



SPACE MESSENGERS

BioSTEAM Activity Guide

4

SPACE MESSENGERS' WORKSHOP Week 4: Feb 15-19 Body as Language

OVERVIEW

In this lesson you will prepare your students for week 4 of the workshop called *Body as Language*. In the workshop they will be working with Markus on creative exploration and developing gestural silhouettes that express our connection to the universe, to each other and to other species. In the Friday workshop we'll share the drawings and images that students have created and uploaded to the Space Board gallery. Markus will demonstrate how he uses software to collage and integrate their images into video silhouettes. Students will be able to collaborate with him in choosing and combining images and effects.

Subjects

Art and technology

Estimated Time

Several class periods throughout the week and home activities for students.

Grade Level

7-12

ART ACTIVITIES

Objectives

Students will be able to:

- Create images that express concepts being explored at the intersection of philosophy, science and technology.
- Explore cross cultural communication skills through gesture and the human body.

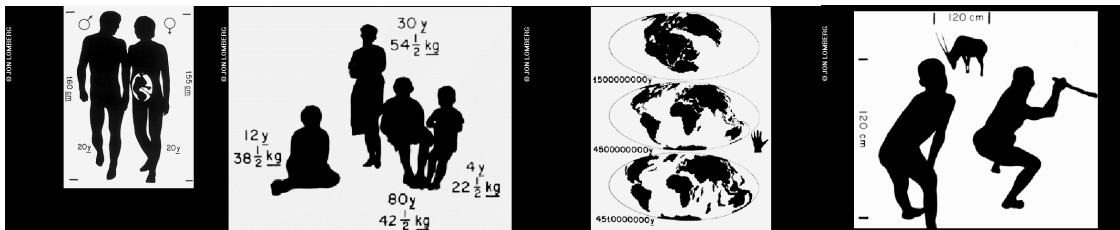


Discover Universal Gestures

When scientists say the universe is in us, they are not just speaking metaphorically. The fundamental elements that make up our universe, make up our bodies as well. We are star stuff- literally.

How can we explore the messages of these inner and outer worlds that we have been discussing in the workshop with art and body language? How might we express science concepts through gesture and shapes?

In 1977, the Space Ships Voyager 1 and 2 contained golden disks that intended to communicate a story of Earth to intelligent life not of this world. This golden record included images, music, sounds and greetings of the diversity on Earth. Some of the images included silhouettes of humans. Why do you think scientists and artists picked these silhouettes? Imagine extraterrestrial life interpreting these signals. What meanings do they communicate? Are there universal gestures among humans? Can these gestures really be *universal*?

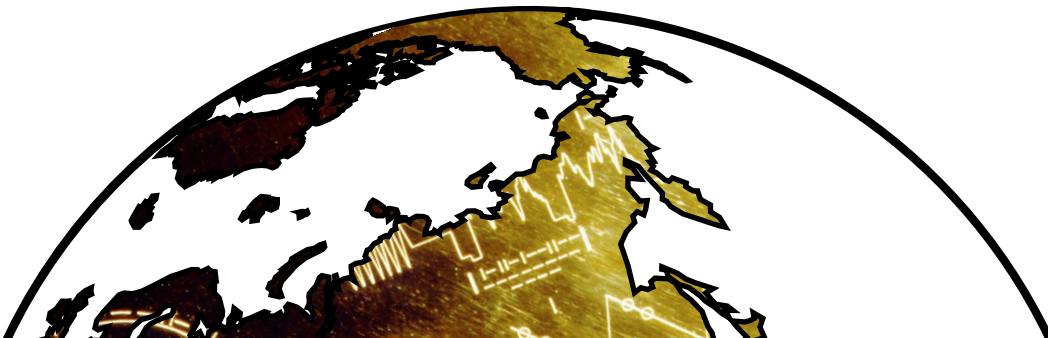


<https://voyager.jpl.nasa.gov/galleries/images-on-the-golden-record/>

Silhouettes have been used for centuries to capture the essence of human forms in an outline. Silhouettes can be drawings, photos or video captured. Experiment with silhouettes. Think of the messages you created on the Space Board for the Space Messengers Installation in the fall. Try out different body poses that communicate those messages. Get creative.



"The cosmos is within us. We are made of star stuff. We are a way for the universe to know itself" - Carl Sagan





Experiment in Light and Motion



1. Watch the [Neil Degrasse Tyson](#) video as a class to start the conversation about our connection to the universe through astrophysics.
2. Markus has put together a great collection of artistic examples of using silhouettes to express ideas (Inspirational Resources below). Watch and discuss the ways humans use body language to express ideas.
3. Have your students choose one of these three activities to prepare for the workshop on Friday. Or they can do them all! Remember how Markus used his fingers on his head to express the science concept of '[spaghettification](#)'? Have students choose messages from the Space Board to interpret through artful movements or imaginative silhouettes.

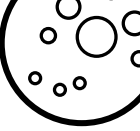
Play with motion, light and shadow

1. Experiment with light and shadow: Find a blank wall and shine a light on it. Stand in front of the light to see your shadow. Try out different body poses and gestures that capture the ideas we have been learning about. Get creative and use objects around the house to create extensions or just use your hands, fingers and motions to express an idea of transformation and connectivity. Trace or photograph your shadow figure or take a short video of your movement. You could also prop your phone on a table to get the shot with a photo timer. If there is someone there to help, have them take a photo or video of your shadows. Upload your photo or video to the Space Board with a caption to share with your team.

2. Draw and imagine creative silhouettes: Draw interpretive silhouettes with pencil or pen on paper that capture the idea of the human experience. Have fun imagining the body as it moves through space or how the body would look if traveling at the speed of light or teleporting through a worm hole! Recall the inspirational examples where the silhouettes were interpretive in proportions like the cut outs by Matisse. Get creative! If you like, fill in the silhouette with colors and textures inspired from the earth/space/technology images collected in the Space Board. Photograph your drawing and upload to the Space Board gallery with a caption to share with your team. Use one of the [free scanning apps](#) to assure you get good quality photos.

3. Continue earth/space image collection: Continue to research online to find interesting images of earth and space or details of the technologies that create them. These will be used to fill the silhouettes. They can be images of scientific instruments such as satellites, telescopes, detectors etc. It could also be photos of nature that capture a unique view from your country or cultural perspective. For example a satellite image of your town or a photo of your sky at night. Add the source and description in the captions. Be prepared to share and describe your favorite image with your team.





INSPIRATION RESOURCES

Artists have been expressing themselves in silhouette for many years. There is a fundamental nature to its simplicity. Check out some of the ways silhouette and shadow has been used in the inspiration links below:

(Artist: Markus Dorniger)

Henri Matisse's cut-outs:

<http://www.matissepaintings.org/cut-outs/>

Lotte Reiniger's pioneering silhouette animations:

https://youtu.be/G_9L7r8NIBc

Iconic Apple iPod adverts from 2003:

<https://youtu.be/BTTglOeHdeY>

Hiwa Matreyek's shadow performance and installation:

<https://www.redcat.org/video/miwa-matreyek-myth-and-infrastructure-excerpts>

Pilobolus dance troupe talks shadows:

<https://www.youtube.com/watch?v=mmqCoJghE2U&list=PLfLpFsUtJnOZ2F8TbR7ncUmHILxTihTWK&index=8>

