Space Citizenship
Space Art

LEARNING OBJECTIVES:

Objective: The objective of this module is to expose Mission Team members to the language of space art and how it helps people think about space. A key objective will be to ensure Galaxy Explorers appreciate the many ways people explore and communicate to others artistically.

Purpose: The purpose of this module is to help Explorers understand that space art is a critical component in the human exploration and exploitation of space.

Foundation: By recognizing the inspirational and conceptual qualities of space art, it is possible to see how literature, paintings, film, music and dance have served as outlets for the imagination, allowing humans to "travel" father than the limits of any spacecraft or telescope.

Grade level: 3-5, 6-8, 9-11
Benchmark: All grades
Gains a general understanding of the role of space art in the human exploration and eventual exploitation of space.

Mission Team Leader's Notes

This mission should be conducted with an accompanying slide set as the slides add to the visual experience of the Mission Team members.

DISCUSSION:
(Intro Slide)
Hello, my name is *put name here*. Today we are going to explore Space Art. Can anyone tell me what is space art? How many people think they have ever seen space art? Well, let's start out with a little history.

Space art, such that it was, can be found as early as the 1600s, when imaginative people carved woodcuts or sketched fantastic machines capable of going to the Moon, among other places. Usually, these depictions were variations on sailing ships. Often, the crews of these "space

ships" would often encounter aliens, though these extraterrestrials looked very similar to humans.

During the 1700s the artwork didn't change significantly, but it was becoming apparent that scientific discoveries were having an impact on how artists imagined worlds beyond the Earth. The 1800s marked the beginning of "serious" space art, particularly in terms of literature. The artwork that accompanied the stories was often quite complex and realistic. Of particular note were the detailed drawings that were included in Jules Verne's *From the Earth to the Moon*.

Artists such as Camille Flammarion, who portrayed as best he could what it would look like while standing on other worlds, and Henry Alvim-Correa, the artist that first portrayed the Martian invasion of Earth in H. G. Wells' *The War of the Worlds* (1898), ushered in a new era in fantastic artwork that laid the foundation for 20th century space art.

In the 1900s, space art came into its own as a genre, beginning with the reported successes being experienced by rocket designers like Robert Goddard, Hermann Oberth, and others in rocket clubs in the United States, Russia, and Europe. It was after World War II, however, when things really took off.

(Slide 2)
Now that we have an idea about the history of space art. Who can tell me some space art they have seen? Has anyone ever seen Star Wars or Star Trek? If so, you have seen space art and it helps shape how we, and millions of other people, think about space. This is, in fact, why space art is so important.

It is widely accepted that a public relations effort including space art helped solidify the establishment of the National Aeronautics and Space Administration (NASA) in 1958. Science fiction author Willy Ley, producer Walt Disney, commissioned space artists and writers in an effort to draw public attention to the space plans being discussed by the U.S Government. Before the mid-1950s, few people paid much attention to space. After paintings were released in a magazine called *Collier's*, supplemented by articles, people quickly became excited about the prospect of human spaceflight.

(Slide 3)
Space art stands out from the other genres because of its portrayal of astronomical (planet surfaces, stars, and galaxies, for example) or astronautical (spacecraft, spaceports, space stations and so on) subject matter. Recently, space art has included sophisticated renderings of imaginary extraterrestrial life (alien).

(Slide 4)

Space art is a genre within the much broader realm we generally call art. Like all genres, space art represents expressions throughout a wide range of media, such as painting, drawing, film production, television production, photography, poetry, literature, dance, music, and sculpture, among others.

Space art is rather unique because artists specializing in each medium must depend on vivid imagination, since most of the subject matter cannot be observed directly or is part of a speculated future. Over time, the imaginative renderings of space artists, usually in the form of industrial design (a profession that includes architecture, transportation design, graphic design, and interior design) or so-called "hard" science fiction (speculative stories with a great deal of science), have helped other professionals conceptualize problems in astronomy as well as engineering.

It was not long before people realized the inspirational quality behind space art. By rendering whole new worlds and fantastic machines, the imaginations of many people were ignited in new ways. Some of these people, usually younger and more accepting of new ideas, would become rocket engineers or work hard to become astronauts, just to name a few career directions.

(Slide 5)
Today, many artists specialize in space art. Several of these artists have provided inspiration for many of the people who work in the space industry today. Paintings and drawings of astronomical and astronautical subjects have become quite sophisticated, and several artists are employed for the sole purpose of depicting what lies on our horizon.

"Paintings and drawings"

(Slides 6-8)
Chesley Bonestell, an architect by trade, is generally considered the founder of space art. His famous paintings included great vistas as seen from planetary surfaces, something which was never done before with as much technical skill and use of stunning color and perspective. Bonestell's objective was to use his training as an architect to portray astronomical and astronautical subjects with a high-degree of realism, an approach rarely used in the past.

(Slides 9-11)

Robert McCall
•Conceptual space artist commissioned to do cover art for selected magazines
•His work is easily recognizable for its dynamic style, rich with movement and color
•Provided designs for films like *2001: A Space Odyssey, Star Trek: The Motion Picture,* and others
•Painted the famous mural in the Smithsonian Air and Space Museum

(Slides 12-14)

Robert McQuarrie

•1929-
•Born in Gary, Indiana
•Worked for Boeing in the 1950s, then honed his skills for film work in California
•Was hired by George Lucas to paint the Star Wars universe in 1975.

•What you see on screen would not have been possible without McQuarrie

Activity:

Give the Explorers a subject to paint or draw. The subject should be sufficiently abstract so it allows the Explorer to exercise his or her imagination, but not too vague so that they can't even get started. Examples might include:

- An alien (consider actual biology as a guide, such as skeletons and muscles as well as sensory organs. Often, artists blend the characteristics of several different animals to develop an idea).
- A planetary landscape (i.e., what would it look like on Titan, Saturn's largest moon?)
- A spacecraft or space station with a particular mission (exploration, military, etc.)

Explorers should first sketch what they have in mind, then shade, color (using pencils), or paint (using water-based acrylics or watercolors) their subjects. Keep the artwork small (81/2" x 11"), so completion can be expected within one hour. While the Explorers are busy drawing and painting, remind them that artists must pull as much information as possible from their surroundings and experience, mixed with healthy imagination, in an effort to produce new and interesting pieces. This is especially true for space artists.

When completed, allow a few Explorers to explain what they drew and/or painted. It is important to point out to the Explorers that today's space artists are very knowledgeable about astronomy and space technologies, allowing them to produce even more realistic and compelling pieces.

Consideration: Think of art as a fertile field, and people as seeds. When people are introduced and immersed in art, they flourish and develop new ideas. These new ideas often create social and technological innovations that keep our species strong and adaptable. Without art, creativity eventually evaporates, innovation suffers, and we become vulnerable to change