



## Ariel Community Academy

### **ACTING OUT A VIEW OF THE SOLAR SYSTEM**

**Grade:** 2nd & 3rd

**Teacher(s):** Catherine Ditto, Tanya Simmons, Kim Bailey, and Michele LaVoie

**Artist(s):**

Cynthia Walls and Ted Williams - Chocolate Chips Theater Company

**Academic Content and Learning Skills:**

Science

**Arts Content:**

Drama

#### **Overview**

This unit integrates the study of the solar system with theater/drama skills. Students participated in a KWILT activity about the solar system and then self-selected various small, cooperative research groups to further study the topic. Students played a variety of theater games relating to the solar system. With the new knowledge of both the solar system and theater skills students performed a play which juxtaposed Harvard graduates incorrectly explaining the seasonal changes with ACA students correctly explaining seasonal changes.

#### **Classroom Goals Addressed by Project**

Students will be able to express themselves accurately, draw inference from written and oral material/sources, synthesize information, understand the application of information, think critically, and be creative. Students will act cooperatively, increase self-discipline, self-control, and their ability to focus.

#### **State Goals Addressed by Project**

- Fine Arts, State Goal 25, 25.A.2b understand the elements of acting, scripting, speaking, improvising, physical movement, gesture and picturization; the principals of conflict/resolution and theme; and the expressive characteristics of mood and dynamics.
- Fine Arts, State Goal 26, 26. A. 1b Understand the tools of the body, mind, voice and simple visual/aural media and the processes of planning, practicing and collaborating used to create or perform drama/theater.
- Fine Arts, State Goal 26, 26.B.1b Demonstrate individual skills (e.g. vocalizing, listening, moving, observing, concentrating) and group skills (e.g. decision making, planning, practicing, pacing) necessary to create or perform story elements and characterizations.
- Fine Arts, State Goal 27.A.1a Identify the distinctive roles of artists and audience.
- Fine Arts, State Goal 27.A.2a Identify and describe the relationship between the arts and various environments.

*Second Grade Science:*

- CAS F: The students will be able to name and describe size, distances, and relationships among major bodies of our solar system.
- Students will be able to identify major constellations in the night sky. Students will be able to describe how shadows change throughout the day and year in relation to the position of the earth and sun. Students will be able to describe the motions of the earth in relation to the sun in determining day, night, year and the seasons.

*Third Grade Science:*

- The students will be able to describe probable surface conditions and compositions of the planets. Students will be able to discuss the impact of the asteroids and meteors on the surface appearance of planets. The students will be able to describe evidence for and the consequences of liquid water being present on other bodies in the solar system.
- Students will be able to understand the universe.

**Subject Areas/Art Forms in the Project**

Academic Content Area Objectives:

- Students will be able to take notes
- Students will be able to summarize information
- Students will be able to use their knowledge gained from texts, videos, and the internet to act out, improvise, and represent information.
- Students will be able to recall facts under pressure while improvising and performing.
- Students will be able to recall information by playing review games,

Arts Content Area Objectives:

- Students will improve their articulation and increase their self-confidence.
- Students will master theater terminology.
- Students will increase their ability to focus and concentrate.
- Students will be able to modulate their vocalization.
- Students will be aware of their movements in space and time.
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- Students will improvise, act out vocabulary and concepts and work cooperatively in groups.

**What Resources were used**

Books:

Galaxies, Mars, Venus, Mercury, Earth, The Stars, The Sun, Our Nearest Star, Eclipse, The Planets, Jupiter, Neptune, Pluto, Uranus, The Magic School Bus: Lost in the Solar System, Stargazers, What Makes Day and Night, Stars and Planets, Exploring the Night Sky, Astronomy, My Place in Space, Our Solar System, So That's How the Moon Changes Shape, The Moon, The Planets in our Solar System, The Night Sky, The Sun is a Star, How The Universe Began, and Scholastics: Big Book of Exploration

Web Sites:

[www.npac.syr.edu/textbook/kidsweb/astronomy.html](http://www.npac.syr.edu/textbook/kidsweb/astronomy.html)  
<http://www.nasa.gov/home/index.html>  
<http://starchild.gsfc.nasa.gov/docs/StarChild/StarChild.html>

Science Sleuth Video (Scholastic)

Guest Speaker: Tony Crowe, CPS? Medill Training Center, museum liaison

Field Trip: The Adler Planetarium

**Key Words/Vocabulary that are most important to this unit**

Astronomer, Big Bang Theory, Planets, Stars, asteroids, axis, distance, atmosphere, gravity, globule, Orion's Belt, North Pole, South Pole, etc.

**Brief Step-by-Step daily/weekly lesson plan for this unit**

- The point of access for this unit was chosen by soliciting from the teachers which areas of the curriculum were the most difficult to teach and which areas were typically taught in a dry manner. Science was selected. The artist was able to incorporate her theater/drama goals within that context.

- This solar system unit started with the KWILT. It was a very rich activity because the children had a lot of background knowledge, but also so many questions. The questions, as well as the CPS framework statements and the states' fine arts goals shaped the research group's topics of study. Students participated in a myriad of drama/science activities including: a Reader's theater for "What the Moon is Like" and "How the Universe Began", numerous theater warm-ups and games for articulation skills, movement, and theater terminology, research group time devoted to note-taking and learning about planets. Students are note taking and dramatizing information from a variety of sources: the internet, books, videos, field trips and a guest speaker. The students participate in their research teams and academic/theater games. The students are also conducting experiments. Students are dramatizing teacher created scripts and writing and performing their own narration.

- Students documented their work through creating murals, videos, dances, and songs. The culminating event is a performance that is part live and part video.

**Assessments Used for this project**

Students kept journals of their notes and scripts to be assessed periodically and at the conclusion of the unit and exit slips are used occasionally. The teachers are creating a rubric to assess the final live/video event.

**Comments/Reflections from Teachers, Artists, Students, Parents**

Teachers:

- "It's fun!!"
- "The learning is not abstract."
- "Physical science is compatible with the movement and drama. Integrating science and drama allows students to 'touch' science."
- "The collaboration with the artists has helped me teach in a new way other than in a dry way with paper and pencil."

Artist(s):

"It's amazing how theater and science is working together and it's exciting!"

Student(s):

(From a reluctant student running up to her teacher after working with the artist)

"Miss Ditto, Miss Ditto, we learned about the earth and acted it out and everything!"

Principal:

"It allows teachers the opportunity to work not in isolation. Typically teachers are the sole tour guides in exploring science. Bringing in another professional allows students to learn from different adults and from different perspectives. It reinforces true collaboration and a diverse approach. The teacher brings something to the table and takes something away. They are stretched professionally and helping another professional stretch in a way that they never have."