



# LINCOLN PARK ACADEMY GRADE 7 NEED PROJECT ADVISOR: LAURA LYSHON STUDENT LEADERS: ZOYA MUKHAMEDOV AND TIFFANY CAMPBELL

Throughout the school year, two of our 7<sup>th</sup> graders have been studying and presenting NEED curriculum. We used the Greek Mythology and the Forms of Energy NEED unit to study. We put together posters about Greek mythology and its relationship to energy, then presented it at the Indian River Lagoon Science festival. Studying the forms of energy and integrating it with Greek Mythology was a fun way to teach others about energy.

# GOAL 1: CREATING POSTERS ABOUT HOW GREEK MYTHOLOGY RELATES TO ENERGY

## Energy Content Activities

- Used the NEED Unit, “Greek Mythology and the Forms of Energy” to learn about Greek myths.
- Used the NEED Unit, “Energy Works” for experiments that go along with the Greek Myths.

## Student Leadership

- Students had to do their own research for the posters
- Students had to design and put together posters on their own

## Resources

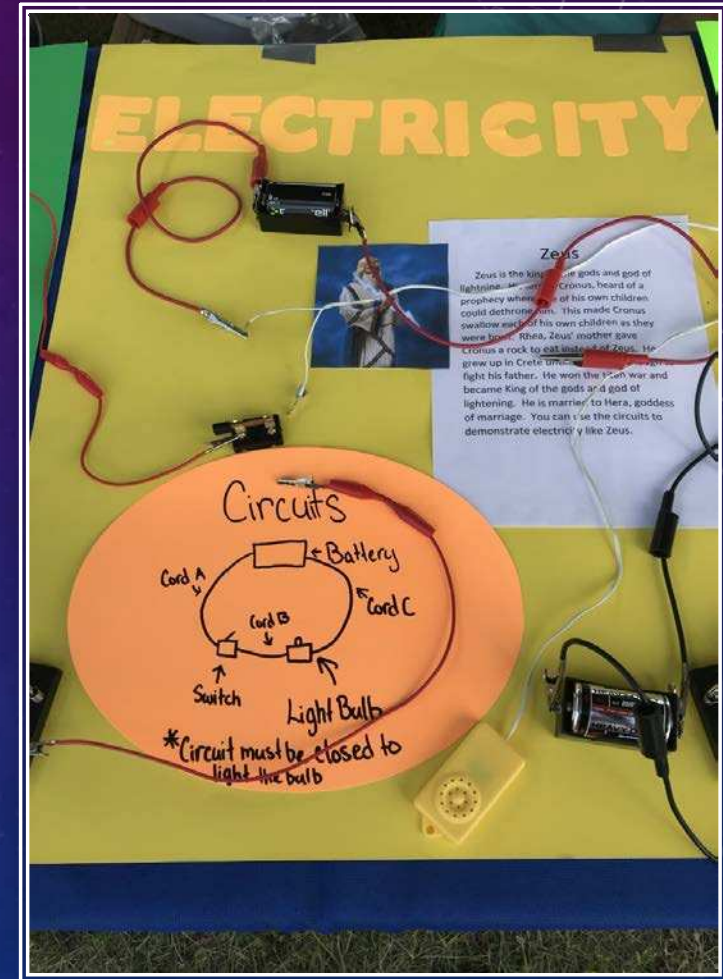
- “Greek Mythology and the Forms of Energy” NEED Unit
- EnergyWorks NEED Unit

## Evaluation

- Posters and experiments were evaluated

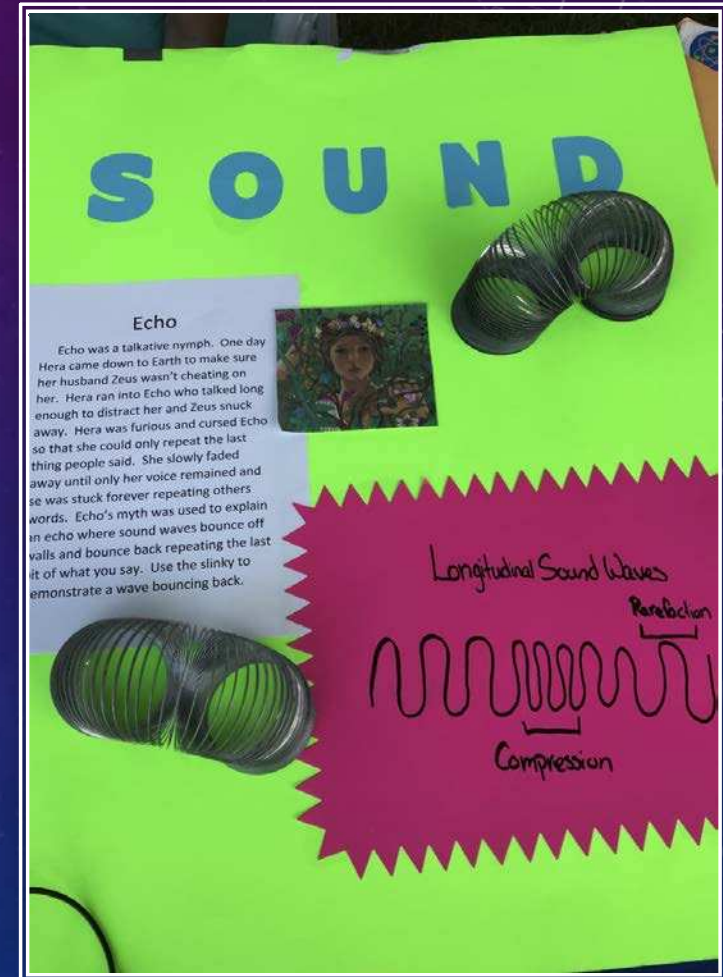
# Poster 1: Zeus and Electricity

In the poster we explained that Zeus is the king of the gods god lightning. Zeus represents electricity, which we demonstrated using circuits. We created a diagram showing how a battery, cords, closed switch and light bulb will crate a closed circuit. The closed circuit will use chemical energy from the battery be transferred through the cords to power the light bulb.



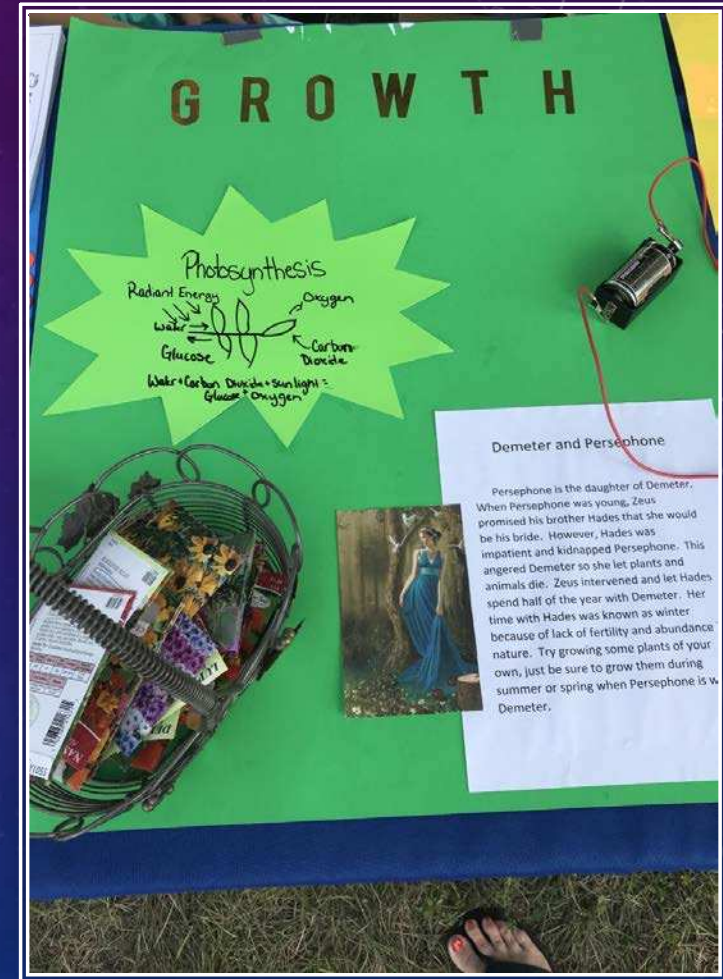
## Poster 2: Echo and Sound

In this poster we used the Greek myth about the nymph Echo to demonstrate sound waves. The poster explains how an angry goddess, Hera, cursed Echo to only repeat the last words people said. Eventually this caused her to fade away until only her voice remained. This was used to explain an echo back in ancient Greece. This diagram explains how longitudinal sound waves move up and down with compressions and rarefactions effecting the frequency of the sound waves.



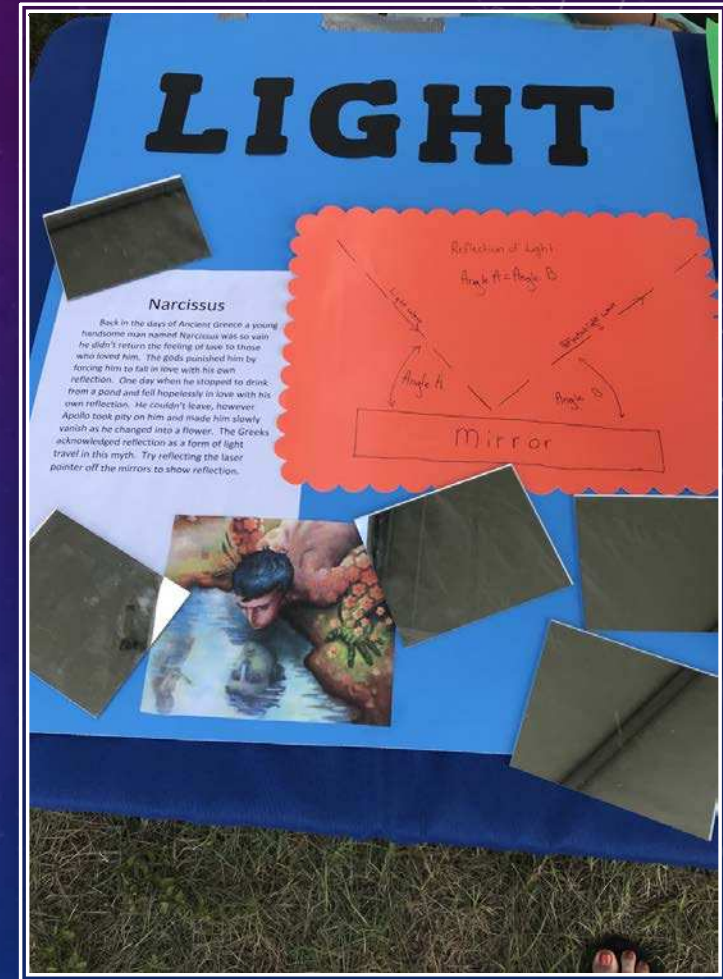
# Poster 3: Demeter, Persephone and Growth

Demeter and Persephone are a mother-daughter duo of goddesses of agriculture and flowers. They represent growth and abundance in nature. Photosynthesis is shown on a diagram, represented as a plant taking in water, carbon dioxide and sunlight to produce glucose and oxygen.



# Creating Poster 4: Narcissius and Light

Narcissius was a young Greek man known for his good looks and cold personality. One day when he angered the gods he was forced to fall in love with his own reflection and slowly turn to a flower. We designed a diagram to show how light bounces off of a reflective surface and reflects so you can see it.



# GOAL 2: PRESENTING POSTERS AT INDIAN RIVER LAGOON SCIENCE FESTIVAL

## Energy Concept Activities

Explain forms of energy and relate the forms energy to Greek myths at the Indian River Lagoon Science Festival

## Student Leadership

Students were responsible for setting up all materials for the festival and for presenting their project to guests at the festival.

## Resources

Materials for experiments from EnergyWorks

Posters that were created using information from EnergyWorks and Greek Mythology and the Forms of Energy

## Evaluation

Positive feedback from guests at the festival



# Presenting at the Festival

- At the Indian River Lagoon Festival we presented our posters.
- We demonstrated each of the relationships from the myths to science through interactive tools from the NEED curriculum.
- Our two student leaders dressed up as Greek goddesses to emphasize the relationship between Greek mythology and energy as shown in the cover picture.



# PRESENTING POSTER 1

- Our students taught others how to create a closed circuit with cords, switches, a battery, microphone and a light bulb.
- Visitors were able to learn about Zeus and electricity through the practice of circuits and electric currents.

# PRESENTING POSTER 2

- Students used slinkies to demonstrate how longitudinal sound waves move when echoing.
- People learned of Echo's myth and how ancient Greeks perceived sound science back before technology.

# PRESENTING POSTER 3

- The students explained how seeds use the process of photosynthesis to process water, carbon dioxide and sunlight; turning it into glucose for food and oxygen.
- Onlookers were told about the myth of Demeter and Persephone, learning that ancient people believed Gods affected seasons and growth of crops.
- Visitors were encouraged to take seeds and grow plants of their own.

# Presenting Poster 4

- Students showed how light reflects off mirrors by creating a mirror maze from NEED curriculum.
- Visitors were able to participate and experiment with the mirror maze until they found the best way for light to reflect off of it.