

## Unit 9 Video Project

Objective 4: I can model reflection, refraction, and diffraction of waves.

Names: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

### Overview

In the next couple of days, you will be planning and making a video to show that you understand what reflection, refraction, and diffraction look like when they occur in the ripple tank. You will do this by:

- Working in a group of 2 or 3 students to make the video.
- Making a storyboard showing the organization of your video.
- Making a video (using screencastify or other method of your choice) which shows refraction, reflection, and diffraction of waves (not necessarily all at once).
- Explaining the meaning of each of the above terms correctly as you are showing them in the video.
- Each student must speak and explain one part of the video to receive credit for being part of the group. (ie. one person explains reflection, one explains refraction, and one explains diffraction. If you have a group of 2 people, one of you will do two of them).


### Part 1 - Storyboard

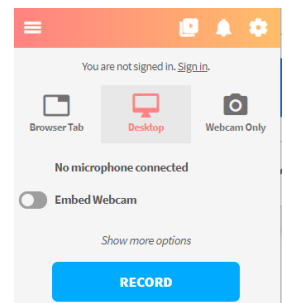
On the back of the paper, please put the organization of how you will show each of the three vocabulary terms: Reflection, refraction, diffraction. Be specific - how will you show this? What will you use? (Online Ripple tank, slinkies, PhET Wave on a String, etc.) What will you say for the definition, explaining the phenomena in your own words?

### Part 2 - Using Screencastify to Make your Video

To make your video, you can either use a phone to record a video, or if you are using the online ripple tank, use Screencastify. You must email a link to your completed video to your teacher.

If you are using Screencastify:

1. Click on the  symbol near the upper right hand corner of your Chrome browser. You will get a small window that looks like this:
2. At the top, sign in. This will save your videos to your Google Drive.
3. Where it says "No microphone connected" there will be a slider tab that allows you to turn on and allow access to the microphone and camera of your computer. Slide so that is red and click "allow access" when asked.
4. If you want to embed a webcam so that you are seen while talking about your wave phenomena, slide that to red.
5. When ready, click "record". Make sure that you have your tabs set that you want to use for the ripple tank (if that is what you are using). When asked, choose "Desktop" for what you want to share - that will allow screencastify to record all of your tabs.
6. Your video must be less than 10 minutes long (constraint of screencastify), I would suggest less than 5 minutes, please be concise but complete.
7. When done, your video will be in your drive. Please share (using a link) with your teacher.



## Storyboard

How will you show **REFLECTION** in your video? Be specific. What object(s) will you use? What is the definition you will use?

How will you show **DIFFRACTION** in your video? Be specific. What object(s) will you use? What is the definition you will use?

How will you show **REFRACTION** in your video? Be specific. What object(s) will you use? What is the definition you will use?

# Rubric

Please make sure to:

- Share a link of the video with your teacher.
- Turn in your storyboard.
- Turn in the rubric.

Your video will not receive full points if you do not provide your storyboard!

Storyboard and plan for the video			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Student only explains how they will show 1 of the phenomena correctly.</li> <li><input type="checkbox"/> Definitions for phenomena are missing or incorrect.</li> <li><input type="checkbox"/> Work shows minimal effort.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student only explains how they will show 2 of the phenomena correctly. The third is incorrect or missing.</li> <li><input type="checkbox"/> At least one definition used is incorrect or incomplete.</li> <li><input type="checkbox"/> Work is sloppy and shows lack of effort.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student explains how they will show the three phenomena, but details are vague or incomplete.</li> <li><input type="checkbox"/> Student makes a small error in defining one of the phenomena or the definition is incomplete.</li> <li><input type="checkbox"/> Effort is shown, but some parts are difficult to follow.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student clearly explains how they will show each of the phenomena.</li> <li><input type="checkbox"/> Definitions for phenomena are correct and complete..</li> <li><input type="checkbox"/> Work is easy to follow and well presented.</li> </ul>
Video Submission			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Student only shows one of the phenomena correctly in the video.</li> <li><input type="checkbox"/> Definitions for phenomena are missing or incorrect in the video.</li> <li><input type="checkbox"/> Video is poorly made and hard to follow.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student only shows two of the phenomena correctly in the video. The third is incorrect or missing.</li> <li><input type="checkbox"/> At least one definition used in the video is incorrect or incomplete.</li> <li><input type="checkbox"/> Video shows some effort, but parts are poorly done or students can not be clearly understood.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student correctly shows the three phenomena, but details are vague or poorly explained.</li> <li><input type="checkbox"/> Student makes an error in defining one of the phenomena or one of the definitions is incomplete.</li> <li><input type="checkbox"/> Effort shown, but could be improved by:</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student clearly shows each of the phenomena in the video.</li> <li><input type="checkbox"/> Definitions used in the video are correct and complete..</li> <li><input type="checkbox"/> Video flows well, is easy to follow and well presented. Students can be clearly understood in all parts.</li> </ul>