

An astronaut in a white space suit is floating in space, with the Earth visible in the background. The astronaut's suit has a NASA logo and an American flag patch. The astronaut's hands are clasped together. The Earth shows blue oceans and white clouds, with a portion of a continent visible on the right side.

***Introduction to  
Lunar Art project***

**NASA**  
**HUNCH**  
**ACADEMY**

***Introduction to NASA HUNCH video.***



Handrail Flex Clips  
aka The Hydra

**Mission Statement: Empowering Elementary School Students in STEM through NASA HUNCH Academy**

**At NASA HUNCH Academy, our mission is to ignite a passion for STEM (Science, Technology, Engineering, and Mathematics) among elementary school students by providing an immersive and innovative educational experience inspired by NASA HUNCH. We strive to cultivate curiosity, critical thinking, and creativity, laying the foundation for future leaders in space exploration and technology.**

**Vision Statement: Fostering a Generation of Young Explorers and Innovators**

**Our vision at NASA HUNCH Academy is to create a dynamic learning environment where elementary school students can thrive in STEM fields. We envision a future where every child is equipped with the knowledge, skills, and inspiration needed to contribute to space exploration and technological advancements. Through hands-on experiences, collaboration, and mentorship, we aim to nurture a community of young explorers and innovators who will boldly shape the future of science and technology.**



***Hello Fellow NASA HUNCH Academy Teachers and students. It is important to make sure your class understands what NASA Hunch is and what NASA does. I start my students out with a class discussion on what the students think NASA stands for. Write down their answers and then tell them that NASA stands for National Association of Space and Aeronautics. Congress founded the National Advisory Committee on Aeronautics on March 3, 1915, as an independent government agency reporting directly to the President. In October of 1958 Dwight D Eisenhower formed NASA to study space and flight. There was a space race going on at this time. All of the countries were competing to see who could get to space first. The Russians were the first to go to space but the United States were the first to go to the moon. In 1969 we went to the moon with three astronauts aboard the apollo 11 shuttle. Neil Armstrong, Edwin “Buzz” Aldrin, and Michael Collins explored the surface of the moon. The footprints they left in the regolith are still there today along with an american flag their backpacks and gold olive branch pin. Now NASA plans to retire to the moon later this year with the Artimus program. We will have the first Woman and the first African American to walk on the moon. Which is very exciting to see, There are several videos that you can watch with your students about this program and the original moon landing as well***



## **NASA and Moon landing videos**



# ***Introduction to NASA HUNCH Lunar Art Project video***



# Objective

**Read over the NASA HUNCH powerpoint, visit the websites and watch the videos for information.**

**[https://www.hunchdesign.com/uploads/2/2/0/9/22093000/lunar\\_art.pdf](https://www.hunchdesign.com/uploads/2/2/0/9/22093000/lunar_art.pdf)**

**Develop, design and build a piece artwork that can be done on the Moon. NASA's long term goal is to have a base on the Moon and even possibly Mars someday. The purpose of making art in space is to keep our Astronauts busy with normal fun things instead of having them just doing research all day and night. Could you imagine a place with no color. No art at all! I couldn't imagine how it would feel to be without colors. This project is very different from the others because art can be done in so many different ways. Attached are art standards for the USA. Use which ones best suit your classroom needs. It is also different because we won't be making something that we can send to the moon. We are coming up with ideas to help inspire the astronauts make that type of art while on missions to space, especially the Moon. It cost \$1.2 million per pound to send material to the Moon. Because of this we will need to find things that might already be available to the Astronauts on the Moon. Things that can be recycled. Old wires, scraps of cloth, scraps of paper, plastic ( everything is wrapped in plastic), Different foods to make paints out of, rocks, Stuff on the surface of the Moon, Sponges, metal scraps, pencils, markers, paper, sticky notes, cardboard, baggies of all sizes and zip ties. I have done some research to see what might be available to the astronauts on their missions, that list is in the next slide. We will be looking into different art techniques and how we could use those in space. Have fun with this project and your ideas might inspire our astronauts in space. You are going to be their inspiration. We can't wait to see what you come up with for this project. Have fun and be creative!**



**Have a class discuss what supplies they think the astronauts will take to the moon.**

**<https://www.nasa.gov/news-release/nasa-asks-what-would-you-pack-for-the-moon/>**

**Then have them make a list of supplies they would bring if they were going to the Moon. Use the NASA website to help you with this discussion.**

**Here is some information that might help with this discussion.**

**Each astronaut traveling to the International Space Station is only allowed a 5-by-8-by-2-inch (12.7-by-20.3-by-5.1-cm) volume of space to carry personal items. That's significantly smaller than a standard airplane carry-on bag, which measures 9 inches by 14 inches by 22 inches.**

**What would you pack for the trip to the moon?**



# Videos about the moon



The Phases  
of the Moon



# ***Making Plarn ( plastic Yarn)***



**PLASTIC YARN?**



**Plastic Bag Bracelet**

# Rock art ideas



# Wire art ideas



# Paper mache ideas



# *Cloth weaving ideas*



# ***Sand art ideas***



## **2nd grade NGSS Science standards covered in this project.**

***K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.***

***PS2.A: Forces and Motion. Pushes and pulls can have different strengths and directions.***

***Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.***

***ETS1.A: Defining Engineering Problems. A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.***

***K-PS2-2.. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.***

***2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\****

***5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky***

## **3rd Grade NGSS Science standards covered in this project.**

***3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.***

***PS2.A: Forces and Motion. Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.)***

***PS2.B: Types of Interactions. Objects in contact exert forces on each other.***

***3-PS2-2.. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.***

***PS2.A: Forces and Motion. The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it.***

***5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky***



## **4th Grade NGSS Science standards covered in this project**

**3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paperclips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.**

**5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky**

## **5th Grade NGSS Science standards covered in this project**

**5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.**

**PS2.B: Types of Interactions. The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. Engaging in Argument from Evidence**

**Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).. Support an argument with evidence, data, or a model.**

**5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky**

**5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.**

## **Middle School 6th - 8th Grade NGSS Science standards covered in this project**

**MS-PS2-1. Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.**<sup>1</sup>

**PS2.A: Forces and Motion. For any pair of interacting objects, the force exerted by the first object on the second object is equal in strength to the force that the second object exerts on the first, but in the opposite direction (Newton's third law).**

**Constructing Explanations and Designing Solutions. Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.**

**MS-PS2-2. Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.**

**PS2.A: Forces and Motion. The motion of an object is determined by the sum of the forces acting on it; if the total force on the object is not zero, its motion will change. The greater the mass of the object, the greater the force needed to achieve the same change in motion. For any given object, a larger force causes a larger change in motion. All positions of objects and the directions of forces and motions must be described in an arbitrarily chosen reference frame and arbitrarily chosen units of size. In order to share information with other people, these choices must also be shared.**

**MS-PS2-3. Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.**

**MS-PS2-4. Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.**

**MS-PS2-5. Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.**

**PS2.B: Types of Interactions. Forces that act at a distance (electric, magnetic, and gravitational) can be explained by fields that extend through space and can be mapped by their effect on a test object (a charged object, or a ball, respectively).**

**MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.**

**ESS1.B: Earth and the Solar System. The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. The solar system appears to have formed from a disk of dust and gas, drawn together by gravity.**

**MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.**

**ESS1.A: The Universe and Its Stars. Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models.**

**ESS1.B: Earth and the Solar System. This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year.**

## **2nd Grade national visual arts standards covered in this project.**

**VA:Cr1.1.2a Brainstorm collaboratively multiple approaches to an art or design problem.**

**VA:Cr1.2.2a Make art or design with various materials and tools to explore personal interests, questions, and curiosity.**

**VA:Cr2.1.2a Experiment with various materials and tools to explore personal interests in a work of art or design.**

**VA:Cr2.3.2a Repurpose objects to make something new**

**VA:Cr3.1.2a Discuss and reflect with peers about choices made in creating artwork**

## **3rd Grade National visual arts standards covered in this project.**

**VA:Cr1.1.3a Elaborate on an imaginative idea**

**VA:Cr1.2.3a Apply knowledge of available resources, tools, and technologies to investigate personal ideas through the art-making process.**

**VA:Cr2.1.3a Create personally satisfying artwork using a variety of artistic processes and materials.**

## **4th Grade National visual arts standards covered in this project**

**VA:Cr1.1.4a Brainstorm multiple approaches to a creative art or design problem.**

**VA:Cr1.2.4a Collaboratively set goals and create artwork that is meaningful and has purpose to the makers.**

**VA:Cr2.1.4a Explore and invent art-making techniques and approaches.**

**VA:Cr3.1.4a Revise artwork in progress on the basis of insights gained through peer discussion.**

## **5th Grade National visual arts standards covered in this project**

**VA:Cr1.1.5a Combine ideas to generate an innovative idea for art-making.**

**VA:Cr1.2.5a Identify and demonstrate diverse methods of artistic investigation to choose an approach for beginning a work of art**

**VA:Cr2.1.5a Experiment and develop skills in multiple art-making techniques and approaches through practice.**

**VA:Cr3.1.5a Create artist statements using art vocabulary to describe personal choices in artmaking.**

## **6th Grade National visual arts standards covered in this project**

**VA:Cr1.1.6a Combine concepts collaboratively to generate innovative ideas for creating art.**

**VA:Cr1.2.6a Formulate an artistic investigation of personally relevant content for creating art.**

**VA:Cr2.1.6a Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design.**

**VA:Cr2.2.6a Explain environmental implications of conservation, care, and clean-up of art materials, tools, and equipment.**

**VA:Cr2.3.6a Design or redesign objects, places, or systems that meet the identified needs of diverse users.**

**VA:Cr3.1.6a Reflect on whether personal artwork conveys the intended meaning and revise accordingly.**

## **7th Grade visual arts standards covered in this project**

**VA:Cr1.1.7a Apply methods to overcome creative blocks**

**VA:Cr1.2.7a Develop criteria to guide making a work of art or design to meet an identified goal.**

**VA:Cr2.1.7a Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design**

**VA:Cr2.3.7a Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas.**

**VA:Cr3.1.7a Reflect on and explain important information about personal artwork in an artist statement or another format.**

## **8th Grade visual arts standards covered in this project**

**VA:Cr1.1.8a Document early stages of the creative process visually and/or verbally in traditional or new media.**

**VA:Cr1.2.8a Collaboratively shape an artistic investigation of an aspect of presentday life using a contemporary practice of art and design**

**VA:Cr2.1.8a Demonstrate willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of artmaking or designing**

**VA:Cr2.3.8a Select, organize, and design images and words to make visually clear and compelling presentations.**

**VA:Cr3.1.8a Apply relevant criteria to examine, reflect on, and plan revisions for a work of art or design in progress.**