Objectives

• Understand how different cultures have viewed the night sky
• Appreciate the wonder and beauty of the night time
• Create an artwork incorporating the night sky

Introduction

Many cultures have relied on the night sky. Constellations and patterns helped them to find their way at night. They also carried with them specific mythologies and stories related to the culture of each nation. Since it has been so influential in the lives of people for so long, the night sky has also been a source of inspiration for artists throughout time.

The Night Sky Activity

1. Cast 6 students into the following roles: Sun, Earth, 4 constellations (for example: Pegasus, Orion, Lyra, and Leo). Give the sun the large beach ball and the earth the small one. Hand a constellation poster to each “constellation actor.” Have the students stand in the same pattern as the diagram below:

   ![Diagram of the night sky activity]

   Have the person playing earth face the light side of the ball towards the sun. Ask the them to walk counterclockwise around the circle, between the sun and the constellations.

2. Stop the Earth when he/she is standing directly between the sun and Pegasus. Explain that once the sun goes down, because of where the earth is in its rotation, Pegasus can be seen in the night sky. Have the Earth continue around to Orion and explain that as he/she moves Pegasus disappears because it is on the other side of the sun and orion comes into clearer view. Have the earth continue around until they get back to Pegasus, asking the students to explain what the “night” side of the Earth can see.

Materials

• Images of Self-Portraits (See Images from the Museum)
• A large beach ball
• Small Beach Ball (with ½ colored dark w/ a sharpie marker or paint)
• 4 constellation posters
• Constellation Print Outs (opt.)
• Star images (nasa.com)
• Art supplies

Images from the Museum

• James C. Christensen, The Rhinoceros
• Wulf Erich Barsch, In the Valley of the Sun and the Moon

Utah Core Standards

Science Standard 4 : Objective 2
Describe the appearance and apparent motion of groups of stars in the night sky relative to Earth and how various cultures have understood and used them.

Art Standard 1: Objective 2
Explore a variety of art media, techniques, and processes.

Art Standard 2: Objective 1
Critique works of art.
The Night Sky Activity cont.

3. Once the Earth makes it back to Pegasus, explain how gradual this change is. Have the Earth spin the ball once all the way around to represent one rotation or one day. Then, have them continue to spin it as they make their way from Pegasus to Orion to Leo to demonstrate how each day, the night sky changes just a little each night.

4. Now, explain to the students that the universe is three dimensional, not two-dimensional. Have the constellations hold their signs at different levels, some may even tilt them up or down, kind of in a spherical shape.

5. Also, have the Earth tilt a little away from the sun, reminding students that the Earth’s axis is not straight up and down. Share with them that this is why different parts of the Earth see different sections of the sky as well. Have the Earth continue around the circle, spinning the Earth one more time. Pause when he/she is between the Earth and a constellation and have the students explain which constellations would be visible from specific points on the Earth.

(It may be a good idea to use a small globe or paint the ball accordingly, as you wish!)

Cultural Research Project

To help students understand how different cultures have viewed the night sky, give each student a constellation and invite them to research the cultural meanings associated with their constellation. Have them look for 2-3 different interpretations and type up a paragraph to share with the class. (You may present them with an image of the constellation which can then become the basis of their art project.)

Extension

Create a presentation on Google slides and share it with your class. Assign each student to create 1-2 slides about their constellation as well as a 30-60 second explanation. Do a large class presentation, with each student sharing what they learned.

Art Project

Explain the cultural importance of the Big Dipper and Polaris in several cultures. Great information can be found at space.com (http://www.space.com/27758-big-dipper.html, http://www.space.com/15567-north-star-polaris.html)

Show the class James Christensen’s *Rhinoceros* Have the students write a brief reflection, answering the questions:

- What constellation is shown in this painting?
- What impact does that have on the meaning of the work?
- How would another constellation have had a different meaning?

Next, bring up Wulf Barsh’s *In the Valley of the Sun and Moon*. Having researched how culture influences the way a person views the night sky, share with the students the cultural background of each artist as found on smofa.org. Then ask:

- How does Wolfe Barsh’s use of the stars compare with James Christensen’s?
- What do you think is Barsh’s attitude towards the night sky?
- What message is being sent about the night sky in these different images- is it the focus or just an additional element?
- What connections does each artist make by including the night sky?

Give each student a printout of the night sky. Have them use this image as inspiration for their own piece of art. They may incorporate a specific constellation into a work like James Christensen or take a more general approach like Wulf Barsh. Images can be found at nasa.gov (http://apod.nasa.gov/apod/archivepix.html)

Assessment

Ask students to diagram the earth’s revolution and how the night sky changes. Did the student participate in class discussion? Did the student present 2-3 cultural associations with their constellation? Did the student use the night sky as inspiration for an art piece?
Wulf Erich Barsch, *In the Valley of the Sun and the Moon* 2000