

Lights! Camera! Educate! [MC]

Grades: 9-12

Time: 45 minutes to 1.5 hours

Goals: To educate young students by producing a conservation video as a “citizen scientist” and understanding the basics of cinematography as a career option for students.

Objectives:

Students will be able to: define “citizen science”; create a conservation video that would be presented to elementary students; and understand how cinematography has become a career option for students, both those who wish to document terrestrial environments and those who wish to go underwater.

Materials:

White paper

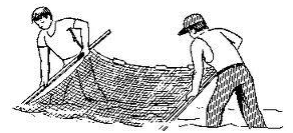
Pencils or pens

Video cameras or camera-phones

Preparation: Because there are three options students can choose from with this activity, make sure all the materials for each option are included and available prior to introducing it to the class. Students will choose from running an experiment, documenting a natural phenomenon, or educating on a specific ecosystem or species. Any of the experiments in this manual can be used and all background information on natural phenomena and ecosystems can be found within the background information for the lessons.

Procedures:

1. **Pre-Activity (introduction):** If students would like to use their phones or cameras for this activity, they have permission. Otherwise, provide simple video cameras for the students to use. Explain that “citizen science” is a way to learn about the basics of cinematography and how to educate others. It can also lead to careers as underwater photographers, documentary filmmakers, and television scientists. Explore examples of these in famous people such as David Attenborough, Jeff Corwin, James Cameron, and Bill Nye the Science Guy. Students will be able to choose which of the three citizen science activities they would like to create a video about.
2. **Activity:** Have the students work in pairs or groups of three. If they choose to video a science experiment, hand out the instructions and materials for that particular experiment. They will have the opportunity to run the experiment once and then run it again while recording it step by step. For those pairs or groups choosing to document a natural phenomenon, make copies of the information provided in this manual for them. They will then list on their white paper the five questions every journalist asks and answer them by creating a scenario in their town or state or region. Have them create a video as if they were either reporting live or reporting in a news studio about the phenomenon.



For those students wishing to educate on an ecosystem or species, provide them with as much background information as possible from this manual or from other sources. They can either choose to teach each other about the ecosystem or species and record it or they can set up an interactive video, such as those provided by Jeff Corwin and Steve Irwin, for example.

3. Post-Activity (review): If time does not allow, you can set up a second class period for the students to present their videos to the class. Explain that editing is an important key to these types of documentaries and can be another example of a career, but that it was not necessary for this activity. Students can evaluate each other based on originality, marine conservation topic, and completed assignment. If a field trip can be arranged, take the students to a media studio (such as a news room, weather station, or local newspaper).

Key Words:

Documentary

Experiments

Marine conservation

Videographer

Natural phenomenon

Citizen Scientist

Ecosystem

Background Information:

Science has always been an inspiration for art. Whether the artist is a painter, a photographer, a sculptor, an author, or a dramatic dance interpreter, science and/or nature have always been a major focal point for the artist. In recent years, citizen science has been on the rise, and more non-scientific people (those who did not go to college for the sciences) have taken on the role of collecting data and information, to disperse to the layman community via books, lectures, written reports, and response to crises. They may range from water quality technicians, who will test the quality of the water and send their results to the state for analysis, to journalists, who report live from storm centers, the aftermath of catastrophic events, or political and environmental conflict.

As students in a thriving and advancing technological era, they have access to all the latest electronic devices. These include Smartphones, iPads, laptops, and digital cameras. In this high-tech world of the 21st century, students can take advantage of capturing science and nature in a unique and artistic way - videography. Although the technique of capturing nature and the marine world has been around since the time of Jacques Cousteau, more modern technology has allowed videographers to present a clearer picture of these ecosystems.



When students report facts in front of a camera, it is considered to be a documentary. As citizen scientists, they can choose to report on anything from a natural ecosystem, to an experiment, to a conservation issue. As part of a team creating these documentaries, students will take on the role of videographer. The videographer is in charge of the video camera from the time the documentary begins to the time it is complete. They must keep the camera steady and in focus and may work on editing the material after it has been recorded.

As a career, many people have become videographers of the marine world, including Cousteau's son, Jean-Michel, as well as Tom Campbell, and the late Mike DeGruy, a National Geographic cinematographer and marine biologist. They have learned how to explore the underwater ecosystems through the lens and from there, students can explore careers working for such prestigious organizations as National Geographic or working in the arts and entertainment industry on movie sets or with TV series. Students can further research colleges that host arts majors or concentrations in cinematography and famous cinematographers and the degrees they've studied.

