics of sound vibrations?**

#### **Discussion Question:**

- 1. 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?**
- 2. Does Jeff's work make you think differently about noise pollution? Why? Does it change the way you think about arches and other rock formations?**

Tomorrow you will start planning your podcast. List three things from Jeff's presentation (or the demonstration) that you think would capture the audience's attention. Can you think of ways to relate Jeff's work to other pollution issues in Utah?

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## **Today's Guests: Salt Lake Astronomical Society**

**Today's Goal:** Learn about the stars and understand that light pollution limits our ability to see them.

### **Discussion Questions:**

- 1. When you looked through the telescope, what did you see?**
- 2. How might the sky look different if we weren't in a city?**
- 3. What are some ways we could limit light pollution?**
- 4. What are some of the other negative impacts of light pollution besides our ability to see what's out in space?**

## **Day 6: Art/Science – Visual Art and Air Pollution**

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## **Today's Guest: Annie from the Utah Museum of Fine Art**

**Today's Goal:** Understand the role of art in communicating about pollution and the effects it has on our health and our environment to a large and diverse audience.

- 1. What are some ways that the work of artists and scientists is similar?**
  
  
  
  
  
  
  
  
  
  
- 2. How might art reach a different audience than a science program? How might it reach a different audience than a book or a radio show?**

### **Discussion Questions:**

- 1. What colors did you choose for your clouds? Why?**
- 2. Why do you think it is so hard to fight the air pollution problem in Utah cities even though we know where most of the pollution comes from?**
- 3. Think back to what we learned about inversion, do you think that humans should think about the environmental factors that could affect the health and sustainability of a city when choosing new areas to develop? What are other examples of environmental problems that are made worse by the environment in which a city is built?**

### **Day 7: Audio Recording Session 1**

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## **Today's Guests: Suzi, Sheri, and Jiovani**

**Goal:** Work on recording your class PSA script that is designed to educate the public about pollution and your role as participants in Mission STEMCAP and continue recording your small group podcast responding to the issue of pollution.

- 1. How does the tone differ in the class scripted PSA than in your personal piece?**
  
  
  
  
  
  
  
  
  
  
- 2. What aspect of pollution do you think is the most important for the Utah public to learn about right now? Why?**

### **Discussion Question:**

- 1. What are some solutions to the pollution problem we are facing? Which solutions might be the most useful to include in your podcast?**
- 2. How is making a podcast different than writing a letter?**

Tomorrow, you will be finishing recording your small group podcast. Think about a personal connection you could make to the issue of pollution? Have you noticed the bad air quality in the valley? Do you have asthma? Do you hear the highway at night? Do you worry about eating microplastics in the food you consume?

## **Day 8: Audio Recording Session 2**

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## **Today's Guests: Suzi, Sheri, and Jiovani**

**Goal:** Finish your podcasts and reflect on Mission STEMCAP.

### **Discussion Question:**

- 1. Why is communicating with others important in the fight against pollution?**
- 2. What are some ways you could communicate about or shed light on the problem of pollution that we didn't get a chance to do in this program?**
- 3. What is one thing you learned in Mission STEMCAP?**
- 4. What was your favorite part of Mission STEMCAP (the science lecture, the film, the art workshop, the letter-writing, the podcast)?**
- 5. What are some ways that you can stay engaged in the fight against pollution after Mission STEMCAP?**

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