

# 4-H at Home

ON THE GO LESSON

## COSMIC ART

### INCLUDES

PAPER | PASTELS | COTTON SWABS

### 4-H PROJECT AREAS

STEM | AEROSPACE | VISUAL ARTS



IOWA STATE UNIVERSITY  
Extension and Outreach



### INCLUDED SUPPLIES

- Drawing paper
- Pastels (Other options include crayons or colored pencils)
- Cotton swabs for blending

### ADDITIONAL SUPPLIES

- Additional drawing materials
- Internet Access (optional)

### BACKGROUND

The elements of art – shape, line, color, value, texture – offer an amazing way to make sense of planetary geology and atmospheres within our solar system either through a telescope or photography.

Circles – When circles are viewed on a planetary image, it often indicates an impact feature, such as a crater.

Blobs – Organic shapes, or blobs, can often be interpreted in two ways. Blobs frequently mean that one is viewing volcanic processes and lava flows. They can also indicate existing bodies of surface liquid (rivers and seas) or ancient bodies of liquid that left remnants of dried beds.

Straight Lines – The presence of straight lines on a planetary body often indicates tectonic activity, including faults, ridges, cracks and mountains on a planet.

Squiggly Lines – The presence of squiggly lines on the surface often tells us forces of erosion are at work. Erosion is the geological process in which rock or soil are worn away and eliminated by natural forces such as wind or water are at work, including that of liquid and wind.

Color – Can highlight distinct aspects of a planet: topography (the shape and features of land surfaces), mineral composition, even gravity!

Value – Value is the contrast of light and dark colors. Its scientific counterpart is called albedo - the measure of the reflectivity of a surface.

Texture – Implied texture, we can see with our eyes, yet not touch. Images of planetary bodies have a lot of various textures that correspond to their geologic history, how they were formed.

## DO REFLECT APPLY

Select an image to draw from NASA's earth and space images: [https://www.jpl.nasa.gov/edu/pdfs/cosmicart\\_images.pdf](https://www.jpl.nasa.gov/edu/pdfs/cosmicart_images.pdf). Or think about images you've seen of the solar system. Make a drawing inspired by one of the images. Pay special attention to the elements of art shared above and how you could use them in your drawing. If any of the vocabulary is new to you, use a dictionary (book or online) to help.

When done, think about the following: How can science inspire art – or art inspire science? How does examining the image help you tell its story? Do you think Earth has straight lines or squiggly lines on its surface when it is looked at from far away? Is there a place near you where you can see different textures of Earth (high points, valleys, smooth surfaces, rocky surfaces)?

Share your drawing with others. Thank you to our partner Iowa Space Grant Consortium! Link to full directions from NASA: <https://www.jpl.nasa.gov/edu/teach/activity/art-the-cosmic-connection>

## LEARN MORE



We want to hear from you! Please use this link or QR code to take a short online survey. [https://iastate.qualtrics.com/jfe/form/SV\\_eR5wRy8dhoqt4Lb](https://iastate.qualtrics.com/jfe/form/SV_eR5wRy8dhoqt4Lb)

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