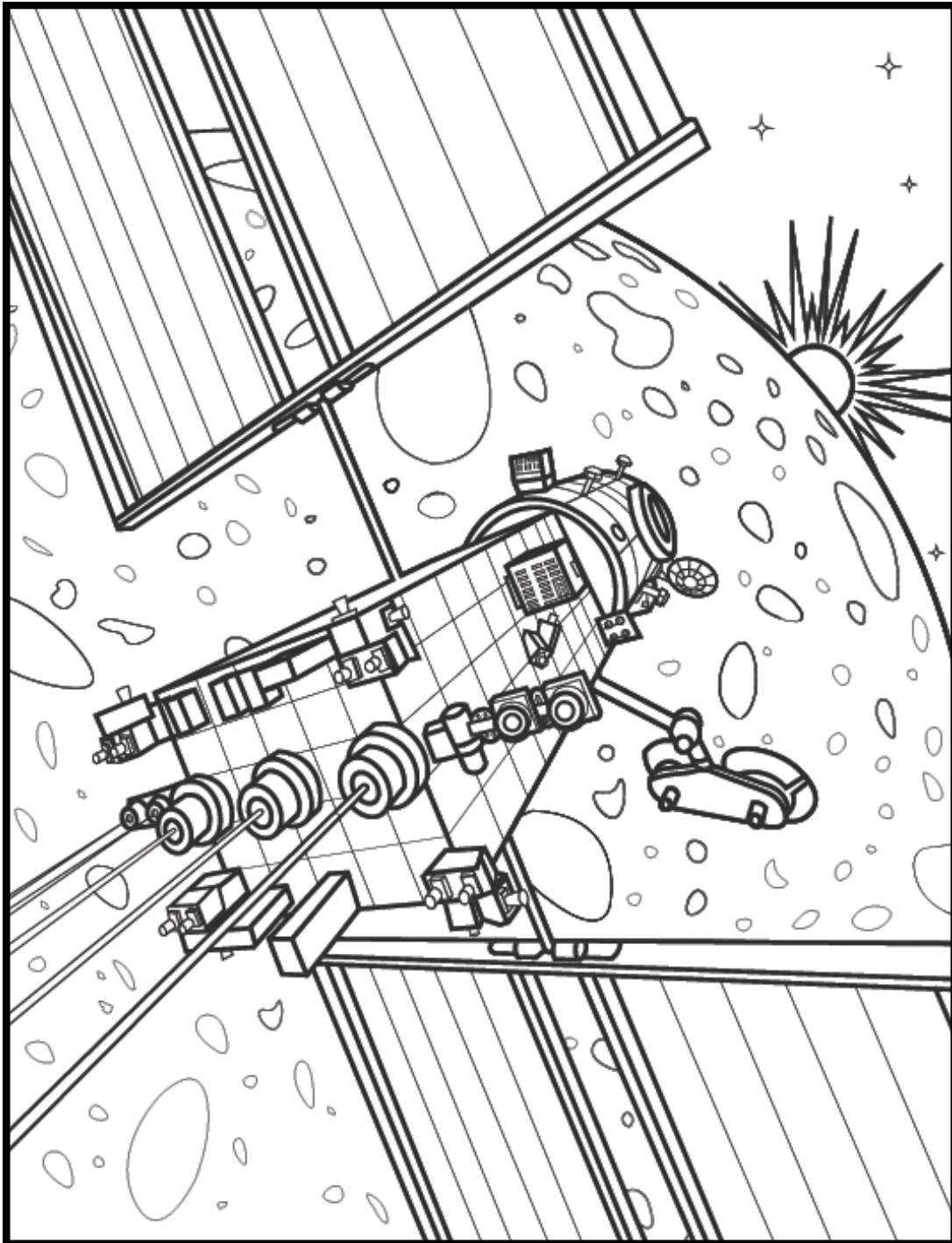


GATEWAY BINGO



MATERIALS + INSTRUCTIONS

Ready to embark on a cosmic adventure? Dive into Gateway Bingo, where you'll learn all about Gateway, humanity's first lunar space station. Here's how to play!

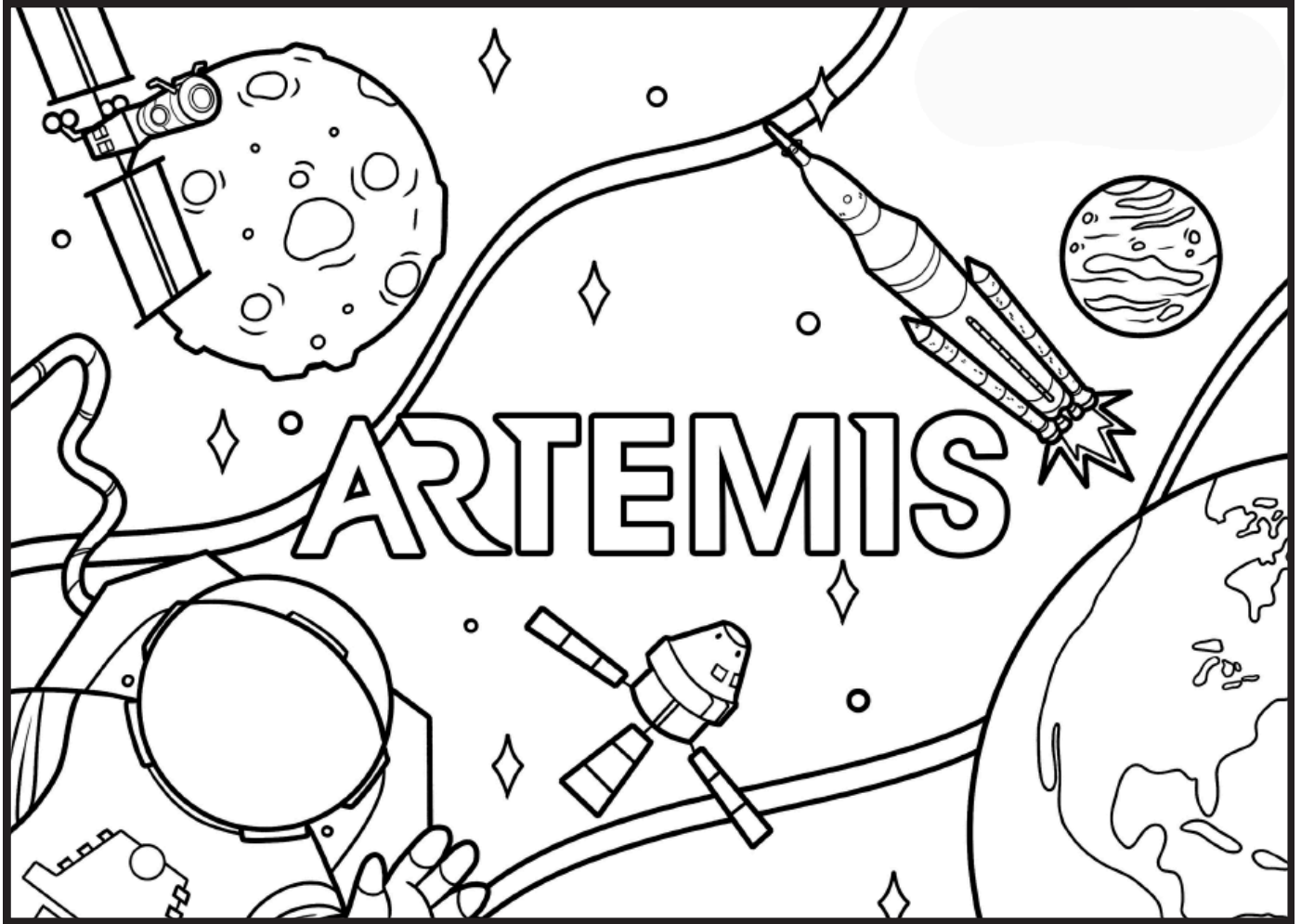
Materials

- **Introduction & Background Sheet:** Provides an overview of Gateway and Artemis.
- **Gateway Vocabulary Sheet:** A list of terms and dates related to Gateway and Artemis.
- **40 Gateway Bingo Trivia Cards:** Cards containing questions and answers for the bingo game.
- **Bingo tracking Sheet:** A card to help keep track of the trivia terms that have been called out.
- **10 Unique Bingo Cards:** Each player gets one of these to use during the game.
- **Create-Your-Own Bingo Card:** A blank card that players can fill in with terms before the game starts.
- **Moon Markers:** Cut-out markers that players use to cover spaces on their bingo cards.

Instructions

- **Preparation:** Begin by reading the Introduction & Background Sheet to learn about Gateway and Artemis. Review the Gateway Vocabulary Sheet to familiarize yourself with the terms and dates you'll encounter during the game.
- **Set Up:** Each player selects a Bingo Card. Alternatively, players can fill in the Create-Your-Own Bingo Card before the game starts. Next, cut out the Moon Markers to use during the game. Then, cut out the Gateway Bingo Trivia Cards, fold them, and place them in a bag or bowl for the caller to draw from during the game.
- **Start the Game:** The caller will draw from the Gateway Bingo Trivia Cards and read each question aloud. Players listen to the question and cover the corresponding answer on their bingo cards with a Moon Marker.
- **Track Progress:** The caller uses the Bingo tracking Sheet to keep track of which Gateway trivia terms have been called out.
- **Winning:** The first player to cover five spaces in a row (horizontally, vertically, or diagonally) calls out "Bingo!" and wins the game. For an added challenge, try playing Blackout, where the winner is the first to cover every space on their bingo card.

INTRODUCTION + BACKGROUND



The Legacy of Apollo

NASA, the U.S. government agency responsible for science and technology related to air and space, has a rich history of space exploration. One of its space exploration campaigns was the **Apollo** program, which sent humans to the Moon. In 1961, President John F. Kennedy challenged the nation to land astronauts on the Moon by the end of the decade. In 1969, Neil Armstrong became the first person to walk on the Moon during the historic **Apollo 11** mission. Over the course of the Apollo

program, a total of 12 astronauts walked on the Moon, with the last mission in 1972. It's been more than 50 years since humans last set foot on the Moon.

The Moon, our closest celestial neighbor, is about 240,000 miles (384,400 km) from Earth. It has a surface covered in regolith, a layer of loose rock and dust. The Moon is about 1/4th the size of Earth, and its gravitational force is only 1/6th as strong. This unique environment was the focus of intense study during the

Apollo missions and continues to intrigue scientists today.

The International Space Station: Earth's Orbiting Laboratory

Following the Apollo program, NASA turned its attention to building the **International Space Station**, a collaborative space station that orbits Earth in low Earth orbit. The ISS has become a hub for international cooperation in space, allowing astronauts from around the world to conduct important scientific research.

Introducing Artemis: A New Era of Lunar Exploration

NASA is once again setting its sights on the Moon, this time with the **Artemis** campaign. Named after Apollo's twin sister and the goddess of the Moon in Greek mythology, Artemis represents a new era of lunar exploration. The Apollo missions achieved the incredible feat of landing humans on the Moon, marking a monumental moment in history. Building on this legacy, Artemis is focused on exploring even more of the lunar surface and developing the capabilities to live on and around the Moon for extended periods. These efforts will pave the way for humanity's next giant leap: the first crewed mission to Mars, which is, on average, about 140 million miles (225 million km) from Earth. The Artemis missions will make history by sending the first woman and the first person of color to the Moon.

Launched in 2022, **Artemis I** marked the beginning of NASA's return to the Moon. The **Artemis II** mission will be the first crewed flight in this new era, orbiting

the Moon and paving the way for future lunar landings. When astronauts land on the lunar surface during the **Artemis III** mission, they will stand where no human has ever stood: the Moon's South Pole region.

The Artemis missions are powered by the **Space Launch System** (SLS), NASA's powerful rocket, which is designed to carry equipment, Gateway space station elements, and the **Orion** spacecraft beyond Earth's orbit. Orion will transport astronauts to lunar orbit and back, providing the necessary life support and systems to ensure their safety throughout the journey.

Gateway: Humanity's First Lunar Space Station

Central to Artemis is **Gateway**, the first space station that will orbit the Moon. Gateway will play an important role in supporting human exploration of the lunar surface and will serve as a stepping stone for future missions to Mars. Gateway will provide a temporary home and workspace for Artemis astronauts, equipped with living quarters, science and research equipment, and docking ports for visiting spacecraft like Orion.

NASA is building Gateway with help from four international partners: CSA (Canadian Space Agency), ESA (European Space Agency), JAXA (Japan Aerospace Exploration Agency), and Mohammed Bin Rashid Space Centre (MBRSC).

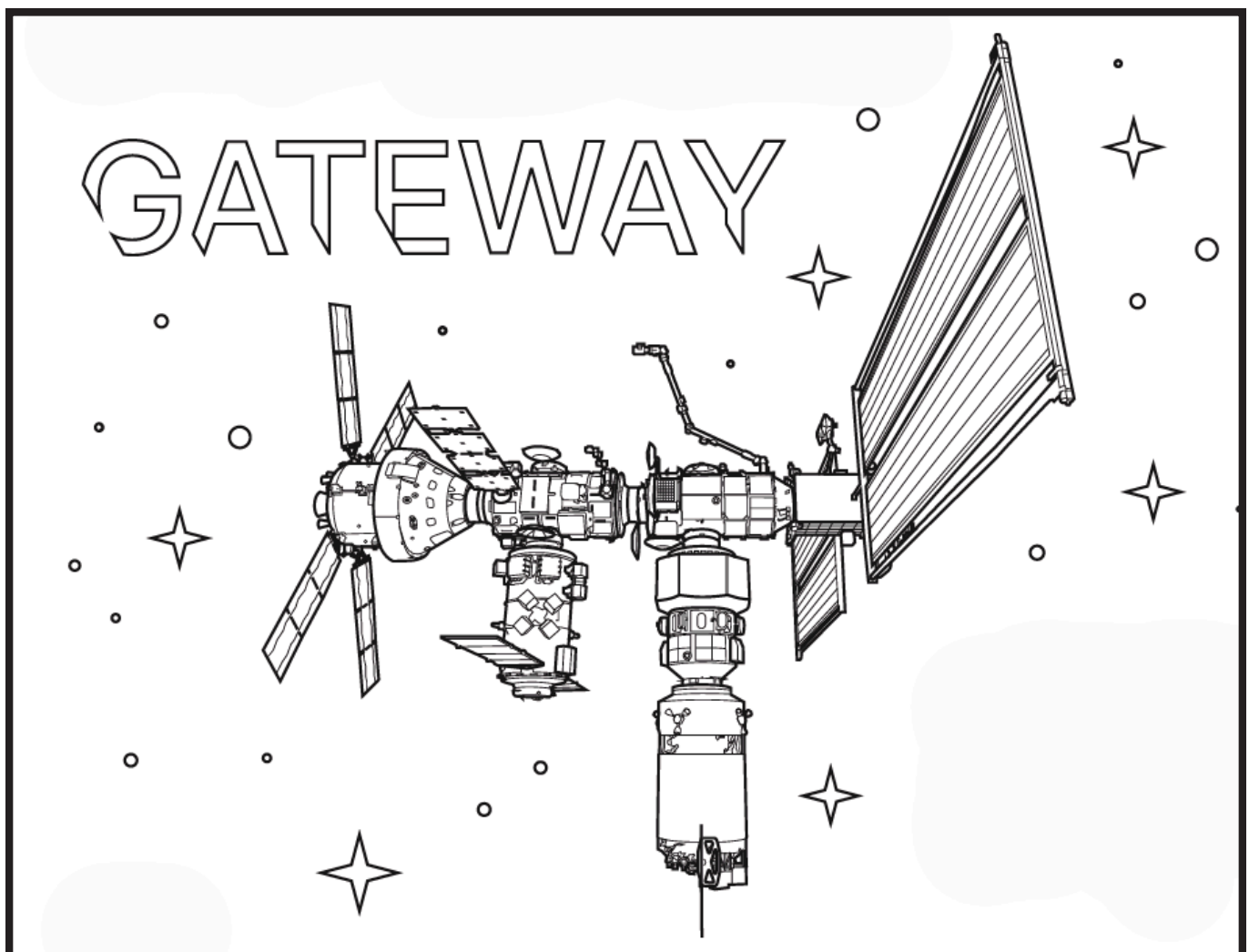
Gateway will be assembled in lunar orbit, piece by piece. The first two

Gateway pieces that will be sent to lunar orbit are the Power and Propulsion Element (PPE), which will provide the station's power, and the Habitation and Logistics Outpost (HALO), crew quarters where astronauts will live and work. The Lunar I-Hab habitation module will be delivered to the Moon during the **Artemis IV** mission. Other Gateway modules include Lunar View, which will feature windows for astronauts to observe the Moon, the Crew and Science Airlock, which will facilitate the safe transfer of astronauts and experiments to and from the station, and Canadarm3, a robotic arm. A Logistics Module (LM) will deliver essential supplies to Gateway,

including equipment, food, and water.

Gateway will orbit the Moon in an oval-shaped polar orbit, completing one full orbit every 6.5 days. Positioned in deep space, far from Earth's atmosphere and magnetosphere, Gateway will offer a unique environment for scientific research. The station's first science experiments will focus on monitoring radiation, an important area of study as astronauts travel further from Earth, as well as heliophysics, the study of the Sun and its effects on the solar system.

Learn more about Gateway's role supporting the Artemis era of lunar exploration at nasa.gov/gateway.



GATEWAY VOCABULARY

NASA - The U.S. government agency responsible for science and technology related to air and space.	1969 - The year the first person landed on the Moon.
Moon - The only celestial body beyond Earth that humans have visited.	1972 - The last time someone walked on the Moon.
Regolith - The layer of loose rock and dust that covers the Moon's surface.	12 - The number of people who have walked on the Moon.
1/4th - The size of the Moon compared to Earth.	Artemis - NASA's new campaign to send astronauts back to the Moon.
1/6th - The gravitational force on the Moon compared to Earth.	Artemis I - The first Artemis mission, which launched in 2022 and marked the beginning of NASA's return to the Moon.
240,000 miles (384,400 km) - The average distance from Earth to the Moon.	Artemis II - The name of the first crewed Artemis mission.
Magnetosphere - Earth's protective magnetic field that surrounds the planet, shielding it from harmful solar radiation and charged particles from the Sun.	Water - The substance found in the form of ice in lunar samples and inside shadowed craters near the lunar poles.
Apollo - The NASA program that first sent people to the Moon.	The South Pole - The region of the Moon Artemis astronauts will explore.
Apollo 11 - The first Apollo mission to land people on the Moon.	Gateway - The first space station around the Moon.
Neil Armstrong - The first person to walk on the Moon.	4 - The number of international space agencies working with NASA to build Gateway.

GATEWAY VOCABULARY

Orion - The NASA spacecraft that will carry Artemis astronauts to lunar orbit.	Crew and Science Airlock - The Gateway module that transfers astronauts and experiments outside the station.
Space Launch System (SLS) - The rocket that will launch Orion and several Gateway modules to the Moon.	Logistics Module (LM) - A visiting Gateway module that will deliver supplies to the station.
International Space Station (ISS) - The space station that orbits Earth.	Artemis IV - The first Artemis mission that will send astronauts to Gateway.
Low Earth Orbit (LEO) - The region of space where the International Space Station orbits Earth.	1972 - The last time someone walked on the Moon.
Deep Space - The area of space far beyond Earth, where Gateway will operate.	Heliophysics - The study of the Sun and its effects on the solar system.
6.5 days - The time it takes Gateway to go all the way around the Moon.	Radiation - The focus of the first science experiments on Gateway.
Oval - The shape of Gateway's polar orbit around the Moon.	Lunar I-Hab - The Gateway habitation module that will be sent to lunar orbit during the Artemis IV mission.
HALO (Habitation and Logistics Outpost) - The first Gateway habitation module that will be sent to the Moon.	Mars - The planet Gateway will help humanity prepare to explore.
Power and Propulsion Element (PPE) - The Gateway part that will provide power to the space station.	140 million miles (225 million km) - The average distance from Earth to Mars.
Lunar View - The Gateway module that will have windows for astronauts to view the Moon.	The Artemis Accords - The international agreement that outlines the principles for cooperation in space exploration under Artemis.

Gateway Trivia Cards 1-10

Question: What is the only celestial body beyond Earth that humans have visited?

Answer: Moon

Question: How far is the Moon from Earth, on average?

Answer: 240,000 miles (225 million km)

Question: How far is Mars from Earth, on average?

Answer: 140 million miles (225 million km)

Question: What is the name of Gateway's robotic arm?

Answer: Canadarm3

Question: What's the name of the NASA spacecraft that will carry astronauts to Gateway?

Answer: Orion

Question: How long does it take Gateway to go all the way around the Moon?

Answer: 6.5 Days

Question: Gateway will help humanity prepare for the first crewed mission to which planet?

Answer: Mars

Question: What is the name of the program that first sent people to the Moon?

Answer: Apollo

Question: Who was the first person to walk on the Moon?

Answer: Neil Armstrong

Question: What is the name of NASA's new campaign to send astronauts back to the Moon?

Answer: Artemis

Gateway Trivia Cards 11-20

Question: When was the last time someone walked on the Moon?

Answer: 1972

Question: What part of the Moon will Artemis astronauts explore?

Answer: South Pole

Question: What is the name of the first space station around the Moon?

Answer: Gateway

Question: In what year did the first person land on the Moon?

Answer: 1969

Question: Which rocket will launch Orion and several Gateway elements to the Moon?

Answer: Space Launch System

Question: What's the first Gateway habitation module that will go to the Moon?

Answer: HALO

Question: How many international space agencies are working with NASA to build Gateway?

Answer: 4

Question: Which Gateway part will provide power to the space station?

Answer: Power & Propulsion Element

Question: What shape is Gateway's polar orbit around the Moon?

Answer: Oval

Question: What is the gravitational force on the Moon compared to Earth?

Answer: 1/6

Gateway Trivia Cards 21-30

Question: What is the layer of loose rock and dust that covers the Moon's surface?

Answer: Regolith

Question: How many people have walked on the Moon?

Answer: 12

Question: Which Gateway module transfers crew and experiments outside the station?

Answer: Crew & Science Airlock

Question: Gateway will allow scientists to study space outside the protection of Earth's what?

Answer: Magnetosphere

Question: What is the name of the Artemis mission that sent Orion around the Moon in 2022?

Answer: Artemis I

Question: What part of the Moon will Artemis astronauts explore?

Answer: South Pole

Question: Which visiting module will deliver supplies to Gateway?

Answer: Logistics Module

Question: What is the first Artemis mission that will send astronauts to Gateway?

Answer: Artemis IV

Question: What is the study of the Sun and its effects on the solar system called?

Answer: Heliophysics

Question: Which space station orbits Earth?

Answer: International Space Station

Gateway Trivia Cards 31-40

Question: Which Gateway module will have windows for astronauts to view the Moon?

Answer: Lunar View

Question: What is the name of the first crewed Artemis mission?

Answer: Artemis II

Question: What's the name of the international agreement that outlines the principles for cooperation in space exploration under Artemis?

Answer: The Artemis Accords

Question: What will Gateway's first three science instruments study?

Answer: Radiation

Question: How does the size of the Moon compare to Earth?

Answer: 1/4

Question: What is the name for the region of space where ISS orbits Earth?

Answer: Low Earth Orbit (LEO)

Question: What's the region of space where Gateway will operate?

Answer: Deep Space

Question: What have scientists found in the form of ice in lunar samples and inside shadowed craters near the lunar poles?

Answer: Water

Question: Which U.S. government agency is responsible for science and technology related to air and space?

Answer: NASA

Question: What is the name of the Gateway habitation module that will be delivered to lunar orbit during the Artemis IV mission?

Answer: Lunar I-Hab

GATEWAY BINGO

TRACKING SHEET

1/4	NASA	Radiation	Water	The Artemis Accords
Deep Space	Low Earth Orbit	International Space Station	Artemis I	Artemis II
12	Helio-physics	Magnetosphere	Artemis IV	Crew & Science Airlock
Lunar View	Logistics Module	Regolith	1/6	Oval
Power & Propulsion Element	4	HALO	South Pole	140 Million Miles (225 million km)
Mars	Space Launch System	Apollo 11	1969	Artemis
Apollo	240,000 miles (384,400 km)	Canadarm3	6.5 Days	Gateway
Orion	Neil Armstrong	Moon	1972	Lunar I-Hab



GATEWAY BINGO

Orion	Logistics Module	Lunar View	South Pole	Regolith
Artemis	Space Launch System	Moon	Deep Space	1972
Apollo 11	Magnetosphere	FREE SPACE	International Space Station	Low Earth Orbit
Mars	Neil Armstrong	Crew & Science Airlock	140 million miles (225 million km)	Artemis I
Lunar I-Hab	Artemis II	1/6	240,000 miles (384,400 km)	Power & Propulsion Element



GATEWAY BINGO

HALO	140 million miles (225 million km)	6.5 Days	Magneto- sphere	South Pole
Helio- physics	NASA	Moon	1/4	Artemis
Apollo 11	Artemis II	FREE SPACE	Power & Propulsion Element	240,00 miles (384,400 km)
4	Mars	Crew & Science Airlock	The Artemis Accords	1972
Low Earth Orbit	Radiation	Lunar View	Canadarm3	Oval



GATEWAY BINGO

Oval	240,00 miles (384,400 km)	Helio- physics	6.5 Days	Lunar I- Hab
Crew & Science Airlock	1/4	Space Launch System	4	South Pole
Orion	Canadarm3	FREE SPACE	NASA	Logistics Module
Apollo 11	Regolith	Deep Space	1972	Artemis II
Neil Armstrong	The Artemis Accords	Radiation	Power & Propulsion Element	Magneto- sphere



GATEWAY BINGO

South Pole	Low Earth Orbit	4	Deep Space	1/6
Neil Armstrong	1972	Moon	NASA	140 million miles (225 million km)
Regolith	International Space Station	FREE SPACE	1969	HALO
Artemis	Canadarm3	Radiation	Oval	Helio-physics
Magnetosphere	Logistics Module	240,00 miles (384,400 km)	Gateway	6.5 Days



GATEWAY BINGO

6.5 Days	Canadarm3	Oval	South Pole	Orion
4	1/6	Gateway	Power & Propulsion Element	Regolith
HALO	The Artemis Accords	FREE SPACE	Crew & Science Airlock	Moon
Helio- physics	Artemis IV	1/4	Low Earth Orbit	1972
International Space Station	240,00 miles (384,400 km)	NASA	Water	Lunar View



GATEWAY BINGO

Artemis I	NASA	Deep Space	South Pole	Artemis
Apollo	6.5 Days	Low Earth Orbit	Magneto-sphere	Power & Propulsion Element
1972	Radiation	FREE SPACE	Moon	Gateway
Artemis II	International Space Station	Space Launch System	12	Neil Armstrong
HALO	Apollo 11	1969	Canadarm3	Regolith



GATEWAY BINGO

Crew & Science Airlock	Mars	Neil Armstrong	NASA	Low Earth Orbit
Water	4	12	140 million miles (225 million km)	Helio- physics
The Artemis Accords	International Space Station	FREE SPACE	South Pole	1969
Logistics Module	Oval	1972	Moon	Artemis
Space Launch System	Magneto- sphere	Artemis I	Regolith	Artemis II



GATEWAY BINGO

Artemis	NASA	Apollo 11	Low Earth Orbit	12
Van Allen Belts	Artemis IV	Crew & Science Airlock	Lunar View	Oval
Deep Space	4	FREE SPACE	6.5 Days	South Pole
Logistics Module	Regolith	Artemis I	1969	1/4
HALO	Orion	Gateway	1/6	Power & Propulsion Element



GATEWAY BINGO

1/4	HALO	1969	South Pole	Logistics Module
140 million miles (225 million km)	Regolith	Crew & Science Airlock	6.5 Days	Water
The Artemis Accords	Magneto-sphere	FREE SPACE	1/6	Orion
Mars	Lunar I-Hab	Artemis IV	Low Earth Orbit	Artemis
Lunar View	Apollo	NASA	12	Space Launch System



GATEWAY BINGO

Apollo 11	Regolith	12	Deep Space	1/6
HALO	Artemis I	Gateway	Orion	NASA
140 million miles (225 million km)	Space Launch System	FREE SPACE	6.5 Days	Crew & Science Airlock
Artemis IV	International Space Station	1/4	Magneto-sphere	Apollo
Artemis II	Lunar View	The Artemis Accords	12	1972



GATEWAY BINGO

		FREE SPACE		

