

# Final Project

Create and Light a Saltwater Aquarium

# Explore Lighting Design

Students watch the video on the SpecLab website to learn how a Smithsonian Lighting Designer uses light to enhance art.

# Fish Reflection Spectra and Colors



- Students can explore the spectra of different colors of the Regal Angel Fish
- They can use the Phet Simulation for a refresher on how light colors mix

# Saltwater Plant Reflection Spectra



- Students can explore the spectra of Chlorophyll a - they'll use this later in the project

# Your Fish Tank



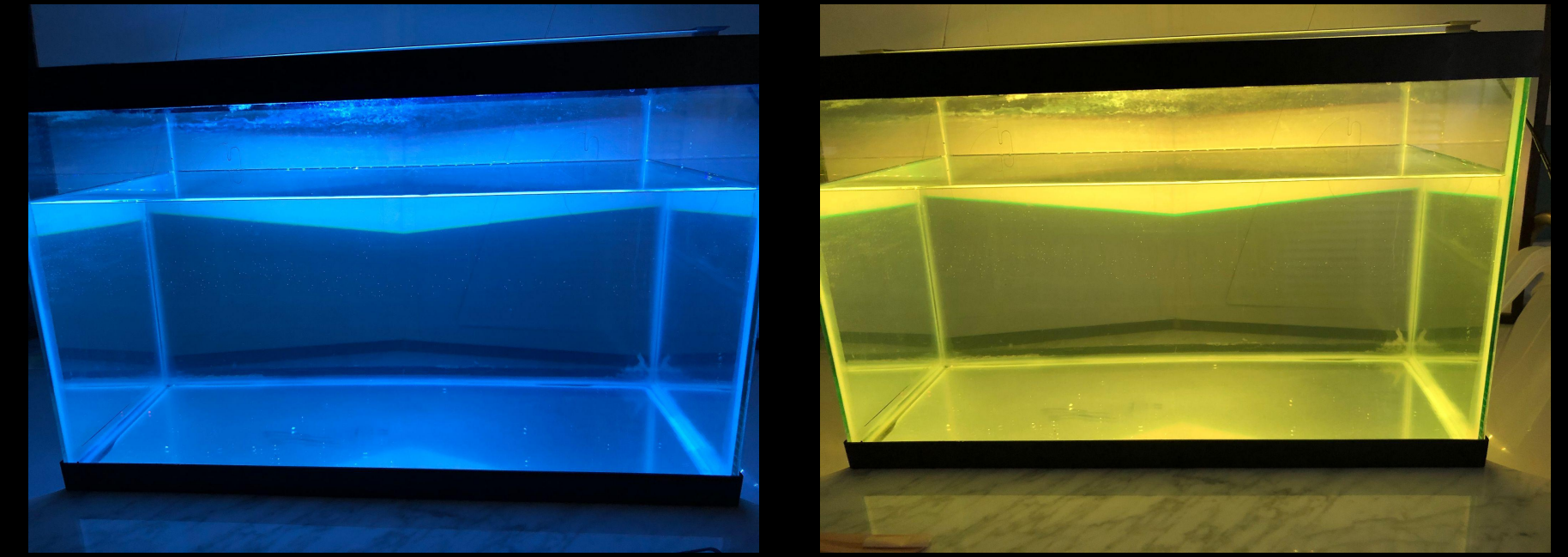
- Students choose which plants (algae) and animals (fish and coral) to live in the tank
- Then they a lighting scheme for the tank that best suits the needs of its inhabitants and is aesthetically pleasing to them

# Choosing Plants and Animals

Students use the Fishtank Data Chart to choose plants and animals for the tank and complete questions in the student notebook.



# Lighting Your Tank



Students use the spectrum charts in the Flishtank Data Charts to complete questions in the student notebook.

They choose a color to light the tank using The PheT simulation, draw the spectrum of this color in the Spectrum Tool and complete questions in the student notebook

Describe what the inhabitants might look like under these lights and complete Part IV of student notebook

Use all of the information gathered in Parts I-IV to answer Part V in student notebook

# Put it Together



Students use all the information they've gathered during the project to write a paragraph that describes the set-up for their tank including what creatures they've chosen to live in the tank, what lighting scheme they've chosen for their tank and why they've made these choices