

**YOUTH
MAKING
RIPPLES**



Marine Science Filmmaking Guide

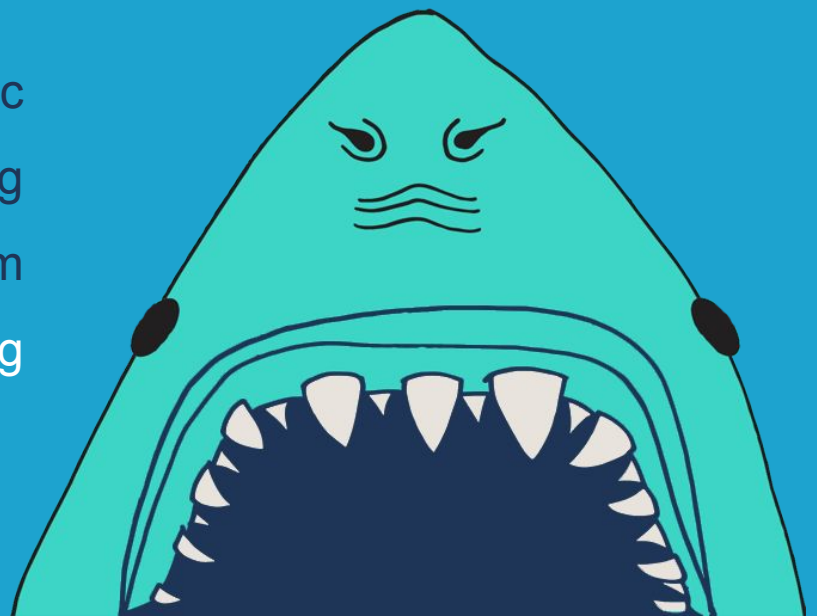
Tips for educators, parents and students interested
in creating short marine science documentaries

Choosing Your Film Topic

Storyboard & Script Writing

Shooting Your Film

Audio Recording



Audio Recording

The activities and filmmaking tips outlined in these units will provide a tutorial for educators, parents, and students interested in creating their own short marine science documentaries. These documentaries are meant to be less than 5 minutes in length. The tutorials we provide are geared toward content shot and edited using smart phones. You can pick and choose certain units to guide you along your way for a comprehensive package on filmmaking. If you are working independently outside of a formal classroom setting can also use these units to prepare your film. These units are designed for any age (elementary - high school) and for a variety of educational settings including formal classroom, camps, afterschool programs, homeschooling groups, etc.

Introduction

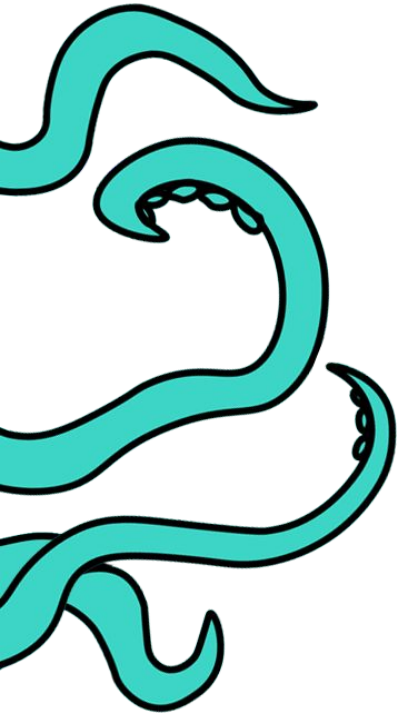
Audio is the single most reason why a film submission will not score high with our judges. Sound is a vibration, or a wave. And just like a wave that breaks towards the sand, sound gets smaller the further away it travels from the source. The louder the sound, the bigger its wave will be. The bigger the wave, the further it will travel. Apply this concept when you begin recording your audio for your film by creating sound waves that will reach your microphone consistently and smoothly. For example, louder sounds close to a microphone will produce hurricane force waves that distort your audio, while speaking too softly or having the microphone too far away from the source of sound will produce low or inaudible recording.

Audio Recording Basics

As you can see, how loud your audio is and how close or far it is from the microphone are important factors in obtaining good quality audio. Here are some additional considerations to help you get a great sound:

- Know where your microphones are located. Help your sounds get to your microphone by creating a direct path for your sound waves to travel.
- Point your microphones towards the main source of your sound to help amplify the noises that you intend to record.





- If you are using your phone for sound, remove anything that would block sound waves from getting to the microphone (cases, fingers, holders, etc...).
- Pay attention to the environment where you are recording. Take notice of potential background noises like wind or nearby conversations. Point your microphone away from these as a way to dampen their sounds.
- When in doubt, move the microphone closer to the sounds you want and further away from the sounds that you do not want to capture.
- Lastly, before you start testing your audio, put ALL phones on airplane mode. Whether they are being used to record, or they're sitting in your pocket, you do not want to ruin a good recording by being interrupted by a call or text message.

Sound Quality

Did you ever go to a concert and hear the guy on stage saying weird things into the microphones like “Test one... two...” or “Crackers and Peanut Butter”? This is a sound check and is performed to test how the microphones will respond to the most plosive (low sounds) and sibilant (high sounds) frequencies.

- Plosive frequencies are the low end sounds like the “c” or “p” sounds in “crackers and peanut butter”.
- Sibilant frequencies are the high end sounds like the “s” or “t” sounds in “test one... two...”
- Your audio should not snap, crackle or pop when you listen and play it back. If it does, try lowering your microphone volume slightly, or creating more distance between your sound and your microphone.

When you test your audio be sure to take notice of how far away your microphone is from your sound and adjust one or both of these accordingly until you find a nice, consistent mix. Some other tips to improve your sound quality are:

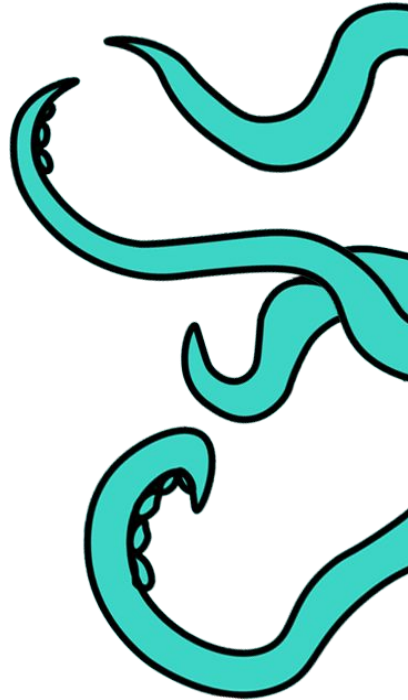
- Consider recording audio and video separate, especially when the source of the audio is off screen (i.e. narrator). For a clean sound, try recording this audio in a quiet, soundproof area (like inside a closet full of clothes).

- If you have multi-track recording options, consider using one device/phone exclusively for each audio source and merging the audio with the video in your mixing phase so that each source of sound can maximize its recording capabilities and potentially help re-record certain audio segments at a later date.
- Most video editing software will have some basic audio mixing options. At the very least, you should be able to maintain consistent volume across all your recorded takes by lowering the audio when it's too loud or increasing it when it's too low

Audio Recording Exercises

Sound Check (10 min)

Record a sound check saying “test 1... 2...” or “crackers and peanut butter” and listen back to the recording to see if your sound pops. Keep practicing until you find the optimal distance from the microphone.

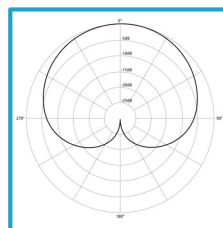


Audio Equipment

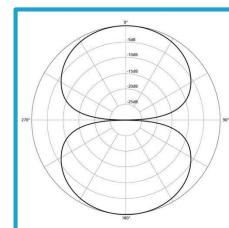
Microphone

The single best way to increase your audio quality is to use a microphone. So if you want to upgrade your audio recording, consider purchasing a microphone, there are several that cost ~\$20 online.

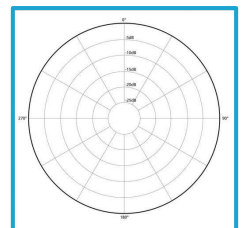
- You will probably want to look for a dynamic microphone (left image below). These have a cardioid (heart shaped) pattern to capture sound. Dynamic microphones are great for recording interviews and people speaking. This type of microphone will pick up the sounds that are directly in front of the microphone vs. a bi-directional (middle image) or omni directional (right image) microphone which will pick up sounds from multiple directions.



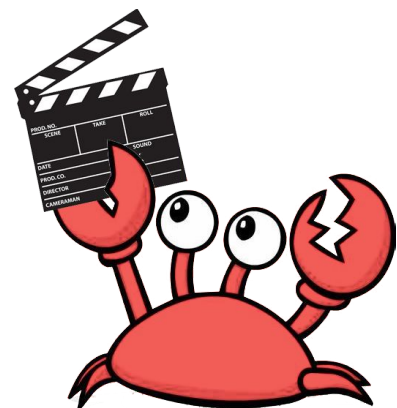
Dynamic



Bi-Directional



Omni Directional





YOUTH MAKING RIPPLES



About Us

Youth Making Ripples is a non-profit focused on marine science outreach and education since 2014. Our annual film competition is an opportunity for K-12 students (< 18 years of age) to use their creative talents and serve as a voice for our oceans. We encourage elementary, middle and high school students to create their own marine related film on a topic of their interest. All submission must be less than 5 minutes. The message of your film can focus on an interesting marine topic, a specific marine related problem or issue, or a call to action for conservation.

Our Mission

Youth Making Ripples is a global platform for ocean conservation, education, and discovery. Our mission is to raise awareness of critical marine issues and promote the protection of our oceans. Our organization creates and hosts powerful and inspirational educational events around the world designed to engage the public in ocean conservation.

Help Us Build A Better Future

Whether you are a teacher, parent, student or marine science enthusiast, there are a number of ways you can get involved. Sign up for our mailing list and visit our website for more details at www.YouthMakingRipples.org

