<u>Mission</u> STEMCAP:



Farmington Bay Youth Center February 24th- March 9th 2020

Day 1: Framing the Challenge

Today's Goals: Understand what makes climate change a "grand challenge" and what we are going to do to address the problem throughout **Mission STEMCAP.**

1. In your own words, what is climate change and why is climate changing at a faster rate than it has in the past?

2. Describe what you expect to do during Mission STEMCAP.

3. So far, what aspect of climate change are you most interested in?

Discussion Questions:

- 1. Can you think of any changes in climate that you have noticed in your own life time? If not, can you think of any ways that climate change could affect your life directly now or in the future?
- 2. What makes tackling climate change so complicated and difficult? Why is it not an easy fix if we know what is causing it?

"Community Change, Not Climate Change"

Day 2: Chasing Ice Film Discussion

Today's Goals Recognize and discuss problems and solutions relating to climate change that are presented in the film *Chasing Ice.*

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

2. How might the images captured by James Balog (the photographer) have an impact on viewers? What is another way that these photographs are important?

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. Balog says that he was never interested in being a "traditional scientist." As a photographer, he contributes to science by documenting his findings through images. Does this change your mind about what it means to be a scientist and expand your ideas of ways you might play a role in scientific discovery?

After watching this film what questions do you have about climate change and the effects it has in Utah or other areas close to home? Think of some questions you might want to ask our local scientist, Bill, tomorrow.

Write one question you want to ask Bill about climate change, or list one topic you want to know more about:

Day 3: Science Right Now – Forest Responses to Climate Change Today's Guest: Scientist Bill

Today's Goal: Understand the influence of climate change on Utah ecosystems and the ways that changes to one population affects the other species that live in a particular habitat.

1. Why is it important to understand how organisms interact with each other and their environment? What role does Bill's work play in helping us understand these types of relationships?

2. How did the yarn activity demonstrate the effects of climate change on an entire ecosystem?

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. Now that you've learned about some close-to-home impacts of climate change, why do you think some people might still be hesitant to accept that it is a huge problem? Why is it so hard to get people to stop using fossil fuels?

It can be hard to engage people in a conversation about a problem when they can't directly see the impacts and don't want to accept that the problem exists. Tomorrow you will learn how music can be used to engage hesitant people. Write down another creative way that you could teach someone about climate change if they seem a little disinterested in learning about the issue:

Day 4: Art/Science – Expressing Climate Change with Music Today's Guest: Musician Rebecca and Physicist Rob

Today's Goal: Understand that there are many creative ways to communicate about climate change that can help you reach a broader audience and understand music as one of those creative outlets.

1. How do Rob and Rebecca work together to use music as a tool for teaching about environmental issues?

2. How might music reach a different audience than a science program at a library or museum? How might it reach a different audience than a book or a radio show?

Discussion Questions:

- 1. Music might reach a different audience than a science lecture, but how might it also reach the same audience in a different way than a science lecture does?
- 2. What are some other ways that artists and scientists could work together to help tackle grand challenges like climate change?

Tomorrow, you will be meeting with Ms. Bonnie for a writing workshop. Creative writing is a different kind of art than music. Now that you've learned how music can be used for environmental causes, think about different types of creative writing that could be useful. What kind of message do you want to send and how can you get that across through creative writing?

Day 5: Art/Science – Writing Workshop Today's Guest: Mrs. Bonnie

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

Discussion Questions:

- 1. Who is your imagined audience for this piece, in other words, who would you ideally like to read what you wrote?
- 2. What imagery (or descriptive language) did you include in your poem? Why?
- 3. What does creative writing offer that a scientific article does not?
- 4. How could you use some of the imagery from your poem in your audio response later this week?

Tomorrow, you will start planning what you want to discuss for your recorded conversation with STEMCAP staff. Are there any lines you wrote today that you would like to include? If so list them here:

Day 6: 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 climate change 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 what is the main thing you wanted them to know or you wanted them to tell you?

Discussion Questions:

- 1. What are some examples of other people you could send letters to in order to spread the word about climate change? Aside from a non-profit, who might you write to in order to ask for help preventing climate change?
- 2. Working for a non-profit organization is one way you can have a job that works toward preventing environmental issues like climate change. What other kind of job do you imagine you could have that could help stop climate change? (Teacher, lawyer, politician, lobbyist, renewable energy engineer, scientist, science communicator, etc.)
- 3. How might people react differently to the class PSA than to the smallgroup audio piece you recorded about your feelings toward the issue? What about to your poem or your letter? Which of these forms of expression do you think would have the biggest impact if all of them went viral?
- 4. What are some steps you can take going forward to continue working toward preventing climate change and minimizing your carbon footprint?

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Day 7: Podcast Pre-Planning Today's Guests: Suzi, Jiovani and Sheri

Today's Goal: Understand how public service announcement (PSA) podcasts might help fight climate change in different ways.

1. Think about what our podcast team leader, Suzi, taught us about the role of media. What do you think will capture people's attention in the class's public service announcement (the script)? How might that be different than what captures attention in your small group podcast?

2. Why do you care about climate change?

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

Discussion Question:

1. Now that you have spent almost two weeks learning about climate change and thinking about ways to help prevent it, what do you think is the most important thing for people to know about this grand challenge?

Days 8: Audio Recording Session Today's Guests: Suzi, Sheri, and Jiovani

Goal: Finish the class PSA that can be used to educate the public about climate change and your role as participants in Mission STEMCAP and finish recording your small group podcast responding to the issue of climate change.

1. What do you hope the audience will take away from the class PSA? What do you hope they will take away from your recorded discussion?

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 and limit their greenhouse gas emissions?

Discussion Question:

1. Why is communicating with others so important in the fight against climate change?

Tomorrow, you will be writing a letter to a non-profit organization. Think of one question you might want to ask about what they are doing to help and how you can get involved:

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