WeatherBlur Final Project

Grades 5, 6, 7

Project Overview:

Through our work with WeatherBlur, we have learned how to ask SMART research questions, how to evaluate and modify questions in order to help them become "SMARTer," and how to design an investigation based on a SMART research question. We also watched *Smog of the Sea* and became curious about microplastic pollution, and subsequently wondered if it was present in our local waters.

After that, scientists noticed our questions on WB about microplastic pollution, and they were so intrigued that they helped us to develop a real investigation. Other schools in the state of Maine were impressed by our work, and asked us about our investigation...now they are joining in!

Since then, we decided it was important to teach the world about what's happening to the environment, and what we should do about it. Your idea for a teaching method was to make a video that could easily be shared with lots of people. You realized that in order for adults to take you seriously, you needed to have evidence of the problem and some realistic suggestions for making a change. In order to gather evidence and make this video a reality, we have a number of different tasks to complete.

The first thing we need to do is gather the evidence of the actual problem by conducting our microplastic investigation at the Drinkwater Beach and the Lincolnville Beach. During this part of the investigation, we need to document the process with photographs, videos, and illustrations, so we can use all of that evidence in our final video. After collecting the evidence, we need to examine our findings and record the data on the WB site.

The second thing we need to do is to conduct research of the problem happening in other parts of the world, and be prepared to convince people why it matters. We can also share what is and isn't working in different communities trying to make a change. So let's get started!

Project Overview:

To really convince our viewers, we must be able to answer the following questions:

a. Why do people depend on water?
b. How much water is on Earth and what percentage is available for humans to use?
c. How do people impact water and why does it matter? What will happen if the global population continues to grow?
d. What are communities (like us!) doing about the problem?
e. What can we all do to prevent this problem?

To get started on answering these questions, we need volunteers to help with various parts of the research, including:

- **Storyboarders:** examine other effective documentaries and plan out the sequence of the video, sketching out ideas for different sections of the film. Making suggestions for where different elements, such as interviews, music, voice overs, still images, and moving film are needed.

- **Artists:** creatively illustrates the investigation process with drawings and maps, and creates a poster to advertise the video.
- **Filmographers:** records the investigation at the beaches and in the classroom with photographs and videos; records interviews.
- **Film editors:** combine the raw elements of the film, overlaying sound, images, voice-overs, footage, and music. Editors would use the storyboards to determine the basic outline of the film.
- **Interviewers:** writes interview questions, contacts people like students, teachers, community members, and scientists to set-up interviews with them, and conducts the interviews.
- **Investigative Reporters:**
    - examines links on the *Smog of the Sea* website that show what communities are doing around the world to educate people about microplastic pollution;
    - creates a way of sharing that information in the video (poster, Q&A, etc.)
- **Writers:** writes the voice-over script of what should be described to narrate the entire video, including words that should appear on the screen.

Standards:

Science	Grade 5: ● Explain the distribution of fresh and saltwater reserves on earth through mathematic modeling. (5ESS2-2) ● Explain how communities use scientific evidence to protect earth's resources and environment (5ESS3-1--) Grade 6: ● Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. MS-ESS3-3 ● Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems. MS-ESS3-4 ● Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. MS-ESS2-4 Grade 7: ● Evaluate competing design solutions for maintaining biodiversity and ecosystem services. MS-LS2-5 ● Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. MS-LS2-1 ● Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. MS-LS2-3
Social Studies	Grade 5: ● D2.Geo.1.3-5. Construct maps and other graphic representations of both familiar and unfamiliar places. ● D2.Geo.8.3-5. Explain how human settlements and movements relate to the locations and use of various natural resources. ● D2.Geo.2.3-5. Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their environmental characteristics. Grade 6: ● D2.Geo.1.6-8. Construct maps to represent and explain the spatial patterns of cultural and environmental characteristics. ● D2.Geo.2.6-8. Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions, and changes in their environmental characteristics. ● D2.Geo.8.6-8. Analyze how relationships between humans and environments extend or contract spatial patterns of settlement and movement ● D2.Geo.9.6-8. Evaluate the influences of long-term human-induced environmental change on spatial patterns of conflict and cooperation.

WeatherBlur Final Project Proposal

Name:

Your choices for the WB project are as follows:

- **Artists:** creatively illustrates the investigation process with drawings and maps, and creates a poster to advertise the video.
- **Filmographers:** records the investigation at the beaches and in the classroom with photographs and videos; records interviews; edits the various cuts of recordings together into one final video.
- **Interviewers:** writes interview questions, contacts people like students, teachers, community members, and scientists to set-up interviews with them, and conducts the interviews.
- **Investigative Reporters:** examines links on the *Smog of the Sea* website that show communities are doing around the world to educate people about microplastic pollution; creates a way of sharing that information in the video (poster, Q&A, etc.)
- **Writers:** writes the voice-over script of what should be described to narrate the entire video, including words that should appear on the screen.
- **Film editors:** combine the raw elements of the film, overlaying sound, images, voice-overs, footage, and music. Editors would use the storyboards to determine the basic outline of the film.
- **Storyboarders:** examine other effective documentaries and plan out the sequence of the video, sketching out ideas for different sections of the film. Making suggestions for where different elements, such as interviews, music, voice overs, still images, and moving film are needed.

What are your top two choices? For each, describe why you think you would be a good person to help with this part of the project.

First choice:

Second choice: