NASA
AND THE
ART
OF THE
COSMOS

An AAYF project
Created by Kathy Bauer

“At the core, both art and aerospace exploration search for a meaning to life.”
NASA Art Program

- Established in 1962, 4 years after NASA’s inception
- Created for the purpose of recording space exploration through the eyes of artists
- Artists were invited to all aspects of the space experience including suit-up, launch and landing activities and meetings with scientists and astronauts
- Then artists went to work with no limitations on what they could create
Artist Andy Warhol

Artist Norman Rockwell
Jack Perlmutter's 1969 *Moon, Horizon, & Flowers (Rocket Rollout)* is a mashup of NASA tech and Florida palms.

**Future Space Colony**

envisioned by sci-fi artist Don Davis
Hubble Telescope
Key Vocabulary

- **Asymmetrical**: A balance of parts on opposite sides of a perceived midline, giving the appearance of equal visual weight.
- **Blend**: To combine into an integrated whole.
- **Cast Shadow**: A shadow cast by an object or figure.
- **Core Shadow**: The darkest part of a shadow on a form.
- **Highlight**: A bright or reflective area on a form.
- **Light Source**: Natural and artificial processes that emit light.
- **Mid-Tones**: Area on a form that gradually blends into the shadows as the surface becomes farther from the light source.
- **Reflected Light**: Light bouncing off an object onto another object or surface.
- **Value**: Lightness or darkness of a hue or neutral color. A value scale shows the range of values from black to white.
Preparing the Canvas

- Cover paper with baby oil using paper towel.
- Have students complete the AAYF project/name label and then affix to the back of the paper.
- Place paper right side-up either horizontal or vertical.

Note

- Specific colors used are for grades TK-2
- Grades 3-5 can choose their own colors.

Preparing the Canvas

- Cover paper with baby oil using paper towel.
Creating a Star

- Color a white circle with a yellow and blue halo around it.
- Using oil-soaked edge of paper towel blend color into paper, blending out any lines to make a glow!
- Re-apply same colors using fingers to blend. Add more colors to halos from light to dark: white, yellow, green, light blue, and then dark blue.
- Blend edges of color to represent a glow: brightest at the star and glow fading when moving away from the star.
- **OLDER GRADES**: Can choose to do a warm colored star instead using white, yellow and red.
Creating a Planet

- Trace a circle with the circle template using an orange pastel tip anywhere on the page and color in with orange.
- Use yellow and white to highlight the part that faces the light source, the star.
- The mid-tone of the planet is orange.
- Color a red or brown shadow at the back of the planet that faces opposite the light source. Blend with fingers.
- Add the original planet color to the back of the planet, behind the core shadow for reflected light. Blend with fingers.

OLDER GRADES: Choose any color for the planet. For best results choose a mid-range value.
- For light value color highlight of the planet will probably need to be white.
- For dark value then red or dark blue are effective shadow colors.
- Avoid black for the shadow on the planet.
Creating a Dust Cloud

- Re-apply baby oil where you want to place your dust cloud. Be careful to avoid edges of the planet.
- Using the red pastel draw a thick line over the newly oiled stripe. Blend with clean corner of paper towel, fingers, or cotton swab.
- Add white and peach highlights, blending with finger.

OLDER GRADES can choose any dark color and highlight variances in cloud with a lighter color.
- Add the star’s glow or dust cloud behind the planet. This is necessary to show a cast shadow behind the planet.
Giving a Black Shadow to your Planet

- Use black pastel to create a cast shadow behind the sphere, opposite side of sun.
Create Asteroids

- Using grey pastels draw and color in 2-3 small asymmetrical shapes floating in your atmosphere.
- Highlight the asteroid with white where it faces the light source.
- Shade the asteroid with black on the opposite side for the core shadow. Don’t forget a cast shadow and reflected light on the object.

Create Distant Stars

- Using white and yellow pastels dot the paper with clusters of stars. Avoid the cast shadow from the planet.
- Add a few glowing stars.
Aesthetic Valuing

1. Why was it important to identify the location of a light source?
2. How did adding shadows help transform the circle into a planet (sphere)?
3. Did you enjoy the blending of the pastels with your fingers?
4. Do you see a difference between your planet art and the Hubble photographs?