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# GATEWAY SPACE STATION INTERACTIVE MODEL

## REFERENCE, USER AND ASSEMBLY MANUAL


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STEMORG AUTHENTICATED EDUCATIONAL PRODUCT

DESIGNED BY Dr. Pablo SPACE RESEARCHER

ARTEMIS

ASSEMBLY VIDEO

Item No. 63803

DESIGNED IN THE USA

This kit will teach you how to assemble NASA's lunar station, the Gateway, an international effort to establish a human presence on the Moon.
You will assemble and test your Gateway Station, which includes Earth-Moon communications, an image projector, rotating solar panels, and internal lights.

WARNING!
Not to be used by children except under adult supervision.

SAFETY INFORMATION

⚠ **WARNING:**
**CHOKING HAZARD - Small parts.**
**Not for children under 3 years.**

This STEM toy has been designed for children of 8 years of age and older.

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Concept, text and design by: Pablo de León, Kein Design, Martin Demonte and the team of Future Explorers LLC.

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# GATEWAY SPACE STATION INTERACTIVE MODEL

## REFERENCE, USER AND ASSEMBLY MANUAL

## INDEX

# Meeting Dr. Pablo

My name is Pablo de León, but I am better known as Dr. Pablo. For the past thirty years, I have been working on what I consider to be the most fascinating topic of all time: human spaceflight. Human spaceflight is the study of how to send humans into space. It involves designing spacecraft, spacesuits, and all of the associated tools, equipment, and systems that astronauts need to explore space. It also includes the exploration of celestial bodies such as the moon and Mars.

Throughout my career, I have primarily focused on designing advanced spacesuits for returning to the moon and starting the human exploration of Mars. I have received several NASA awards, and the American space agency has funded my research to study ways to protect astronauts from the most hostile medium known to humanity, which is space.

I have always been passionate about space exploration, and in this new stage of my life, I want to share this enthusiasm with all of you. Even if you don't plan to become an astronaut, aerospace engineer, or rocket scientist, this knowledge will serve you well in the future.

Through these projects, we will learn and have fun together. We will be putting together experiments, models, and vehicles. My intention is to share my passion for space exploration with all of you.

Now, in a time of diminishing resources on Earth, it is imperative that we find ways to harvest the unlimited potential of energy and resources we have in space, and we need you to make it possible.

Dr. Pablo

# The Artemis program

The Artemis program is the first step in the next era of human exploration. NASA, together with commercial and international partners, aims to establish a sustainable presence on the Moon and to prepare for missions to Mars. One of the key components of the Artemis program is the Lunar Gateway.

## Gateway

The Lunar Gateway is a space station that will orbit the Moon and be powered by solar energy. It will serve as a science laboratory and temporary living space for astronauts.
The primary purpose of the Gateway is to support missions that explore the Moon and build a permanent lunar base. It is a vital component of the Artemis program, and its development requires collaboration between NASA, other nations, and commercial enterprises. This collaboration opens up commercial and resource opportunities for all of humanity and also supports deep space exploration, including the journey to Mars and beyond.
The Lunar Gateway will facilitate the study of various disciplines such as astrophysics, planetary science, heliophysics, space biology, health, and human performance.

The same international partners involved in the International Space Station, including the European Space Agency (ESA), the Japanese Space Agency (JAXA), and the Canadian Space Agency (CSA), will participate in the development of the Gateway. The International Space Exploration Coordination Group, which includes NASA and 14 other space agencies, recognizes the Gateway as critical for expanding human presence on the Moon, Mars, and deeper into the Solar System.

The Gateway will be placed in a nearly rectilinear, highly elliptical orbit around the Moon. This type of orbit, called Near-Rectilinear HALO Orbit, or NRHO, has not been used before by spacecraft but will provide valuable experience for future missions to other celestial bodies in the Solar System. The Gateway's orbit will pass around the Moon's poles, aligning with one of the objectives of the Artemis missions: landing on the south pole of the Moon.

To fulfill its missions, the Gateway consists of several components or modules contributed by space agencies and companies. These components will build upon the experience gained from the International Space Station to achieve more ambitious objectives in lunar exploration.

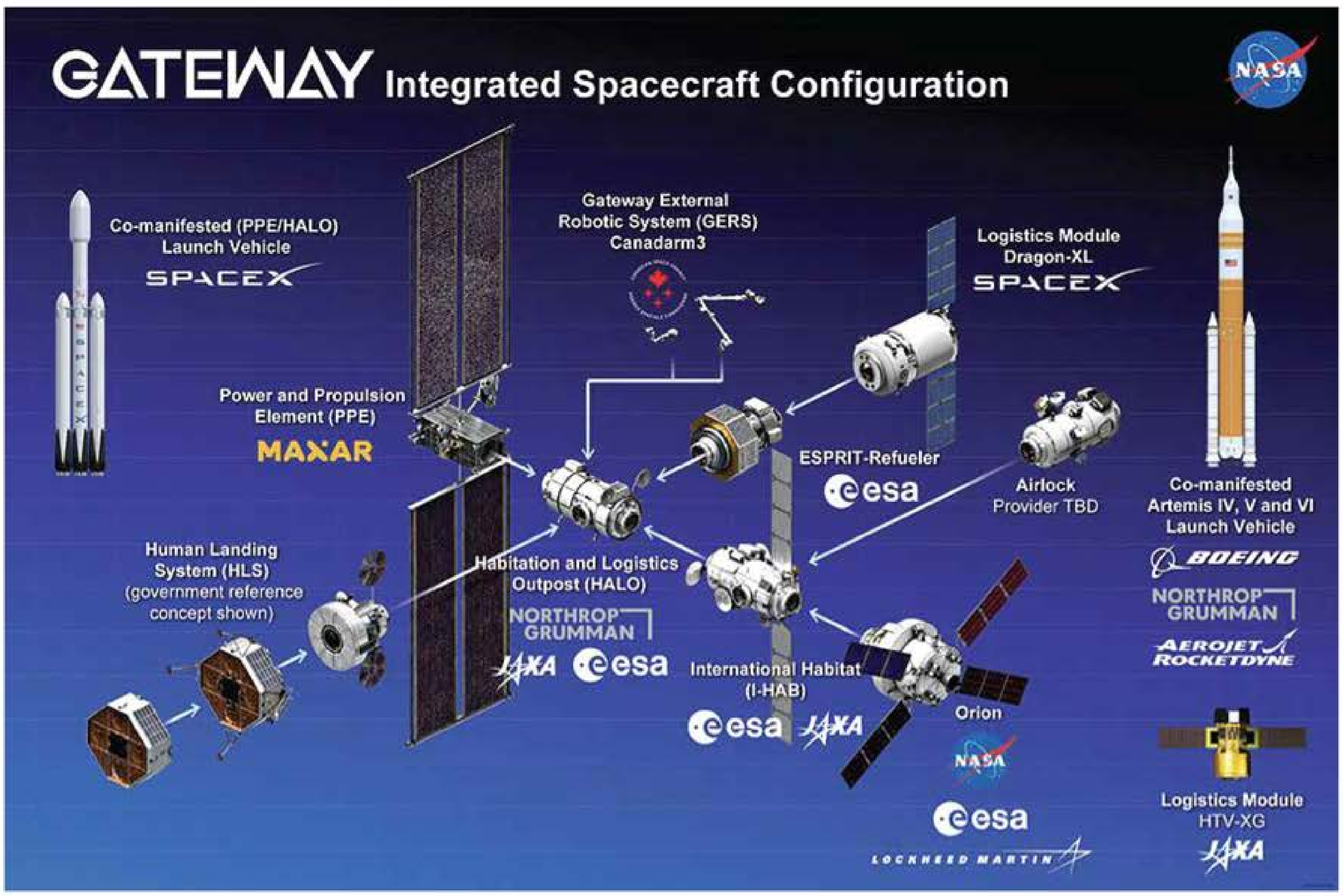


*Fig.1: Gateway (Credit NASA)*

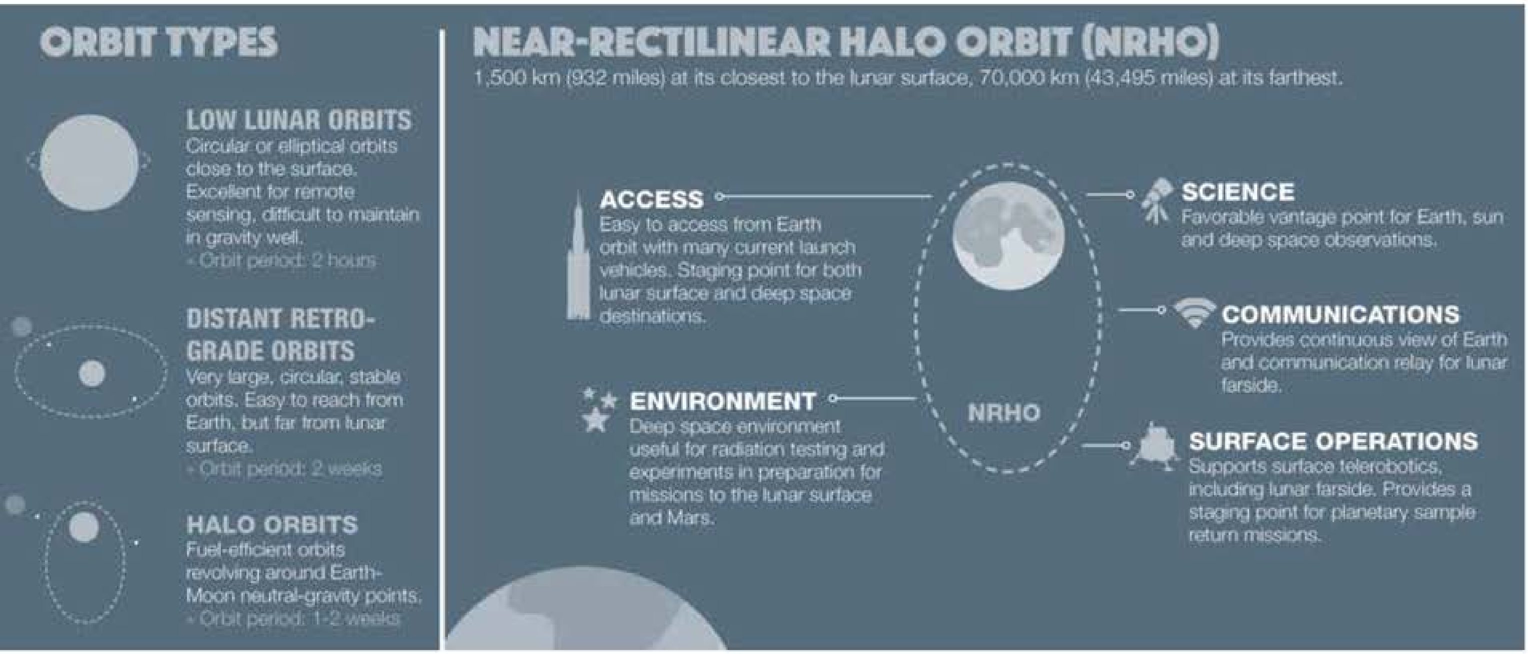


*Fig. 2: Near-Rectilinear HALO Orbit, or NRHO*

*Fig.3: PPE Assembly (Credit NASA)*

## Power and Propulsion Element or PPE

The Power and Propulsion Element (PPE) is an essential component of the lunar Gateway, serving as a high-power solar electric propulsion module. Its primary functions include providing power, high-rate communications, attitude control, and orbital transfer capabilities for the Gateway.

In May 2019, NASA selected Maxar Technologies, a private company based in Westminster, Colorado, to develop and construct the PPE. The management of the PPE is overseen by NASA's Glenn Research Center in Cleveland, Ohio.

Currently, the PPE, which is being manufactured by Maxar Technologies, is undergoing electric propulsion system tests. These tests aim to assess the performance of the Gateway during various mission scenarios. The results will help engineers and mission planners make necessary adjustments to ensure that the system meets the requirements for lunar exploration missions under the Artemis program.

Solar electric propulsion is an ideal choice for the Gateway as it utilizes the Sun's energy, converting it into power for long-duration and highly efficient thrust. This propulsion system offers mission flexibility and reduced costs. The PPE incorporates both a 6-kilowatt (kW) and a 12-kW electric propulsion system. These systems consist of various components such as thrusters, power processing units (PPU), and flow controllers to regulate gas flow, including xenon. Multiple companies, including Maxar Technologies and Aerojet Rocketdyne, are contributing to the development of electric propulsion technologies for the PPE.

The developmental versions of the PPE's thrusters and electric propulsion systems are currently undergoing testing at NASA's Glenn Research Center. These tests include the validation of changes and technical interactions between Maxar's flight-like PPU and Busek's 6-kW test thruster, as well as the validation of Maxar's larger 12-kW PPU. Additionally, end-to-end tests have been conducted using Aerojet Rocketdyne's Advanced Electric Propulsion System (AEPS) 12-kW test thruster. These tests demonstrated successful operations with Aerojet Rocketdyne's thruster and Maxar's PPU and Xenon Flow Controller. NASA plans to continue testing the PPE's propulsion system to mitigate integration and operational risks.

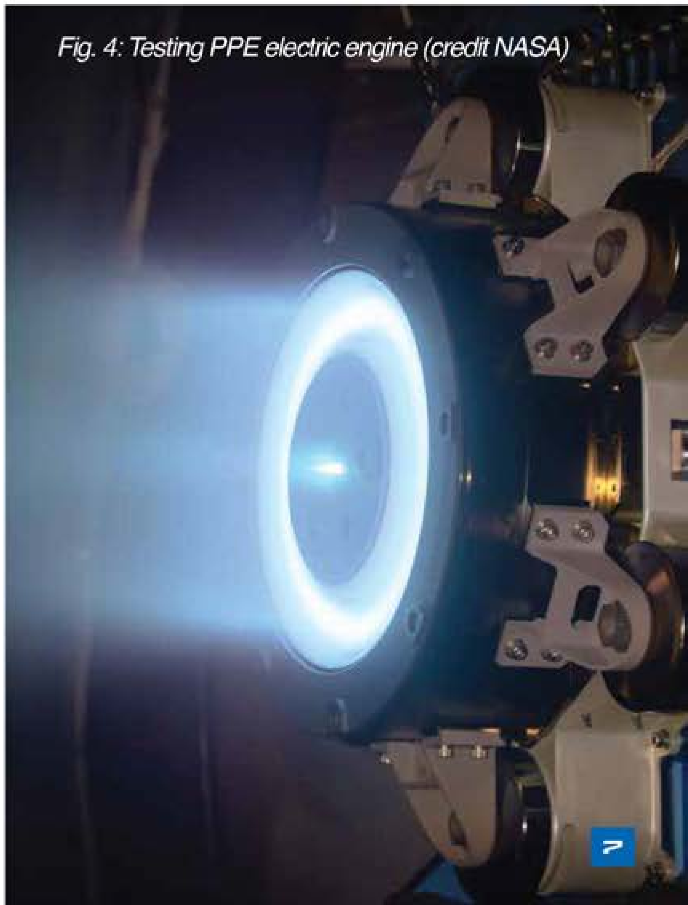

*Fig. 4: Testing PPE electric engine (credit NASA)*

Throughout the tests, both electric propulsion systems proved capable of performing across the full mission power range and parameters. The engineering team also carried out various start-up and shutdown sequences and thruster throttling simulations to mimic operations around the Moon. These tests were crucial for finalizing the design, requirements, and capabilities of the electric propulsion systems.

These milestone propulsion system tests mark progress in the initial development stage, leading to a critical design review and additional spacecraft ground testing later this year. Following the ground testing, the spacecraft will be delivered and eventually integrated with the Habitation and Logistic Outpost (HALO) before launch. The reliable operation of the PPE, which will feature the highest-power electric propulsion system ever flown, is vital for the integrated spacecraft's transit from Earth orbit to lunar orbit. It is a critical component for the Gateway's operations as a home away from home for astronauts and a lunar microgravity lab supporting Artemis and future missions.

To summarize, the Power and Propulsion Element (PPE) is a crucial component of the lunar Gateway. It serves as a centralized power and propulsion platform, providing the necessary power for the Gateway station's operation and handling its propulsion. The PPE module is equipped with propulsion systems for orbital maneuvers and maintaining the desired lunar orbit. It also houses power generation systems, such as solar panels, to capture and convert sunlight into electrical energy, ensuring continuous operation of the station. Additionally, the PPE module is designed to facilitate docking with other modules and spacecraft, enabling expansion and integration of future missions into the station. Its operation and mobility capabilities are essential for the functionality and adaptability of the lunar Gateway station.

*Fig. 5: PPE with HALO (credit NASA)*

## HALO

HALO, which stands for Habitation and Logistic Outpost, is the living quarters for astronauts during their visits to the Gateway. It will serve as a pressurized module, providing command and control systems for the lunar outpost and docking ports for various visiting spacecraft, including NASA's Orion spacecraft, lunar landers, and logistics resupply vehicles. In addition to these functions, HALO will act as the central component for command and control and power distribution throughout the Gateway. It will also support scientific research by accommodating internal and external payloads and facilitate communication with lunar surface expeditions.
HALO's design allows for the integration of additional habitable elements in the future, expanding the capabilities of the Gateway.

Following its launch, the Heliophysics Environmental and Radiation Measurement Experiment Suite, developed by NASA's Goddard Space Flight Center, will commence research activities outside of the Gateway.

*Fig. 6: PPE Docking with HALO (credit NASA)*

The combination of the Power and Propulsion Element (PPE) and HALO will form the foundation of the Gateway, establishing humanity's first permanent outpost in lunar orbit. Positioned at varying distances from the lunar surface, the Gateway will be in a near-rectilinear halo orbit, allowing NASA and its international and commercial partners to conduct groundbreaking deep space science and technology investigations while supporting sustainable lunar exploration.

*Fig 7: Halo component during manufacturing (credit NASA)*

HALO incorporates contributions from international partners to enhance its capabilities. Batteries provided by the Japan Aerospace Exploration Agency (JAXA) will power HALO until the PPE's solar arrays can be deployed, as well as during eclipse periods. Robotic interfaces provided by the Canadian Space Agency will support payloads and serve as base points for Canadarm3 robotic operations. The European Space Agency (ESA) will provide a lunar communications system to enable high-data-rate communications between the lunar surface and the Gateway.

HALO features three docking ports, serving as a hub for future international expansion of the Gateway. This includes the provision of an international habitat by ESA and JAXA, as well as an ESA-provided refueling module. The docking ports will also accommodate a human landing system for lunar surface expeditions and logistics resupply spacecraft. As the central hub, HALO will provide power, data, airflow, and thermal conditioning to support the needs of each port, ensuring optimal equipment functionality and habitable environments for future elements and spacecraft.

*Fig 8: Assembly of the HALO module (Credit NASA)*

## I-HAB

The International Habitat (I-HAB) module is a vital component of the Gateway Space Station, serving as a habitable module that provides accommodation and life support for the crew during missions. Designed to support sustainable human exploration on the Moon, the I-HAB allows astronauts to live and work in space for extended periods.

*Fig 9: First Element of I-HAB (credit NASA)*

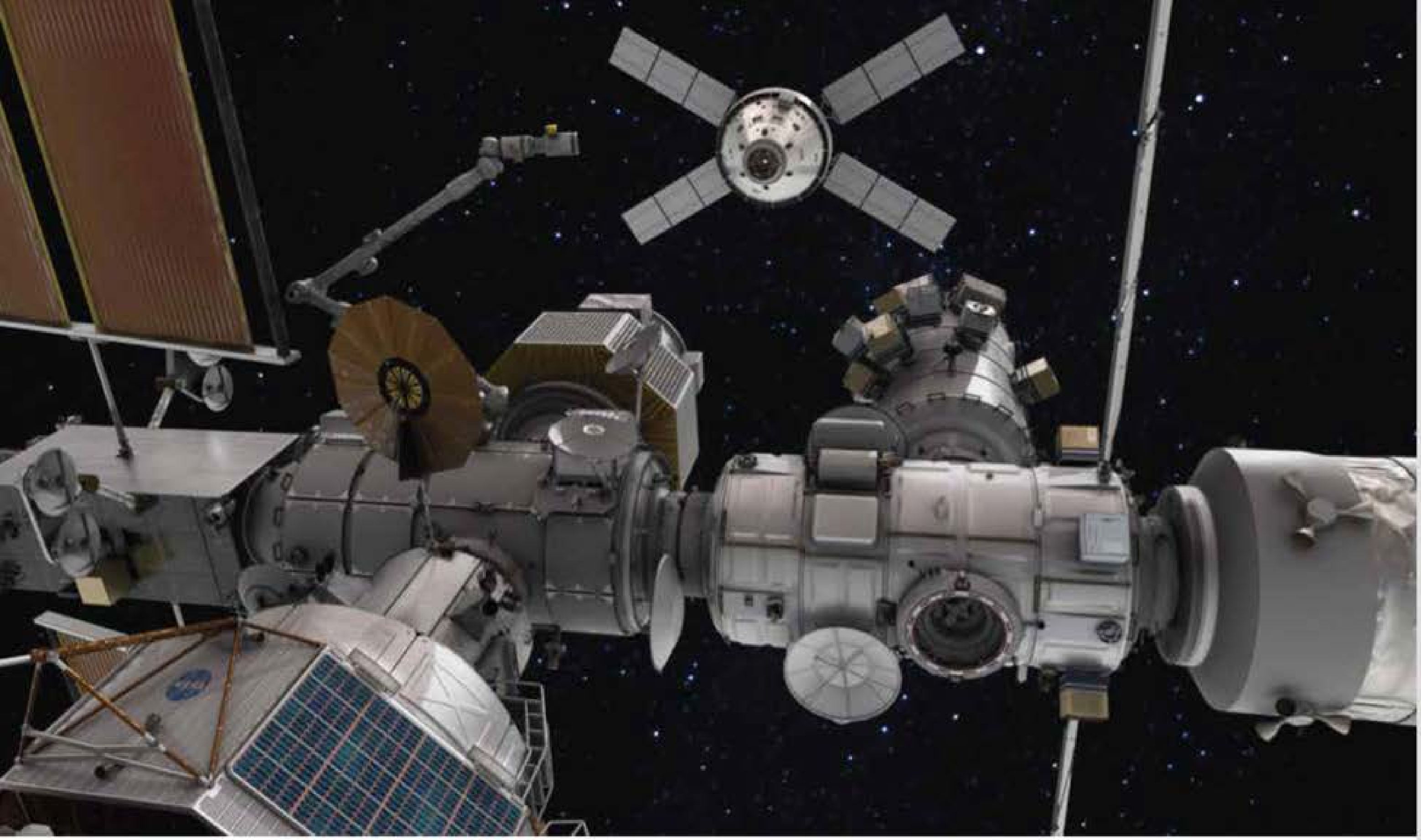

*Fig 10: I-HAB shown in the center of the image (credit NASA)*

The I-HAB module offers astronauts a safe and habitable space equipped with life support systems, communications capabilities, environmental controls, and research equipment. It incorporates advanced technology for resource monitoring, management, and conducting scientific and technological experiments.

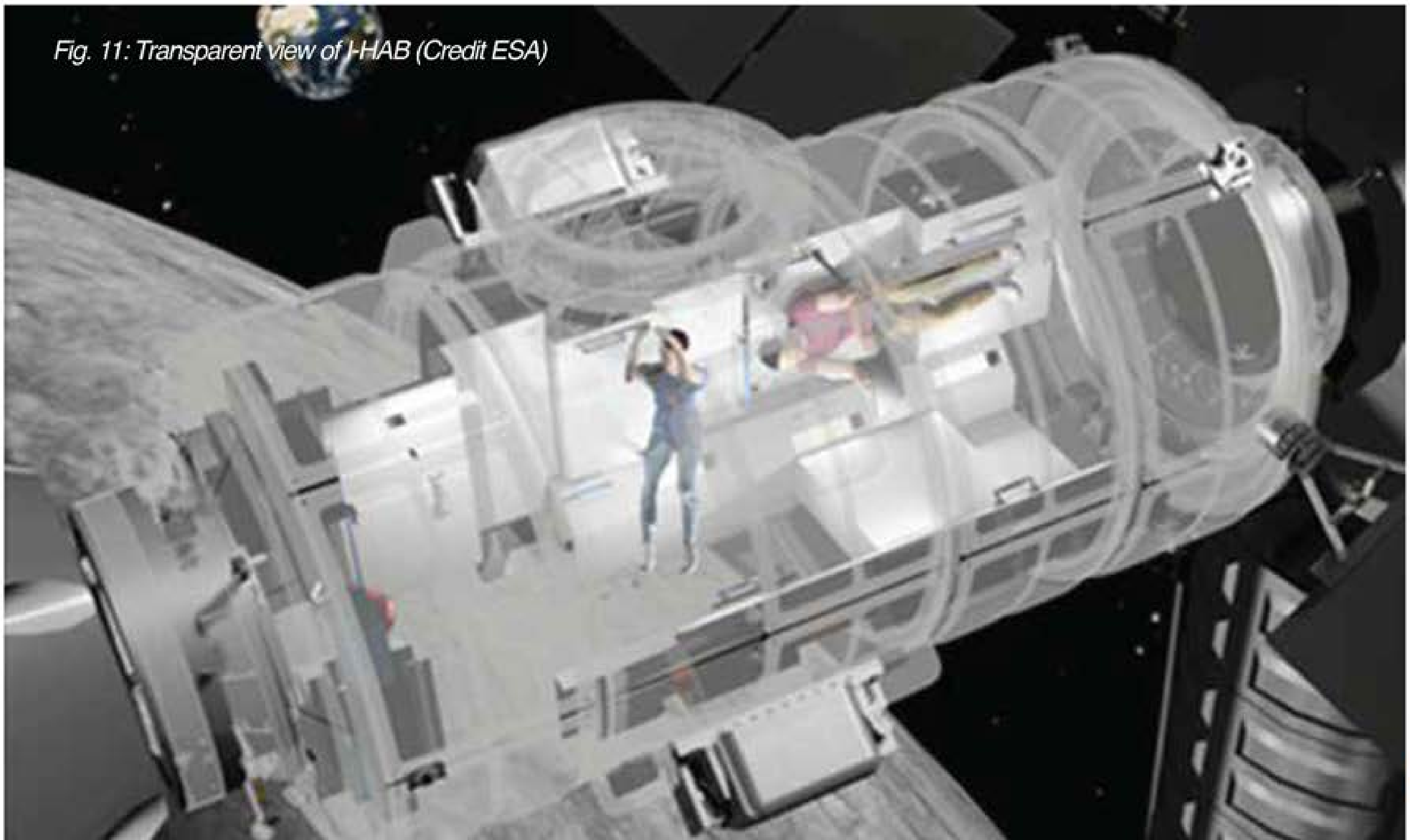

*Fig. 11: Transparent view of I-HAB (Credit ESA)*

The module is being developed collaboratively with the European Space Agency (ESA), bringing European expertise and technology to the Gateway project. ESA's contributions include the life support system, power system, and other necessary equipment for the operation of the I-HAB.

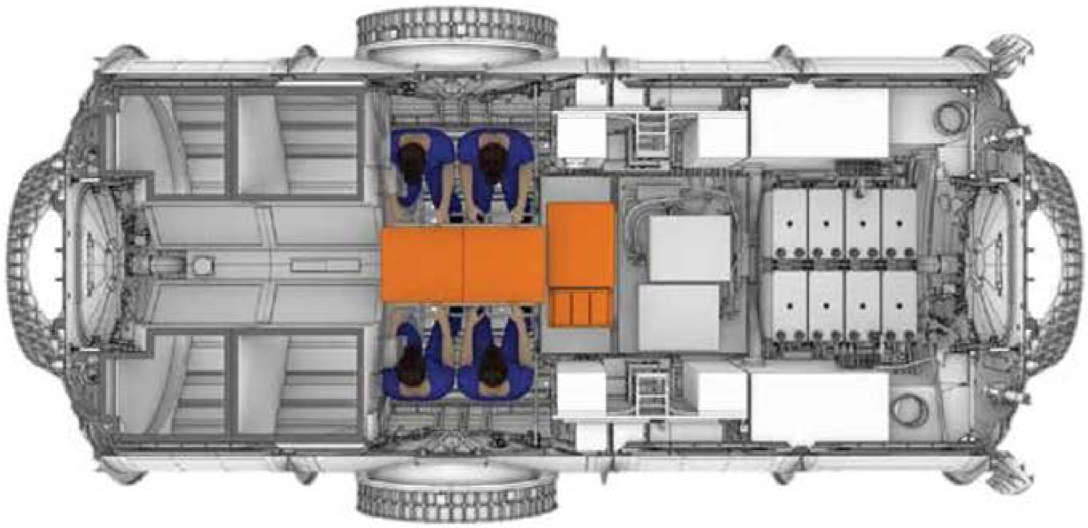

*Fig.12: Another view of the inside of I-HAB (Credit ESA)*

ESPRIT Logistics Module

The ESPRIT module (European System Providing Refueling, Infrastructure, and Telecommunications) is another significant component of the Gateway Space Station. It is a European module designed to fulfill refueling, infrastructure, and telecommunications requirements on the station.

The primary objective of the ESPRIT module is to enable spacecraft refueling in lunar orbit. It will facilitate the transfer of fuel, oxygen, water, and other resources to spacecraft arriving at the Gateway station. This capability is vital for sustainable lunar exploration as it allows for refueling in lunar orbit, enabling longer and more complex missions.

*Fig. 12: ESPRIT (credit NASA)*

In addition to its refueling function, the ESPRIT module will provide advanced infrastructure and telecommunications support. This includes life support systems, power systems, data communications, and other necessary services for the operation of the Gateway station.

*Fig. 13: ESPRIT (Credit NASA)*

The development of the ESPRIT module is part of the collaboration between the European Space Agency (ESA) and NASA in the Gateway project. ESA's expertise and technology are being utilized to develop this crucial module. It is expected that the ESPRIT module will be launched and integrated into the Gateway Space Station as the station gradually takes shape and assembles in lunar orbit.

Communications and Navigation:
ESA is also contributing communications and navigation systems for the Gateway. This includes antennas and communication equipment that facilitate data transmission between the Gateway, Earth, and lunar missions. Navigation and positioning systems are also being developed to support precise operations around the Moon.

AIRLOCK Provider (To Be Determined, TBD)
Airlocks are crucial hermetically sealed compartments that facilitate safe transitions between the vacuum of space and the interior of a space station or spacecraft. They are utilized for extravehicular activities (EVAs), such as spacewalks, repairs, or satellite deployments.

Within a space station, airlocks are essential for astronauts to venture into outer space while maintaining the pressure and atmosphere within the station. They also enable the entry and exit of equipment and supplies. As the contractor for this module has not yet been selected, for the purposes of our project, we will call this module TBD until it receives its official name.

*FIG. 14: Airlock Module (Name TBD) (Credit: NASA)*

## ORION

The Orion spacecraft is a capsule developed by NASA as part of the Artemis program to transport astronauts beyond low-Earth orbit, including missions to the Moon and potentially Mars in the future. Designed to be multipurpose, Orion has the capacity to carry both crew and cargo.

*Fig. 15: Orion Assembly (Credit NASA)*

Resembling the shape of the Apollo capsules used in lunar missions, Orion incorporates advanced technology and enhanced capabilities. It is launched using a powerful rocket called NASA's Space Launch System (SLS), which provides the necessary energy to propel it beyond low-Earth orbit.

*Fig. 16: Orion during its maiden flight (Artemis 1) on board the SLS (Credit NASA)*

Orion can accommodate up to four astronauts on long-duration missions and up to six astronauts on short-duration missions. It is equipped with life support systems, communications, navigation, attitude control, and other essential systems to ensure astronaut safety and comfort throughout the journey.

Designed for reusability, Orion can make controlled high-speed reentries through Earth's atmosphere and splashdown in the ocean. Following recovery, the capsule can be refurbished, repaired, and prepared for future missions.

*Fig. 17: Orion (Credit ESA)*

As an integral component of NASA's Artemis program, the Orion spacecraft will play a crucial role in returning humans to the Moon and advancing space exploration. It provides a safe and reliable means of transportation for astronauts as they expand our knowledge and explore new destinations within the solar system.

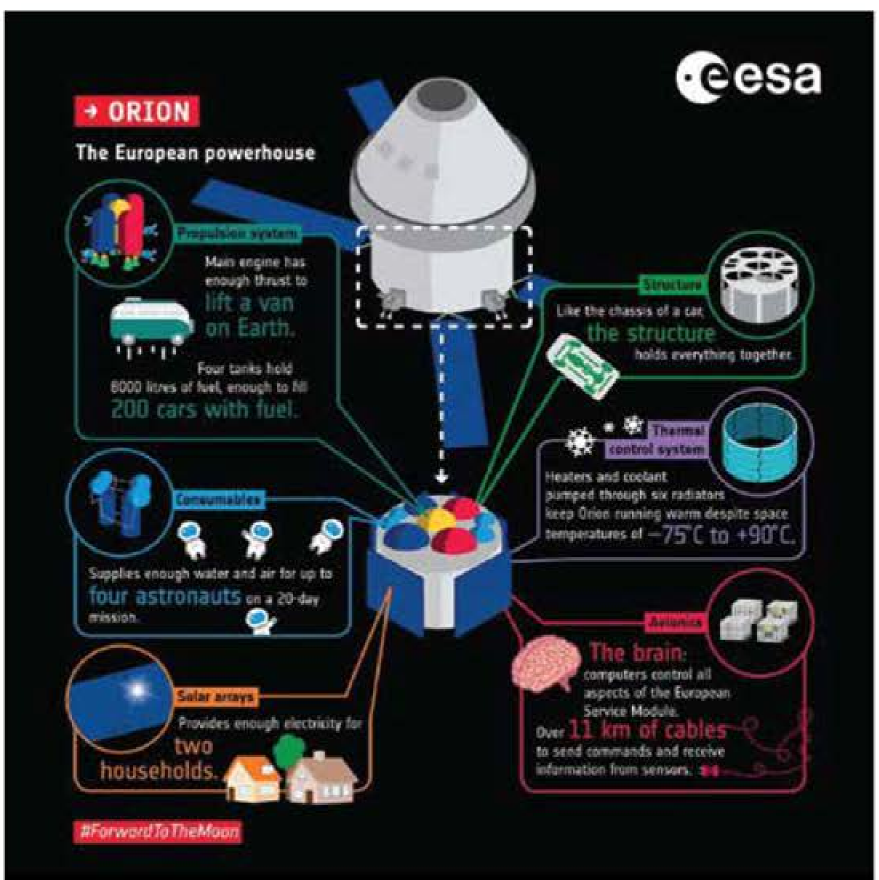


*Fig 18: Orion Facts. The European Space Agency provides the Service Module for Orion. (Credit ESA)*

*Fig.19: Dr. Pablo with the Orion capsule in the Kennedy Space Center, after its trip around the moon.*

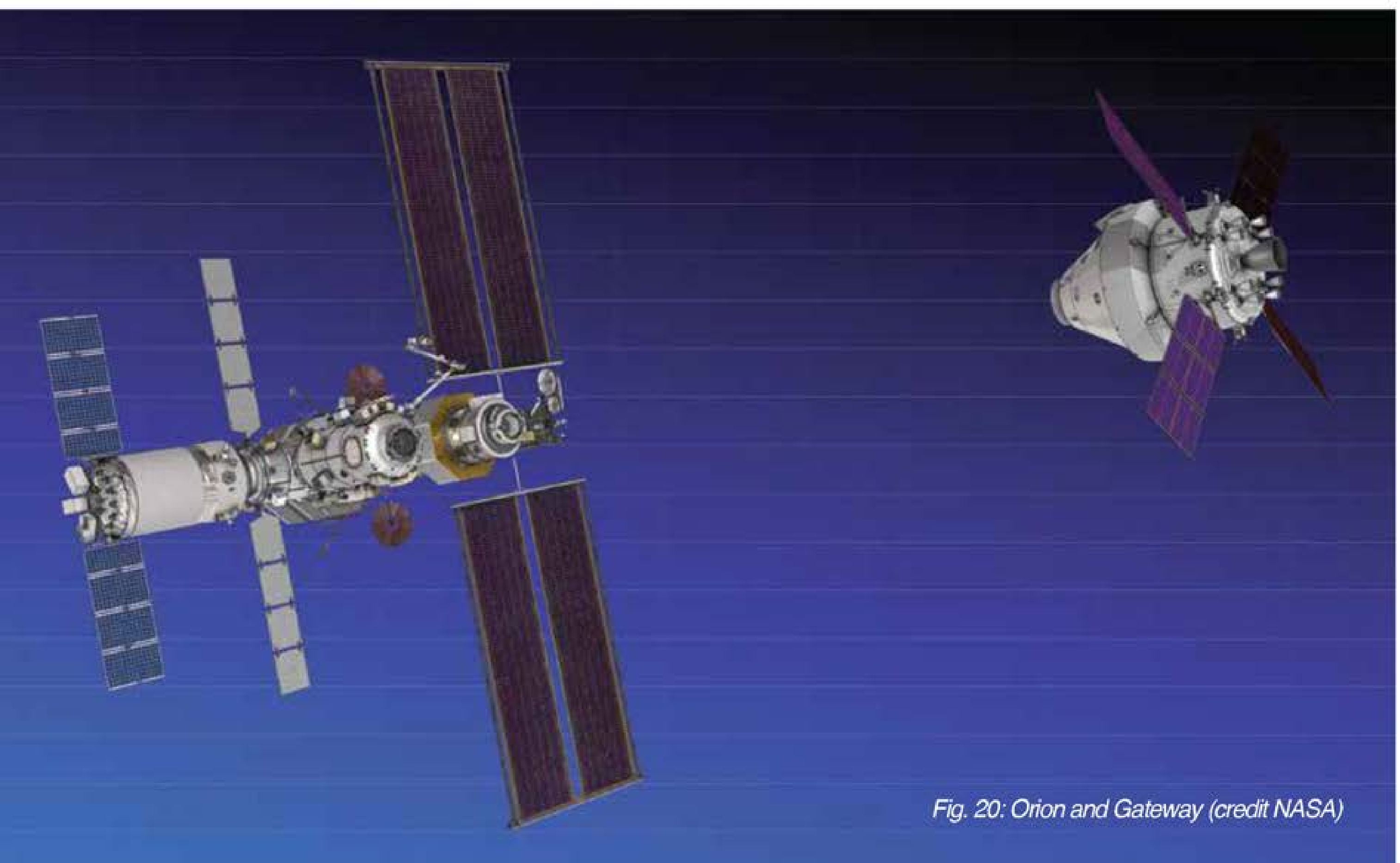

*Fig. 20: Orion and Gateway (credit NASA)*

The Canadarm

The Canadarm, officially known as the Canadarm Remote Manipulator System (CRMS), is a highly sophisticated and versatile robotic arm developed by the Canadian Space Agency. It possesses the capability to perform a wide range of tasks, including equipment assembly and maintenance, spacecraft capture and release, deployment of scientific instruments, and assistance during extravehicular activities. The Canadarm 3 is being designed for the Gateway.

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Another of our Future Explorers™ toys is a Canadarm that you can assemble and test.

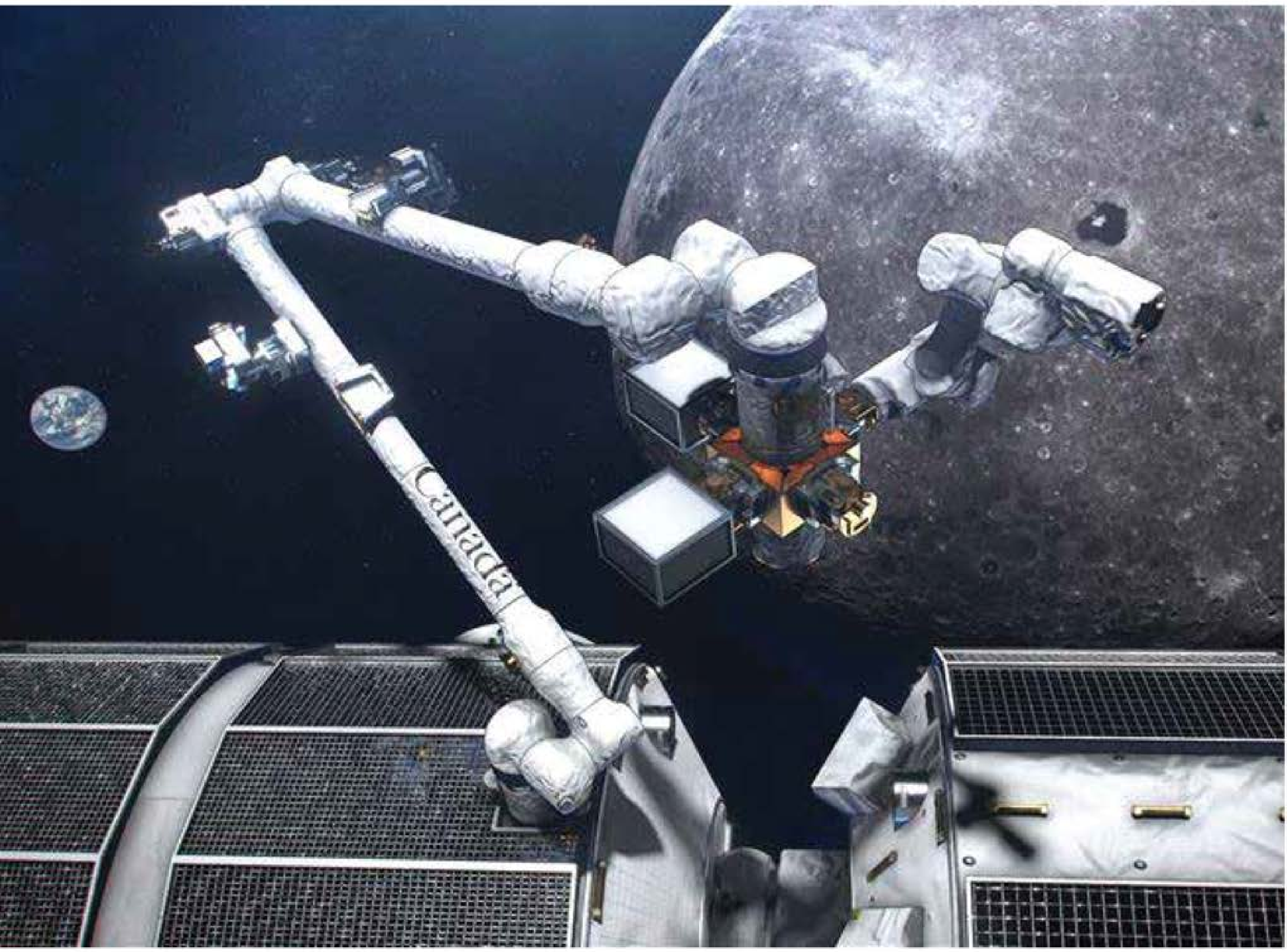



*Fig. 21: Canadarm 3 (credit NASA)*

Within the Gateway context, the Canadarm 3 will serve various purposes, including:

Assembly and maintenance: Assisting in the construction and assembly of the station, connecting necessary modules and components, and conducting equipment and system maintenance and repair.

Cargo handling: Capturing and releasing spacecraft and payloads arriving at the Gateway, including docking with unmanned cargo vehicles and facilitating their transfer to the station.

Extravehicular support: Providing a stable and secure anchor point during spacewalks, enabling astronauts to move and work more efficiently.

Deployment of scientific instruments: Deploying and positioning scientific instruments in lunar orbit for research and data collection purposes.

Moreover, the Canadarm will be an integral part of the Lunar Gateway Logistics Vehicle, which will transport payloads and supplies from the orbital station to the lunar surface.

In summary, the Canadarm will play a pivotal role within the Gateway project.

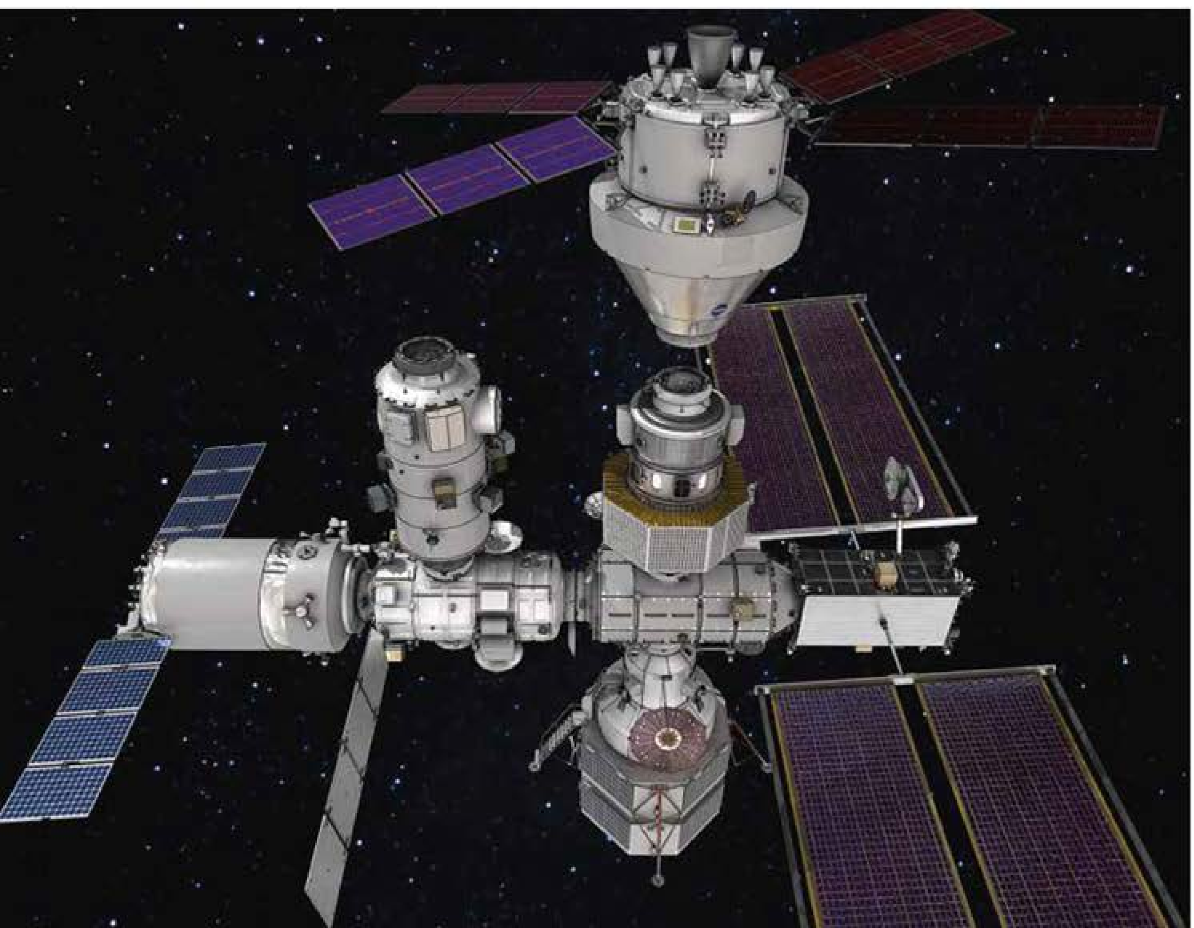


*Fig. 22: Orion and Gateway (credit NASA)*

Fig. 23:
Full configuration of Gateway
(credit NASA)

Fig. 24:
Full configuration of Gateway showing the position of a future lunar lander. (credit NASA)

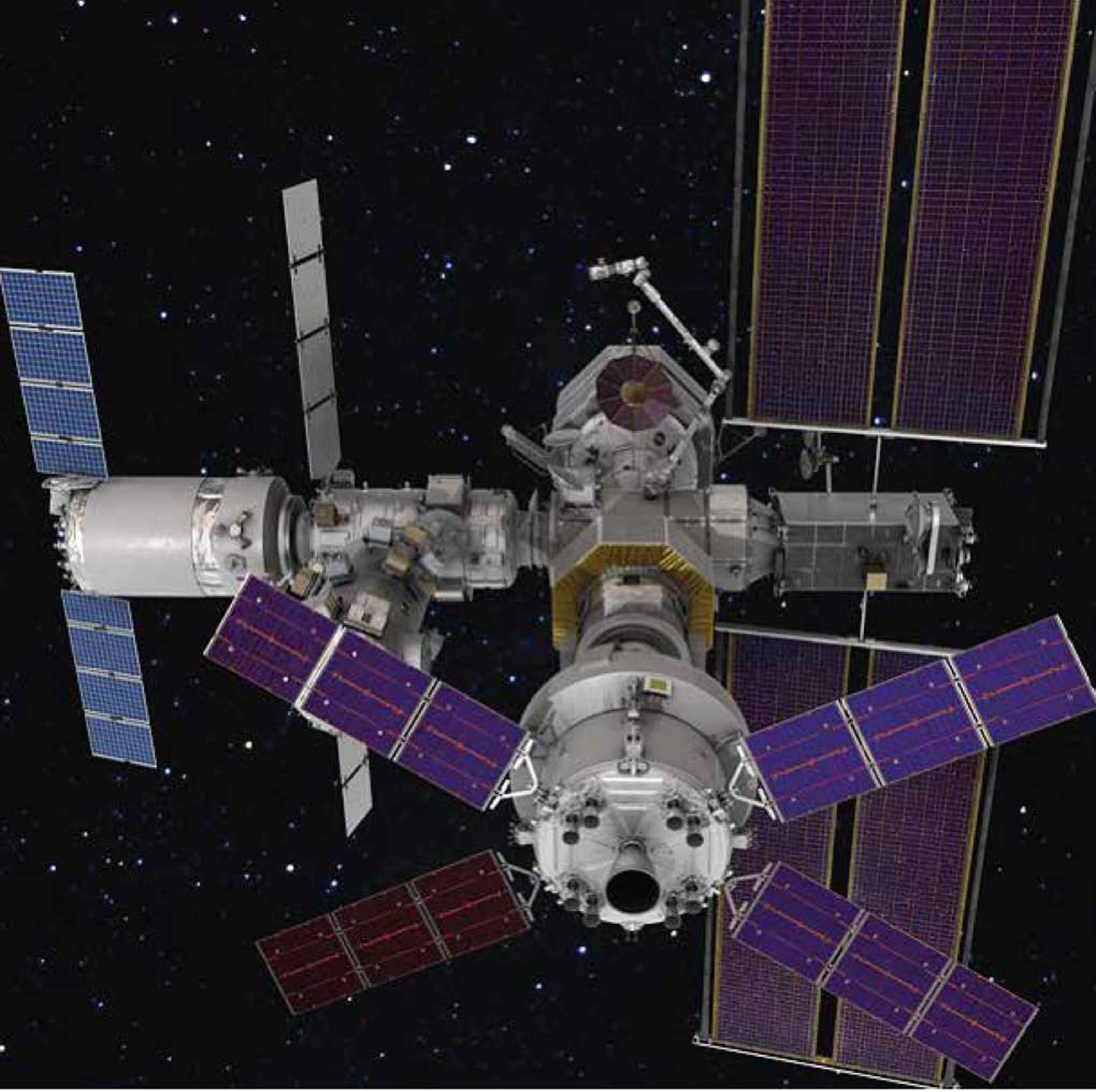


*Fig. 25: Full configuration of Gateway (credit NASA)*

# GATEWAY
## SPACE STATION
## INTERACTIVE MODEL

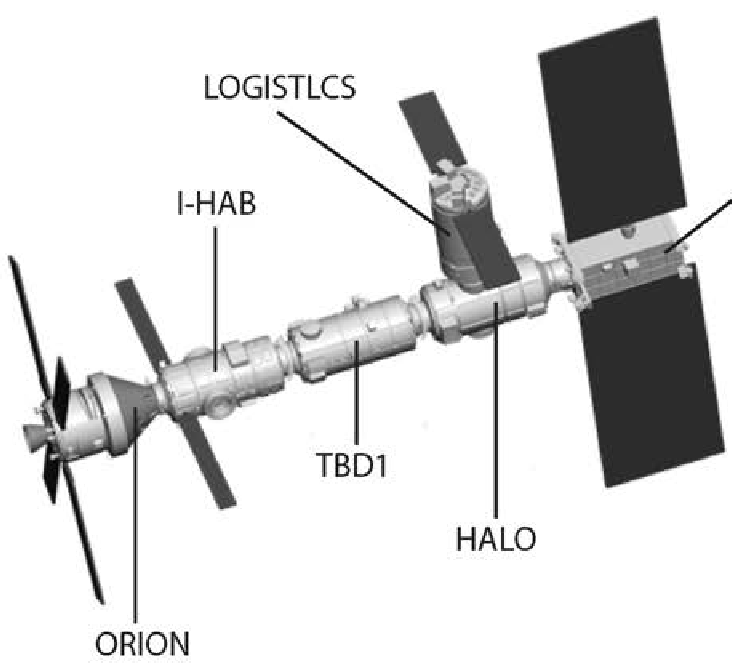
## STEP BY STEP BUILDING GUIDE

Assembly Sequence of Gateway

Now that we understand the concept of Gateway, let's proceed with assembling our own version of the lunar orbiting station. Our Gateway model is quite complex, featuring interactive electric interfaces designed by our team. These features include:

- Internal LED lights for illumination.
- An audio player for simulated conversations between Gateway, the lunar surface, and Mission Control.
- A still image projector to display images of the Artemis 1 mission and future mission renders.
- A rotating solar panel with a small electric motor to allow panel rotation.

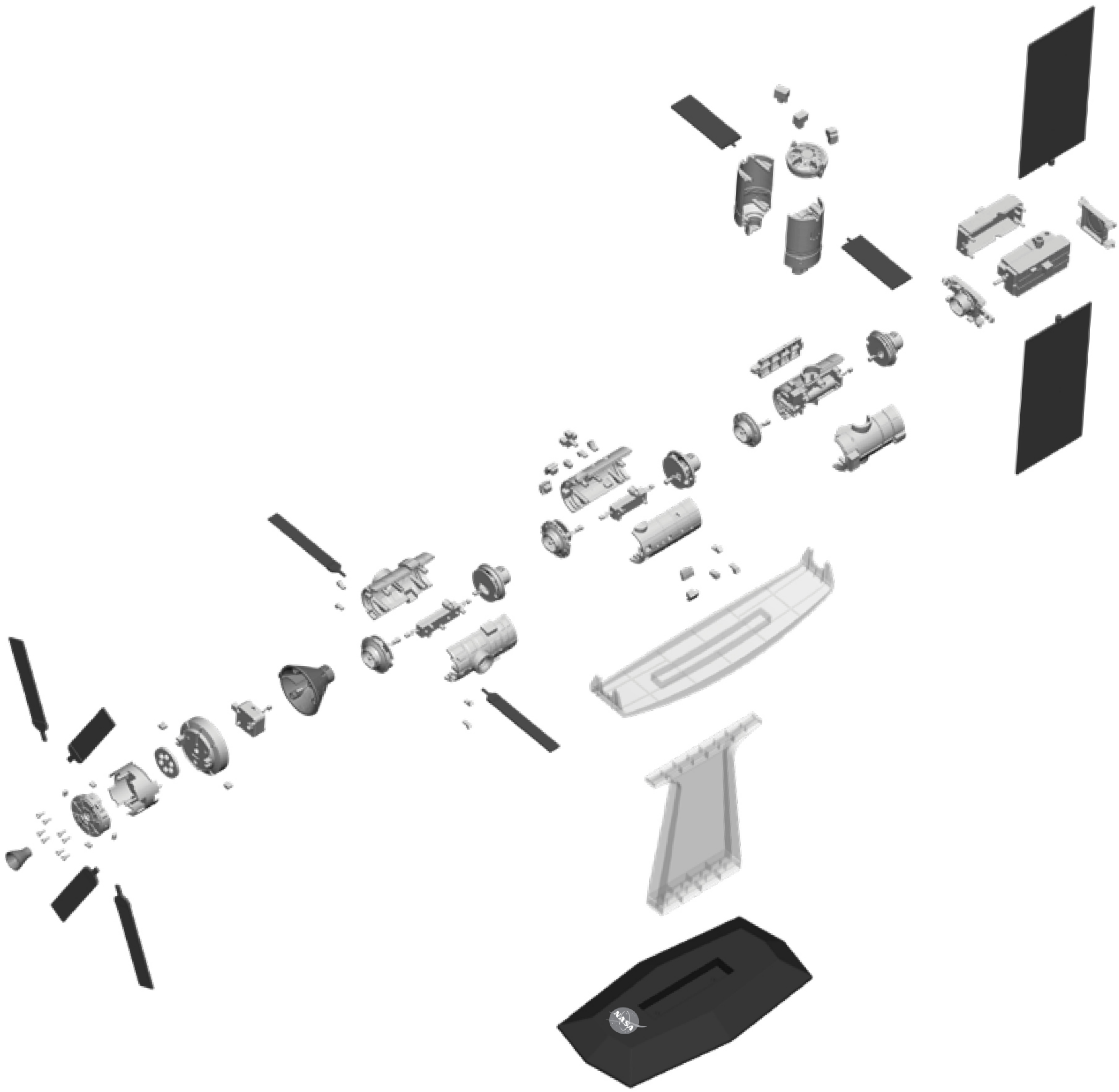
This is how your completed Gateway should look (you can also customize the docking configuration of some modules if desired).



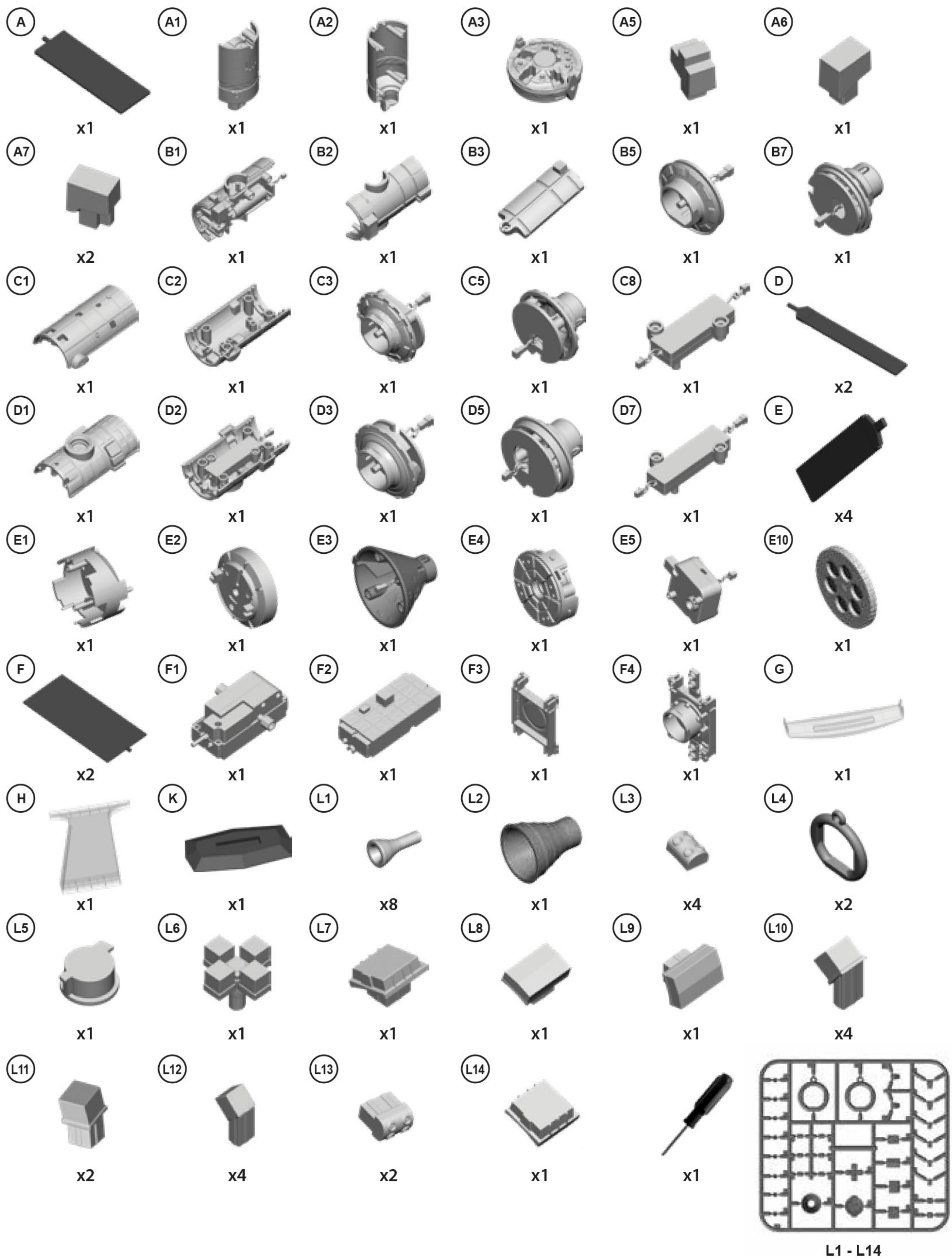
Below is an exploded view that shows all the pieces included in your kit. We will go through each piece individually, so don't worry if the drawing appears too small to identify each one. You'll notice a stand included in your kit that can be used to display your Gateway.

Now, let's begin the assembly process:

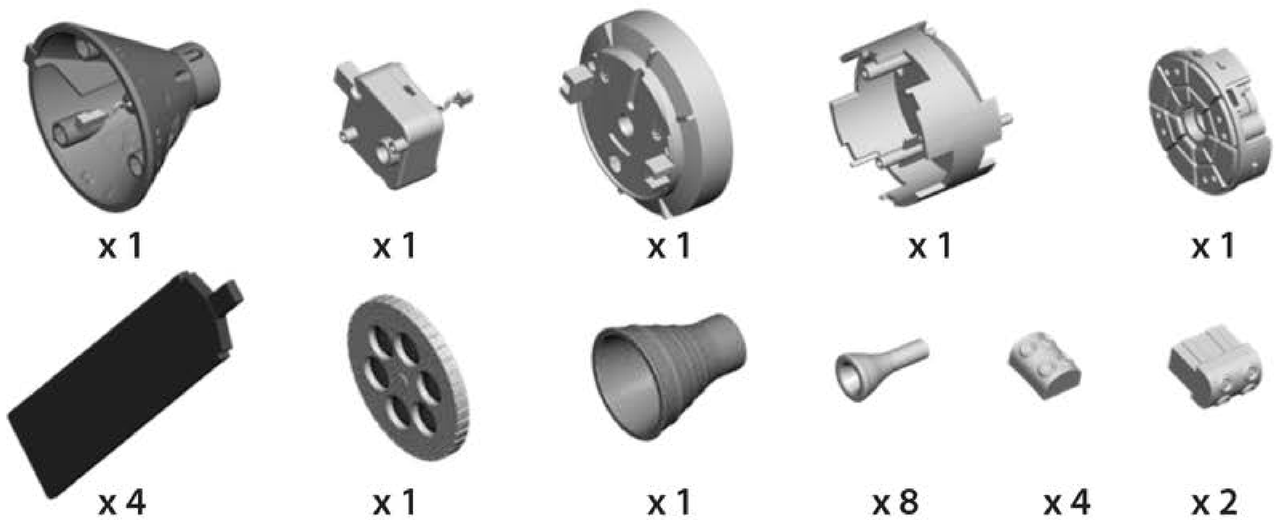
1. Carefully detach each piece from the plastic base and organize them into groups to ensure no parts are lost.

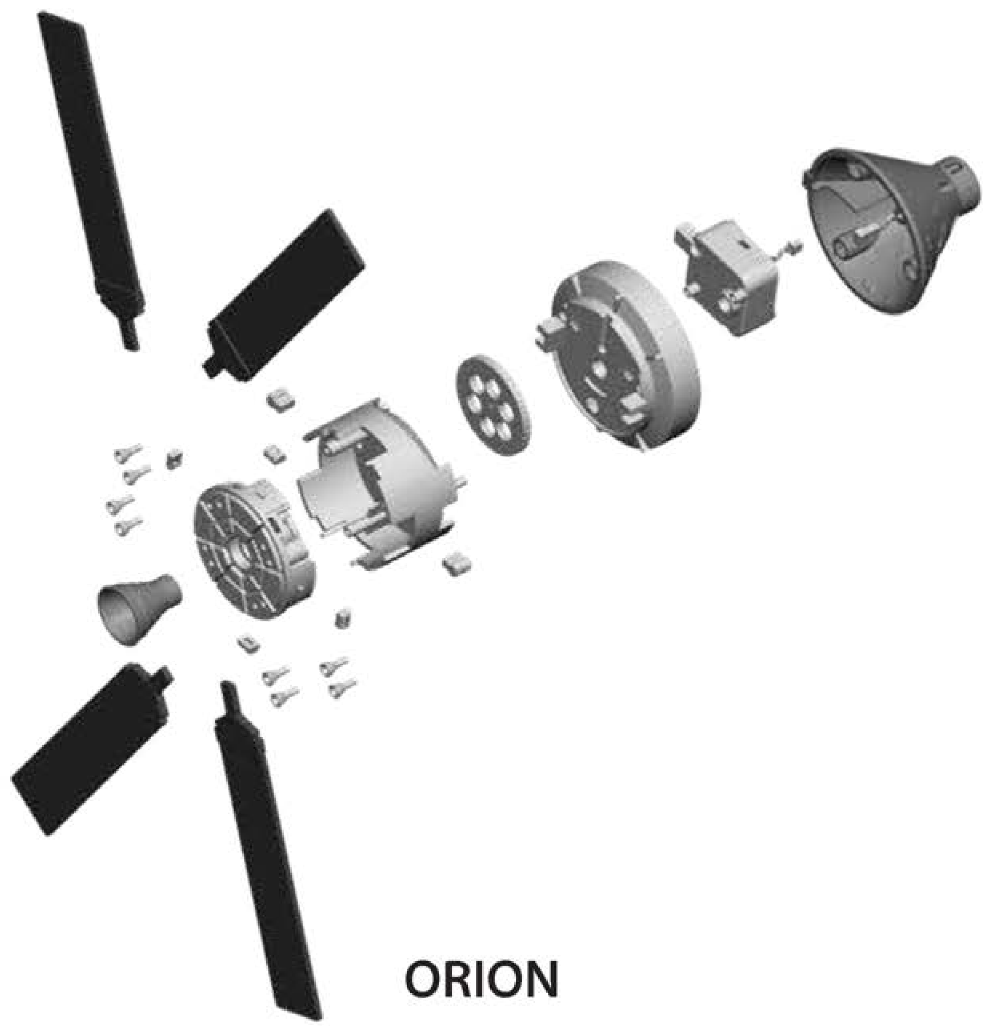


2. Here is a detailed breakdown of each piece, identified by a letter and number (e.g., A1, A2, A3). The "x" at the bottom of each piece, followed by a number, indicates the quantity needed. In most cases, you will require one of each piece, but there may be instances where you need two or even eight of a specific piece.



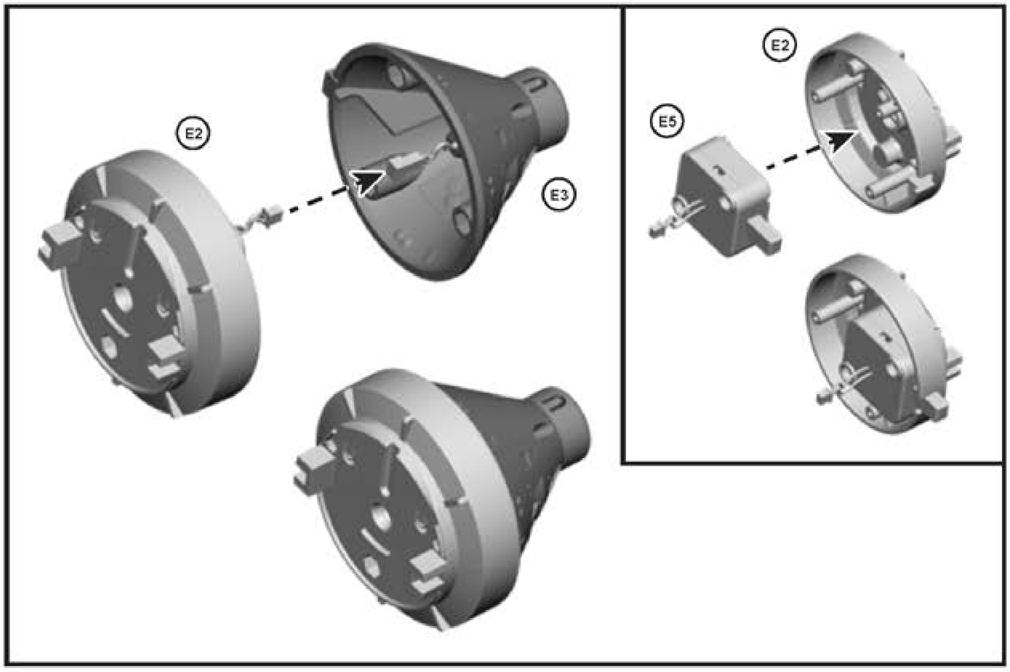
3. We will start by assembling the Orion Spacecraft. Refer to the provided pieces and the exploded view to understand the order of assembly for each part.



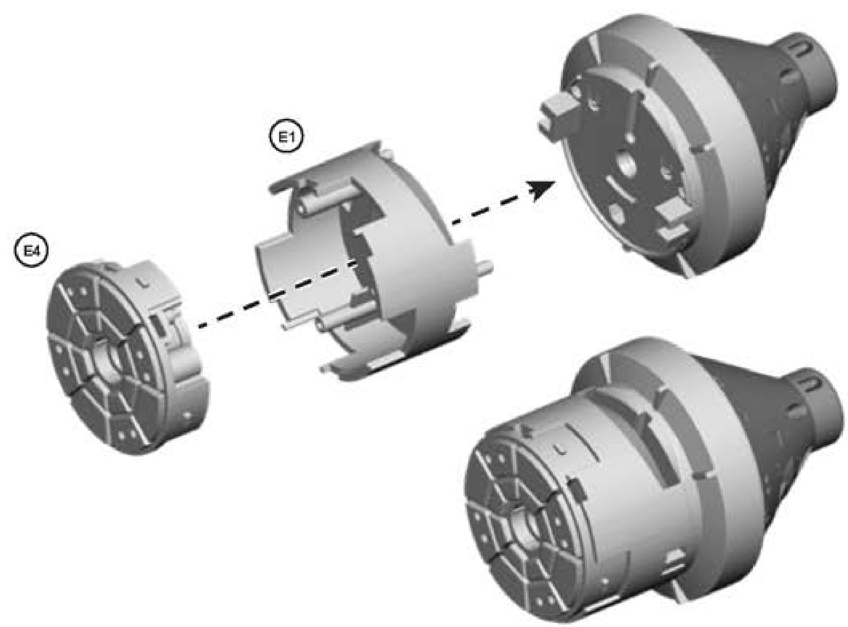



ORION

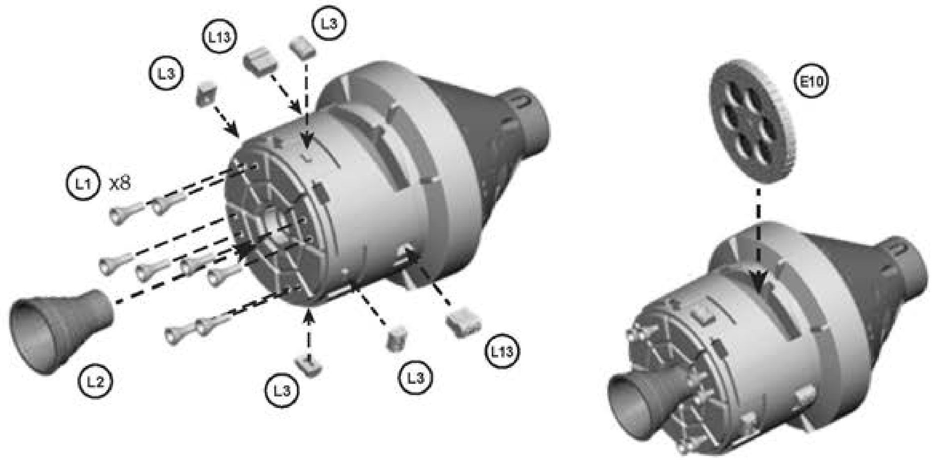
4. Identify parts E2, E3, and E5. E2 has an electric connector, which needs to be connected to the electric connector on E3. Pay attention to the polarity of these connectors, as they should be connected in a specific orientation. The connection should be straightforward, but ensure the connector is securely attached to establish a solid link between the cables. Once connected, attach part E5, which serves as the switch to turn the Orion (images projector) on and off.



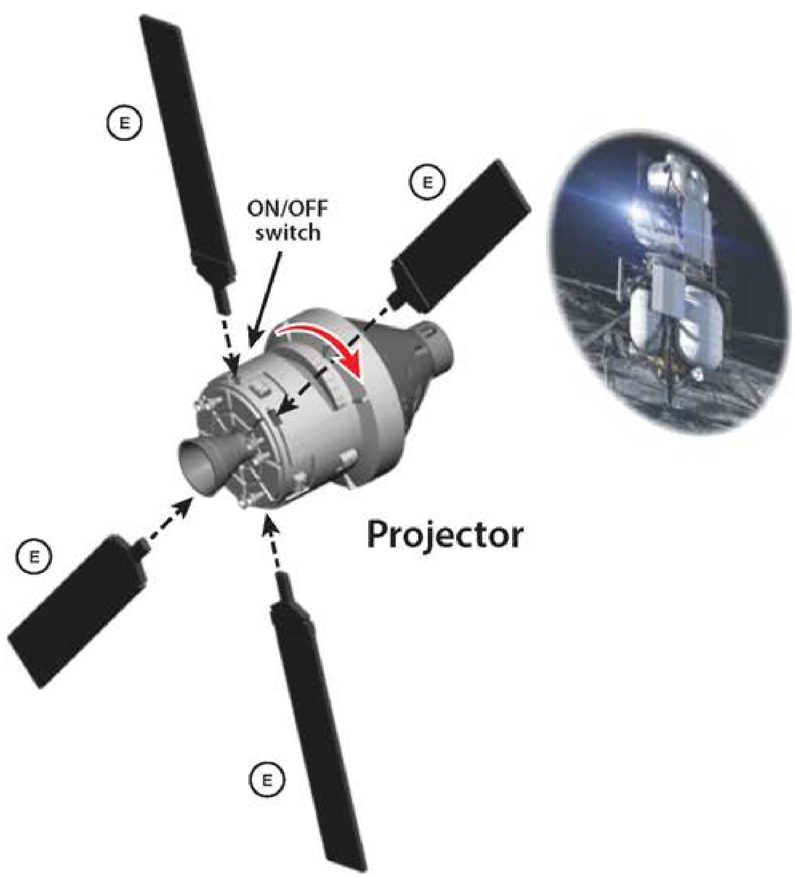

5. Next, connect parts E4 and E1 to the Orion capsule as shown. This represents the Service Module portion.



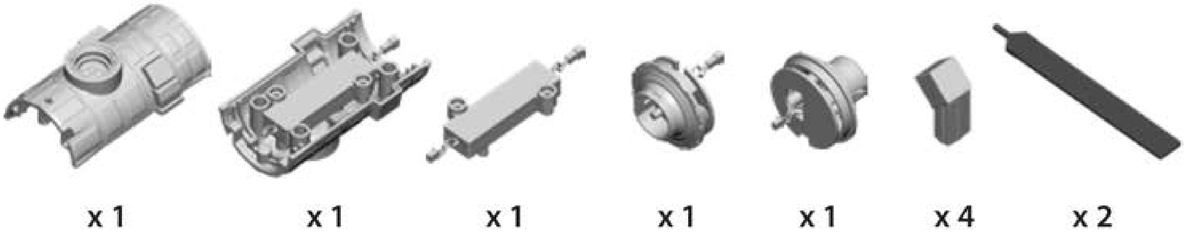
6. It's time to add the accessories. Attach the small Reaction Control Systems (nozzles) identified as L1, and the small sensors and boxes also labeled with L letters. Additionally, attach the main engine of the Orion, labeled as L2. Once that is done, your Orion will be nearly complete. Adding the images disk marked as E10 will finish this step (you can add the images disk later).

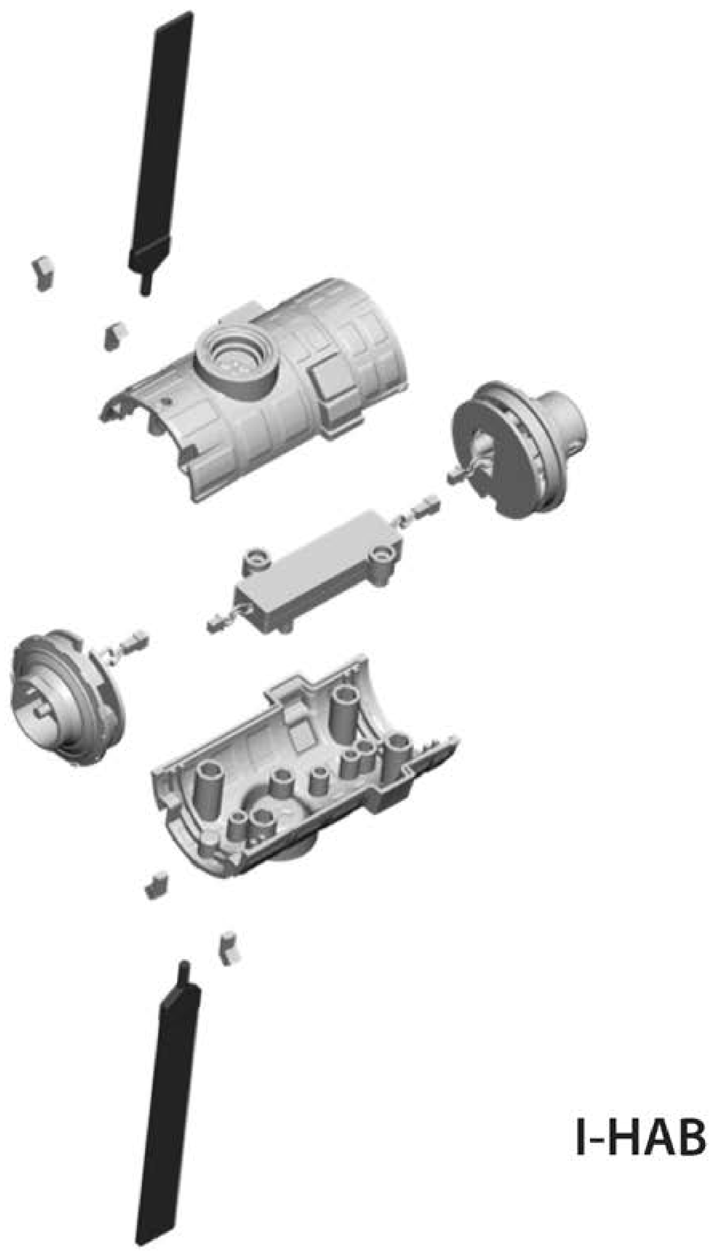



7. Attach the four simulated solar panels marked as E. These are not functional solar panels but are included for realism. Once all modules are assembled, your Orion will be powered, and you can turn it on using the switch connected earlier to view images of Artemis. To view the next still image, simply move the images disk (E10) to the next position. Please note that the room should be dark for optimal image visibility (we will discuss this step later).

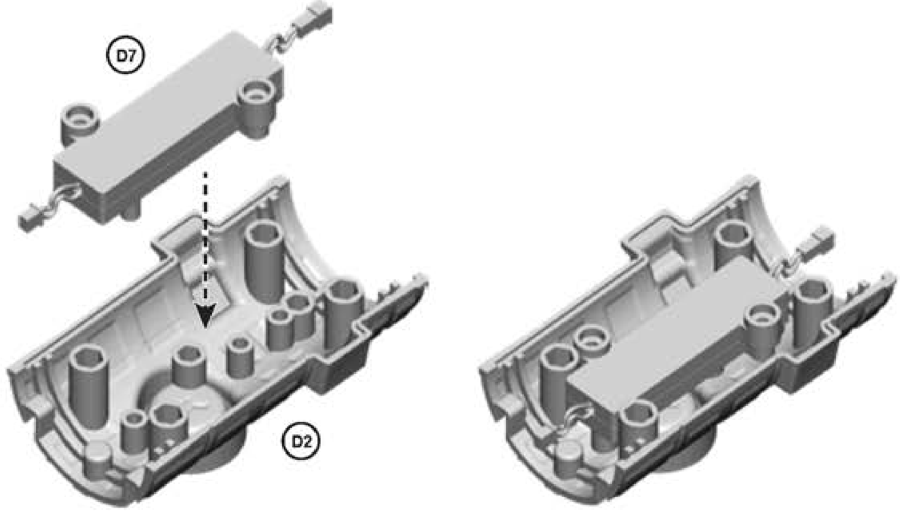


8. Moving on, we will assemble the I-Hab habitation module. Refer to the provided pieces and the exploded view for guidance.

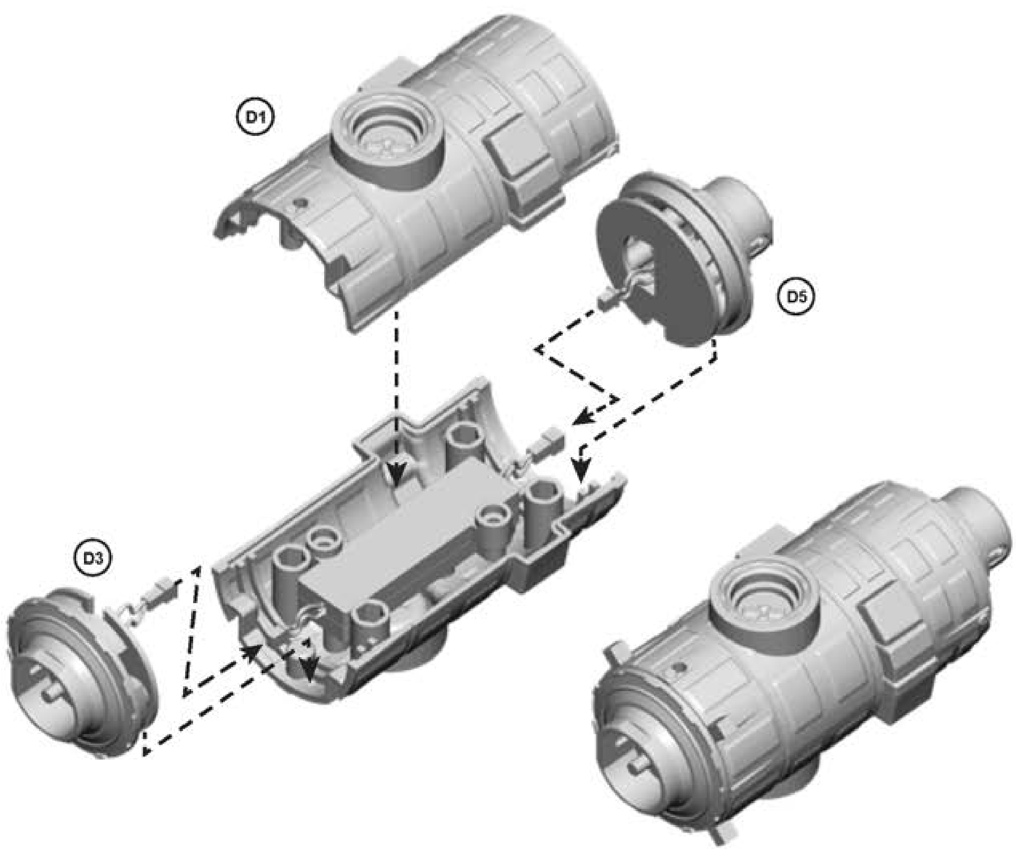



9. Start by attaching part D7 (lighting unit) to D2.

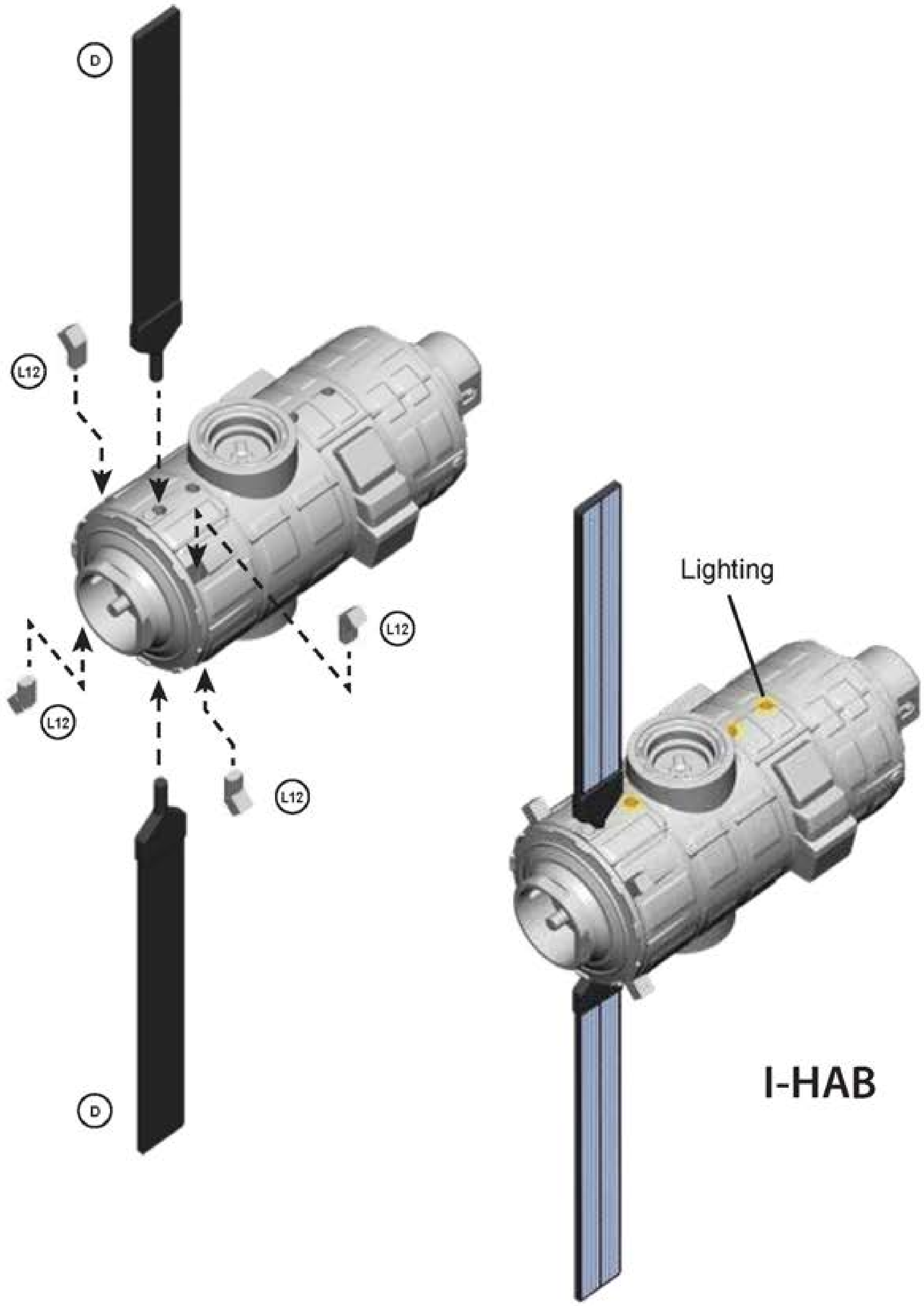



10. Secure the electrical connectors to D3 and D5, making sure to follow the drawings to avoid connecting the wires incorrectly. Then, attach the ends of modules D3 and D5 to D2 and close the module with D1.

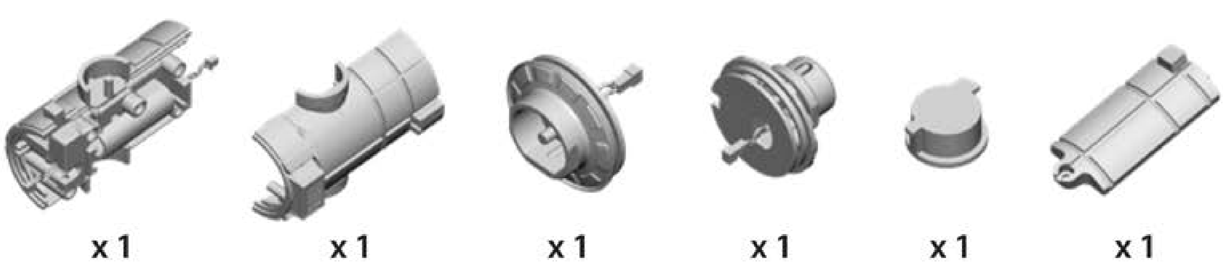



11. Attach the star sensors labeled L12 and the solar panels labeled D. Your I-HAB module is now ready. Although it does not have a power source yet, it will soon be energized as we proceed with the assembly.

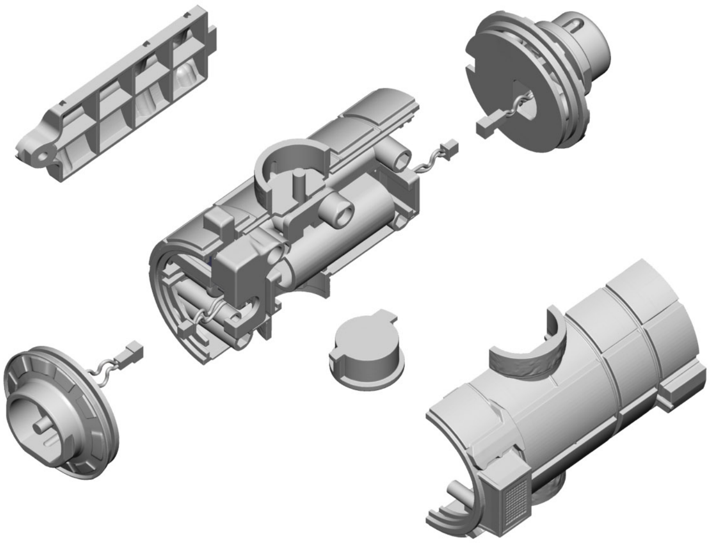
8. Moving on, we will assemble the I-Hab habitation module. Refer to the provided pieces and the exploded view for guidance.




12. Now, we will construct our HALO module. Refer to the figures below for this step.

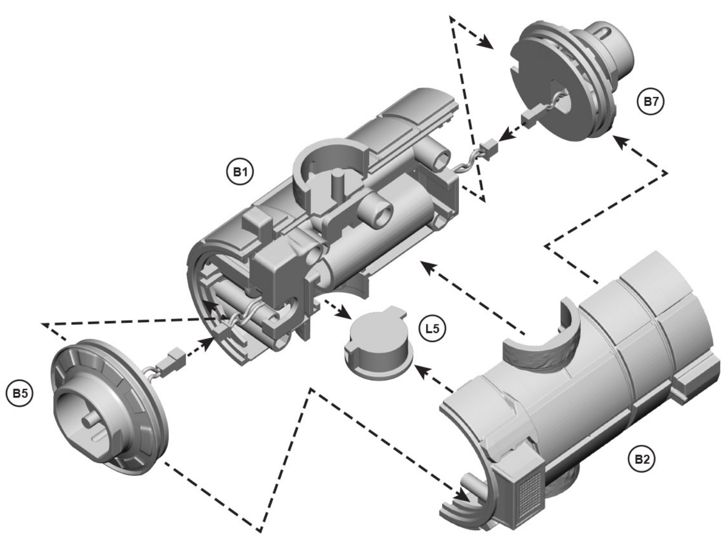


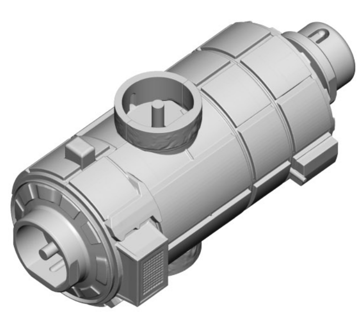
13. The general assembly process for HALO is shown below. This step requires careful electrical work as well.



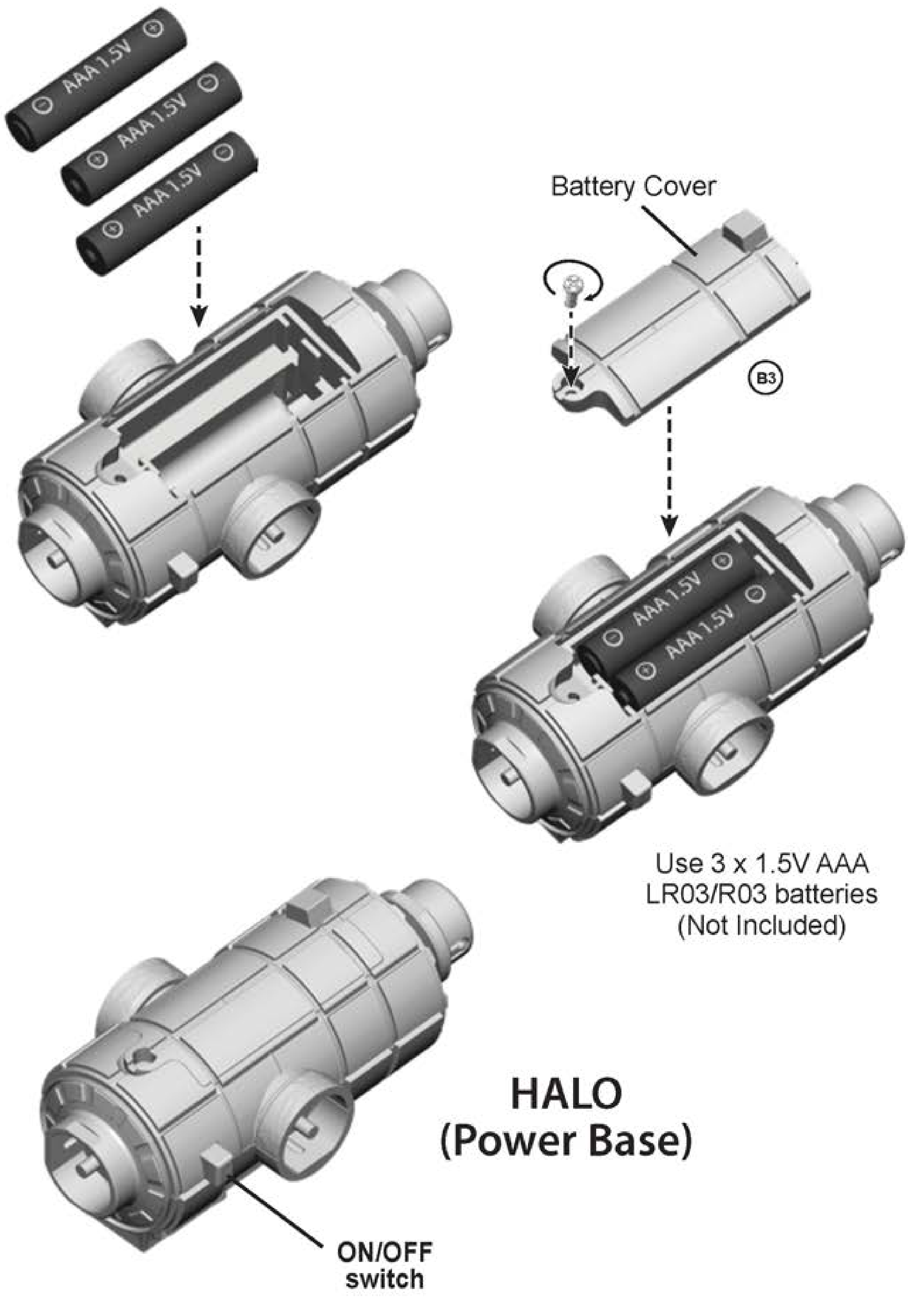
**HALO**

14. Begin by connecting both sides of the B7 and B7 connectors to part B1. Once again, refer to the drawings to ensure correct connection orientation. After the connections are made, join parts B7 and B5 to B1, and then add L5 at the bottom, closing it simultaneously with B2.



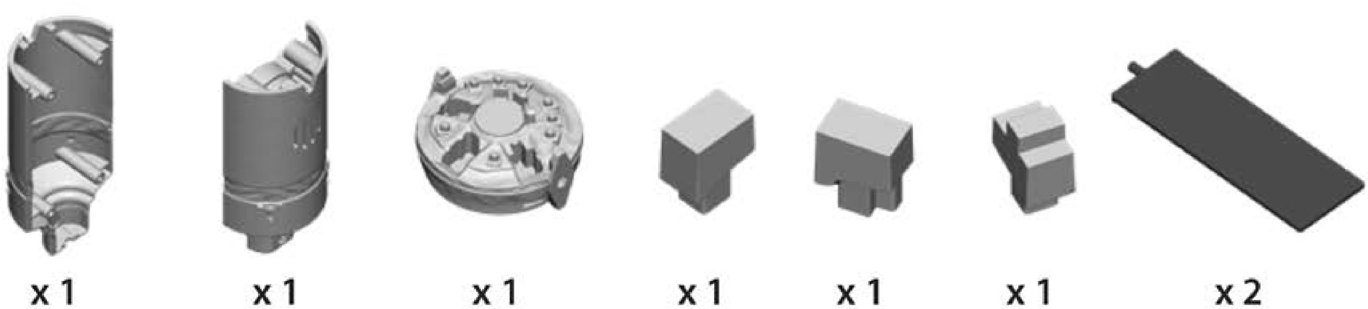
15. HALO acts as our power source or Power Base. While the real Gateway uses solar panels, we will utilize three 1.5V AAA alkaline batteries LR03/R03 (not included) for our model. You can insert the batteries now and close the battery cover using the small screwdriver provided in the kit. HALO also features an on-off switch on the side.

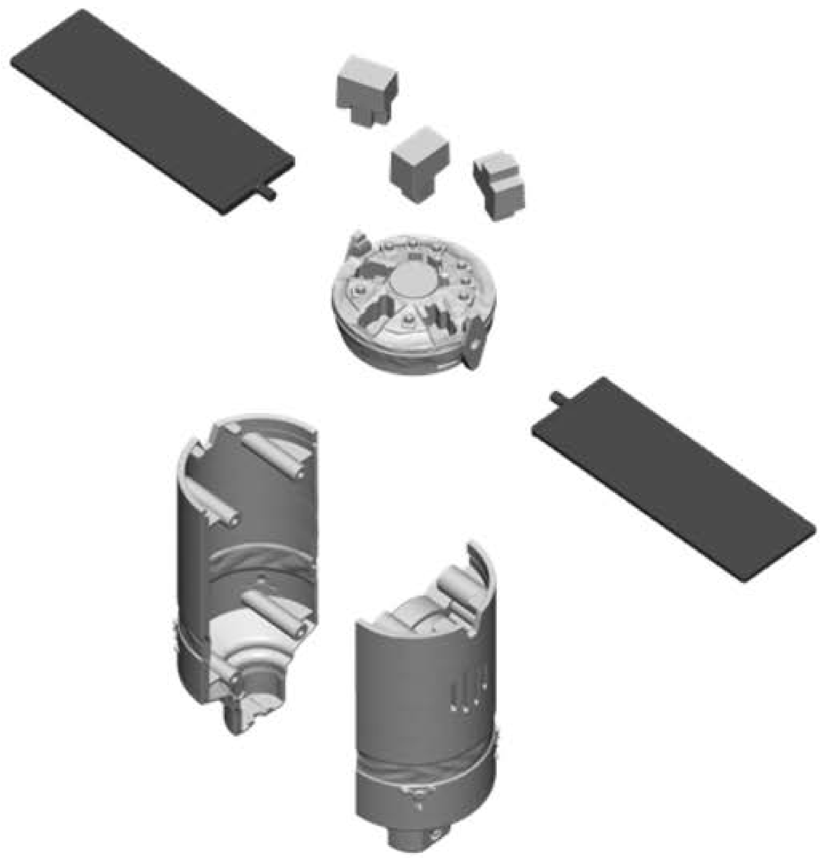


Battery Caution

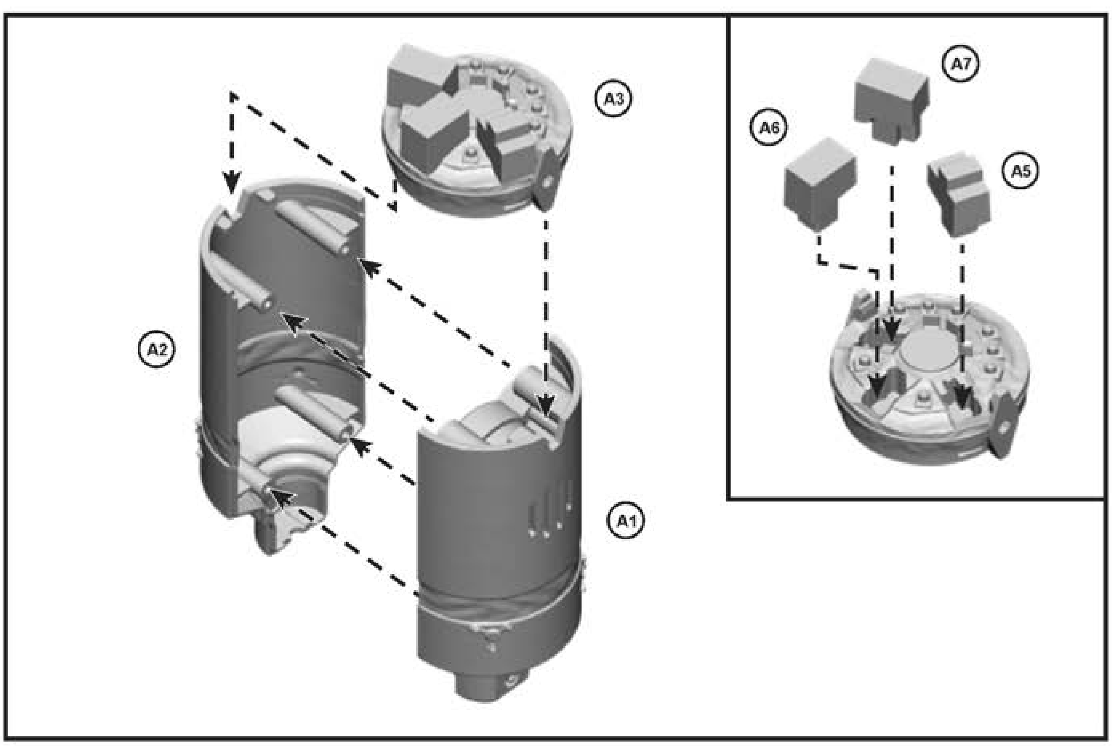
- It is recommended to use alkaline batteries.
- Do not use rechargeable batteries.
- Use only the recommended batteries.
- Do not mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel cadmium) batteries.
- Non-rechargeable batteries should not be recharged.
- Only use batteries of the same or equivalent type as recommended.
- Ensure the batteries are inserted with the correct polarity.
- Do not short-circuit the battery terminals.
- If the batteries are loose, bend out the contacts for a tighter fit.
- Remove exhausted batteries from the toy immediately and dispose of them properly; never dispose of batteries in fire.
- If storing the toy for long periods of time, make sure to remove the batteries.
- Periodically check the product for signs of damage to electrical parts; do not play with the product until any damage has been properly assessed.
- Batteries should be charged under adult supervision.
- Please keep this manual for future reference.

16. Now, let's build our Logistics Module, also called ESPIRIT. Check the parts below. Next is the exploded view of our ESPIRIT Logistics Module

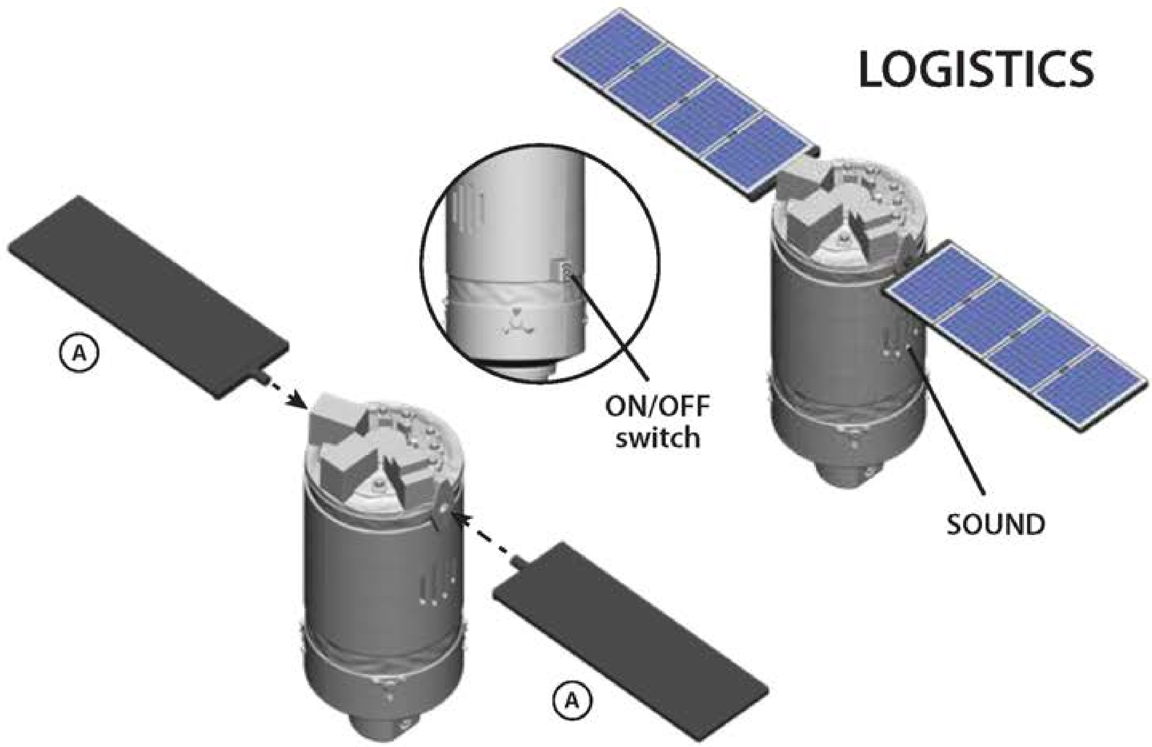




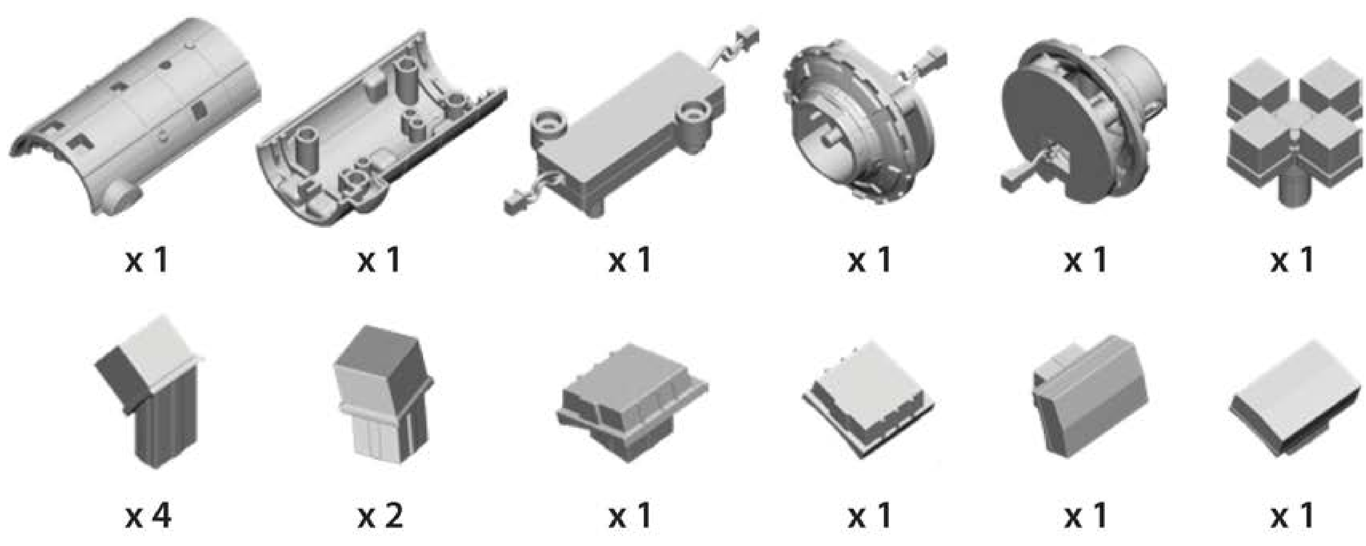
17. Find parts A3, A1, and A2 and connect them together as shown below. Then, add the small boxes labeled A5, A6, and A7.

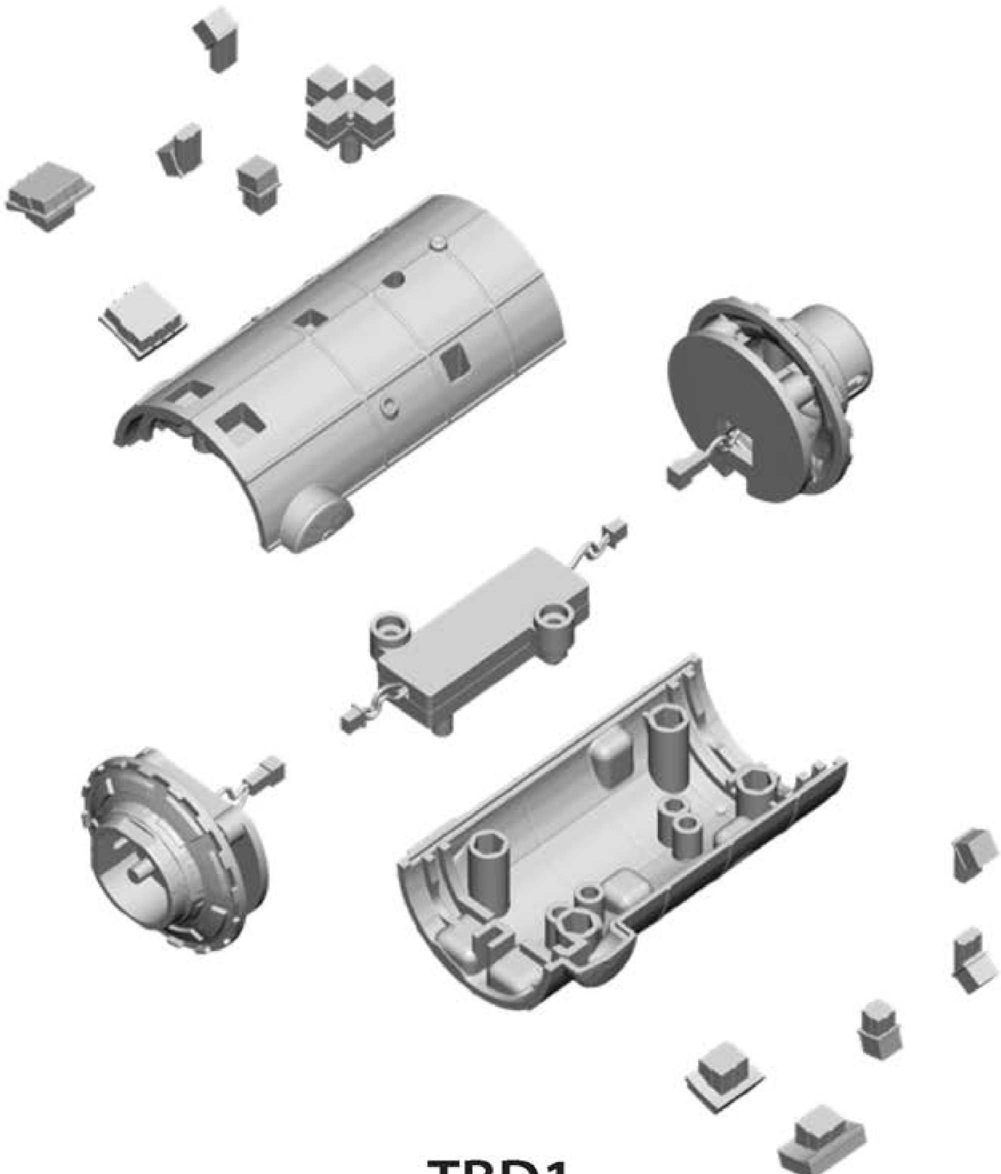


18. Connect both solar panels, A. An On-Off switch on the side of the module will activate the audio player, allowing you to listen to recorded simulated conversations between Gateway, the lunar surface, and Mission Control. However, this will only work after you have connected the entire Gateway and turned on the Power Base (HALO).



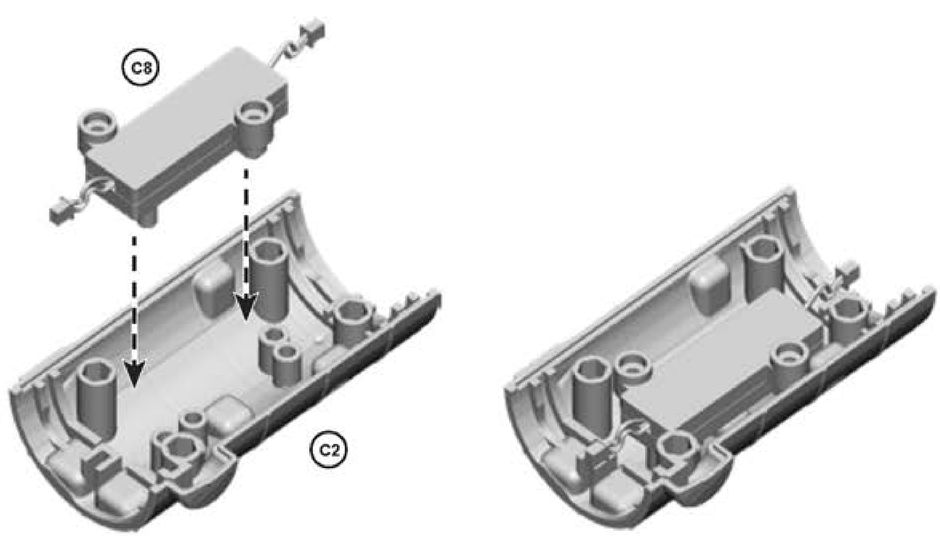

19. It is now time to assemble our airlock module. Since this module has not been given a name yet, we will refer to it as TBD1 (To Be Determined 1). Check the parts in the drawing below and refer to the exploded view for guidance.



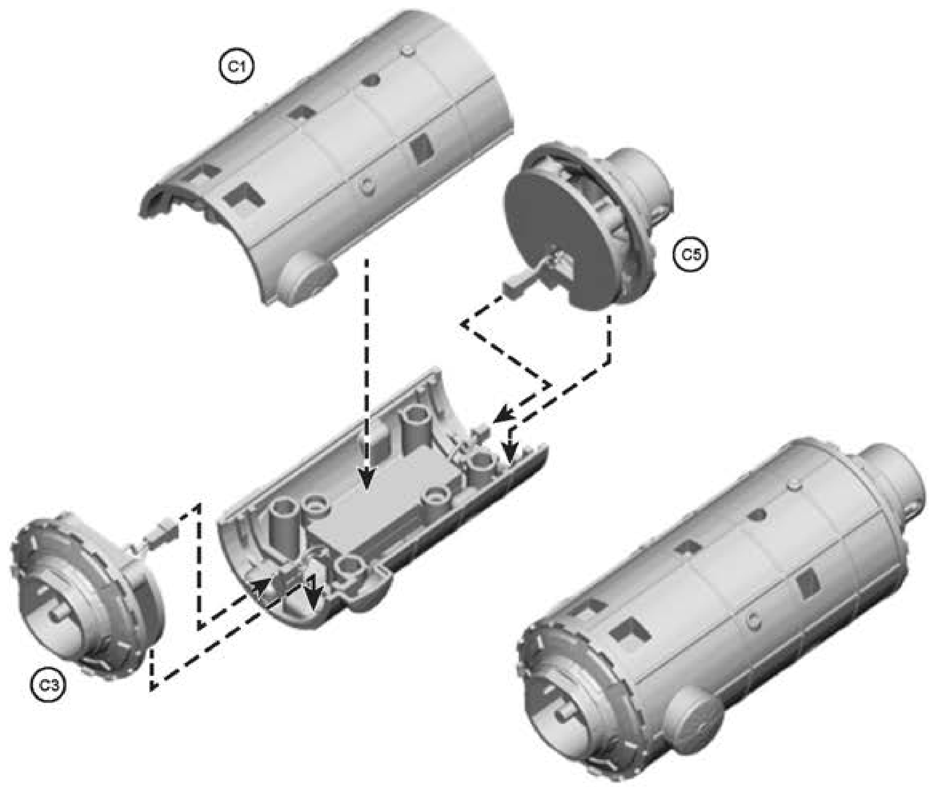


TBD1

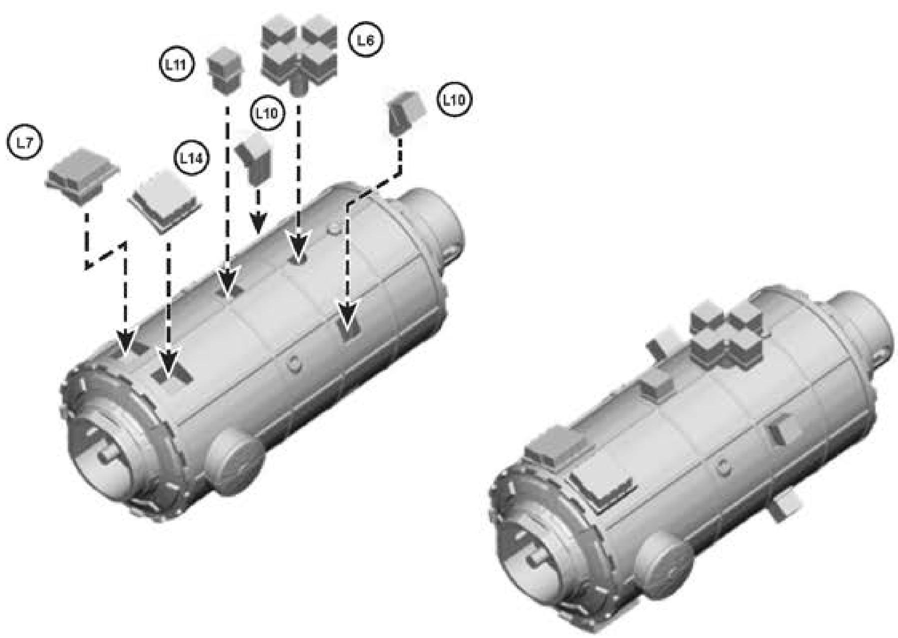
20. Here we have another lighting module, C8, which needs to be installed in C2.



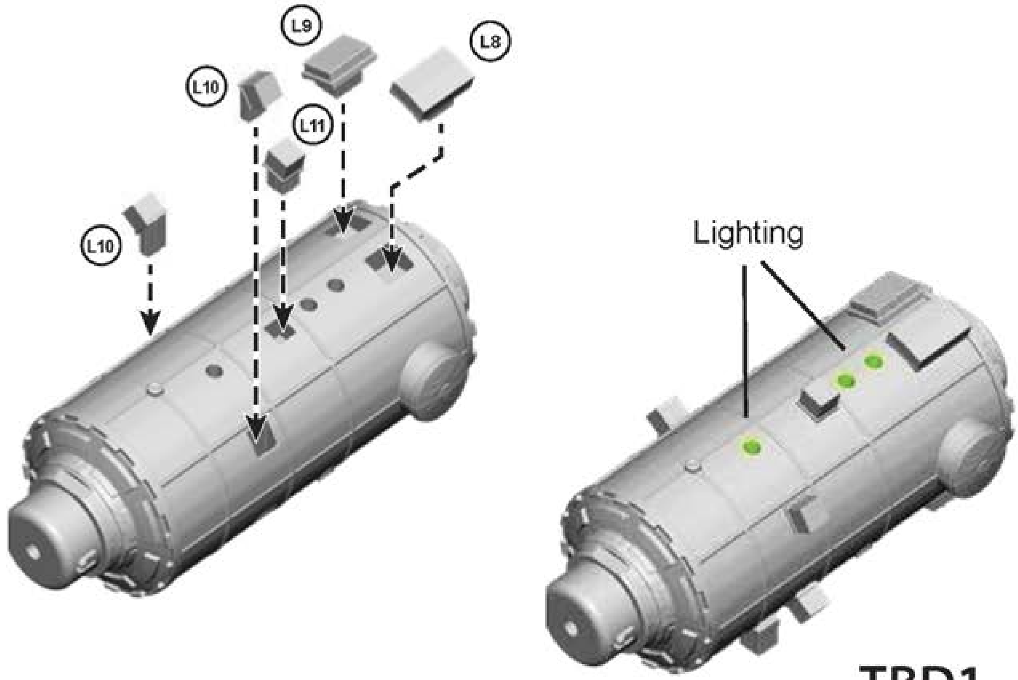
21. Carefully connect both ends of the lighting module with the correct polarity. Once that is done, position C3 and C5, and close the module with C1.




22. Add all boxes and sensors marked L.

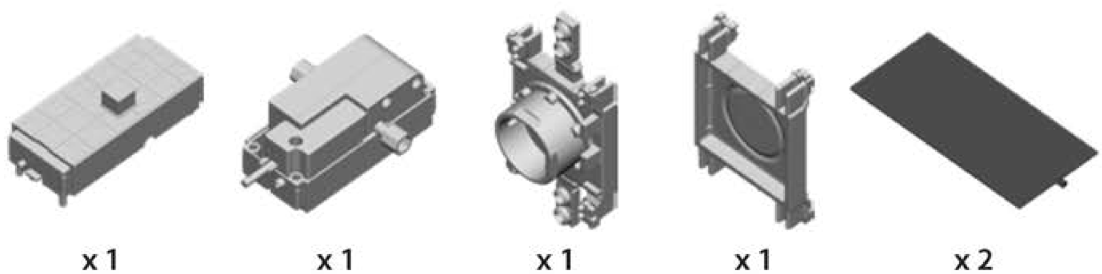


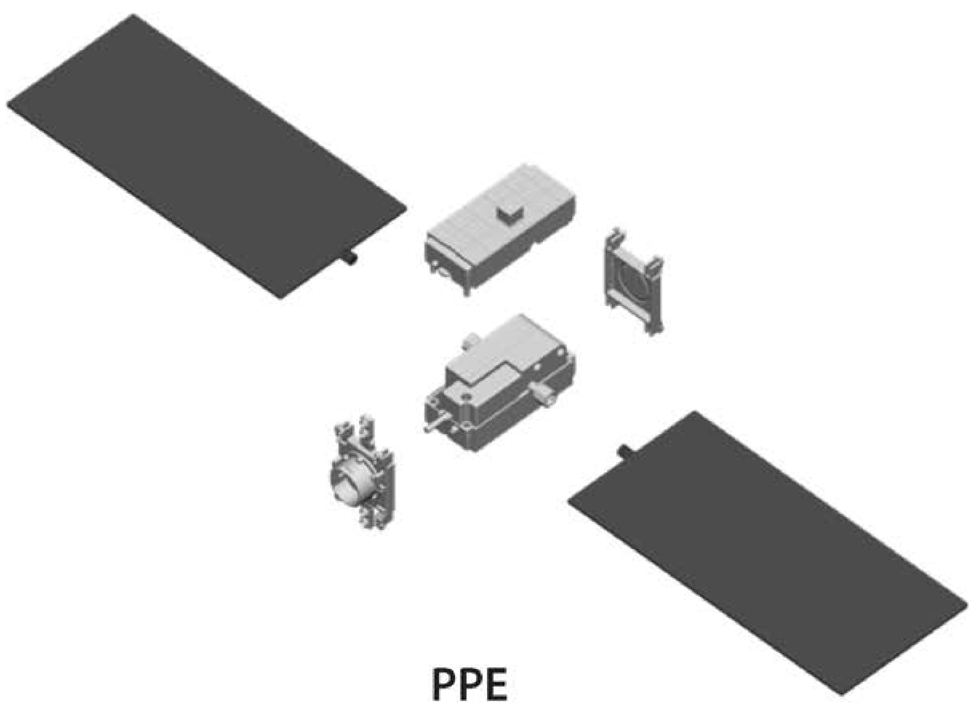

23. Repeat the same process on the opposite side of the module, as shown below. Once connected to the rest of Gateway, our airlock module will illuminate two LEDs on its windows.




TBD1

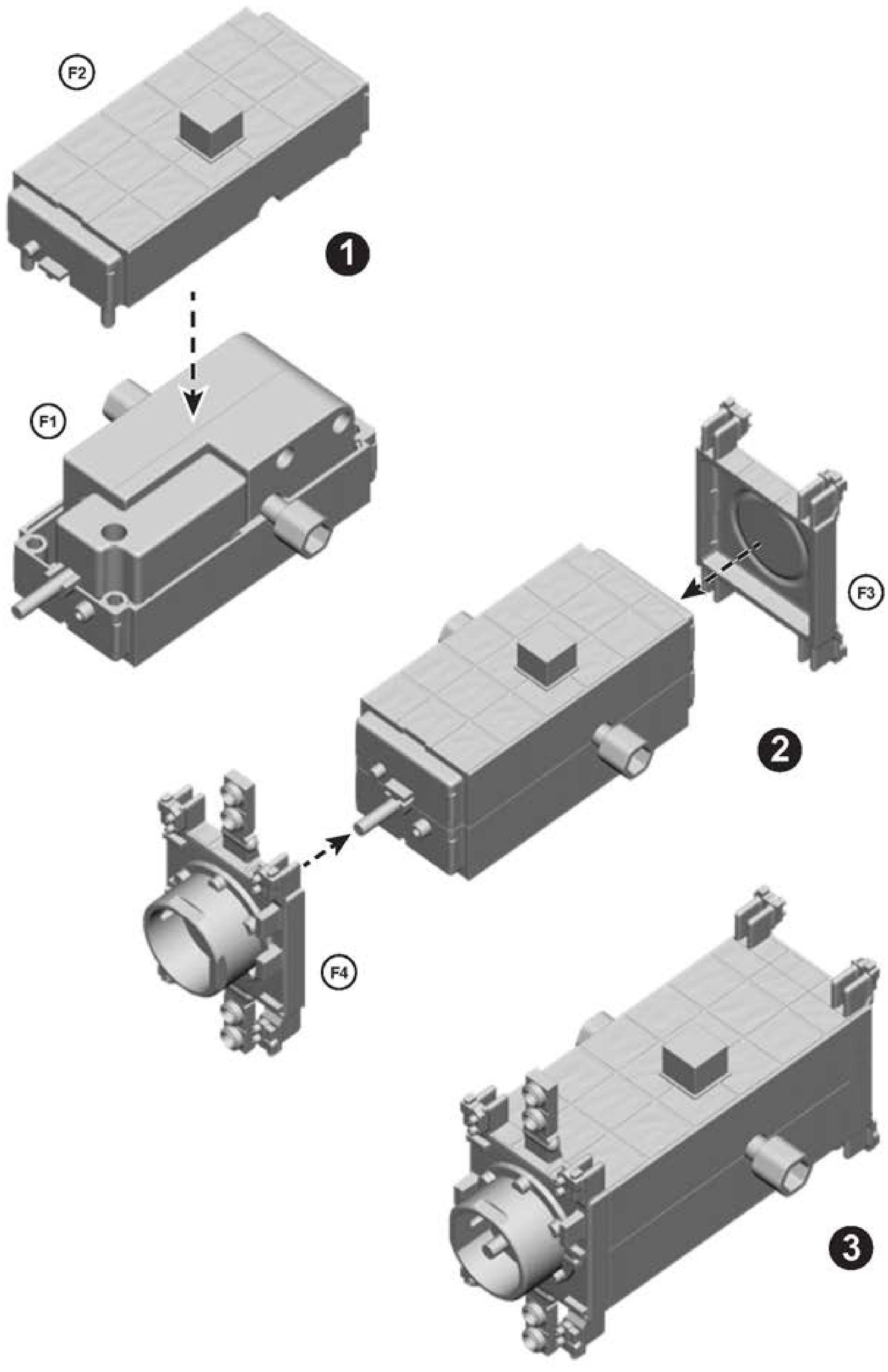
24. Now it is time for our Propulsion Module, or PPE. Find the parts marked below and refer to the exploded view of the module.



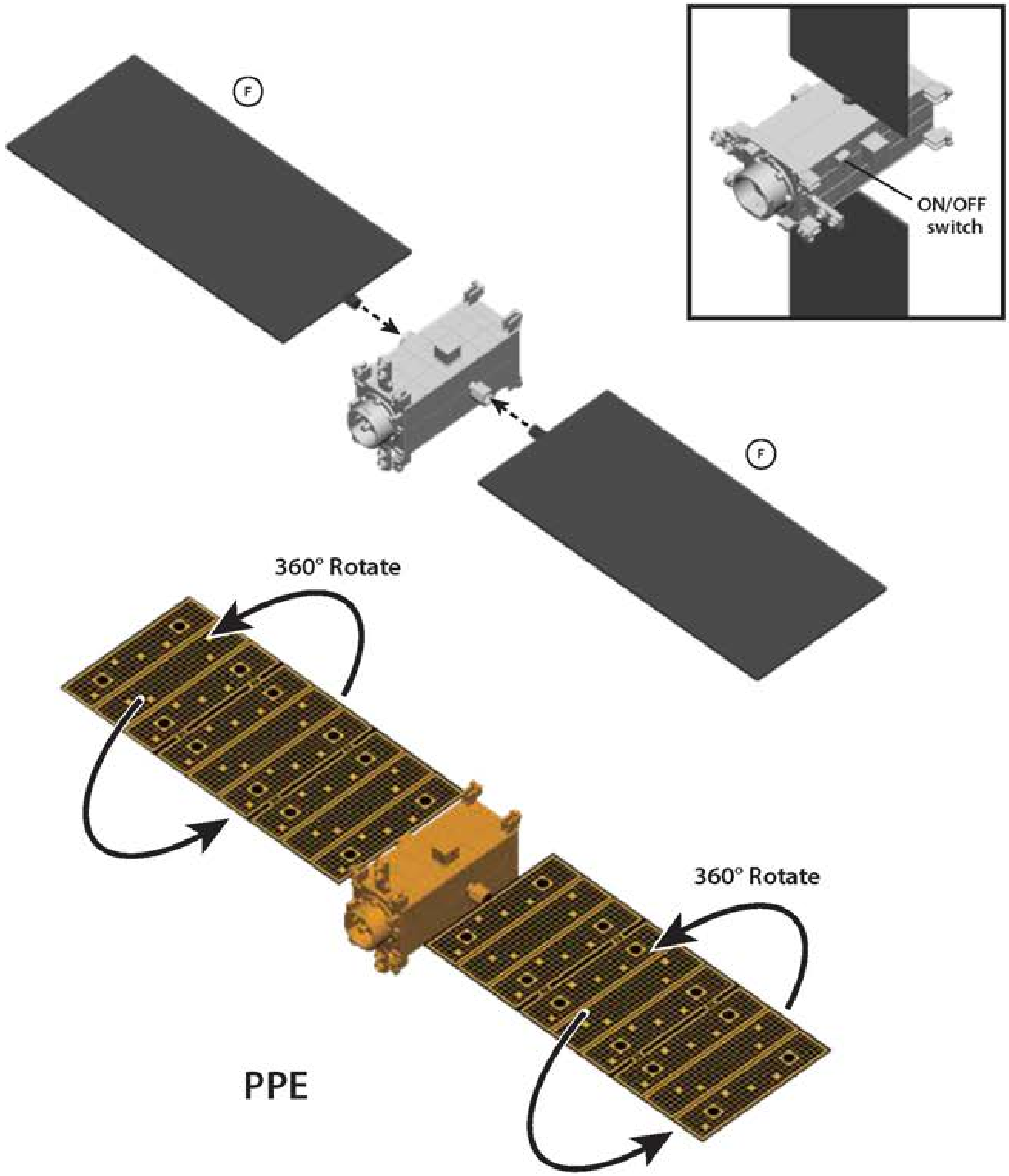



PPE

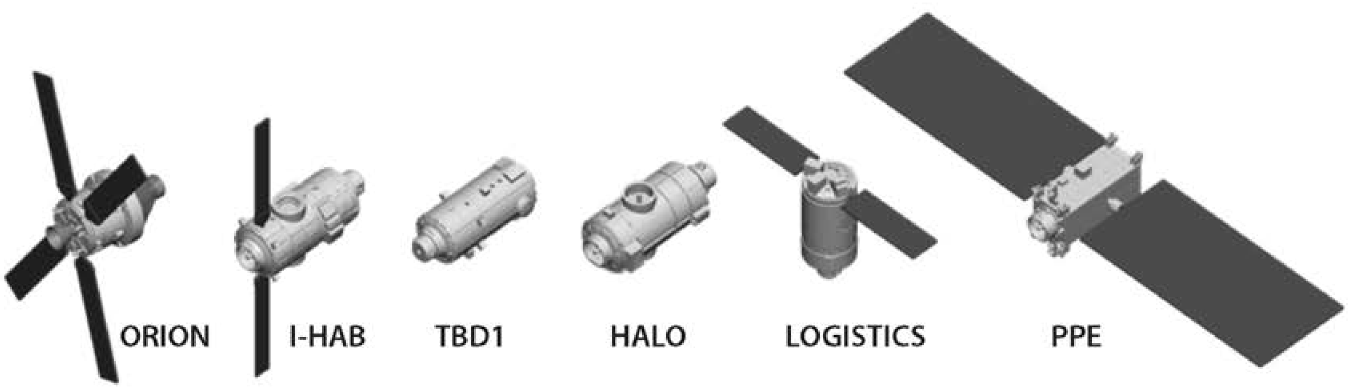
25. Select part F2 and connect it to the electric motor and gear, F1. Then add the sides, F3 and F4.



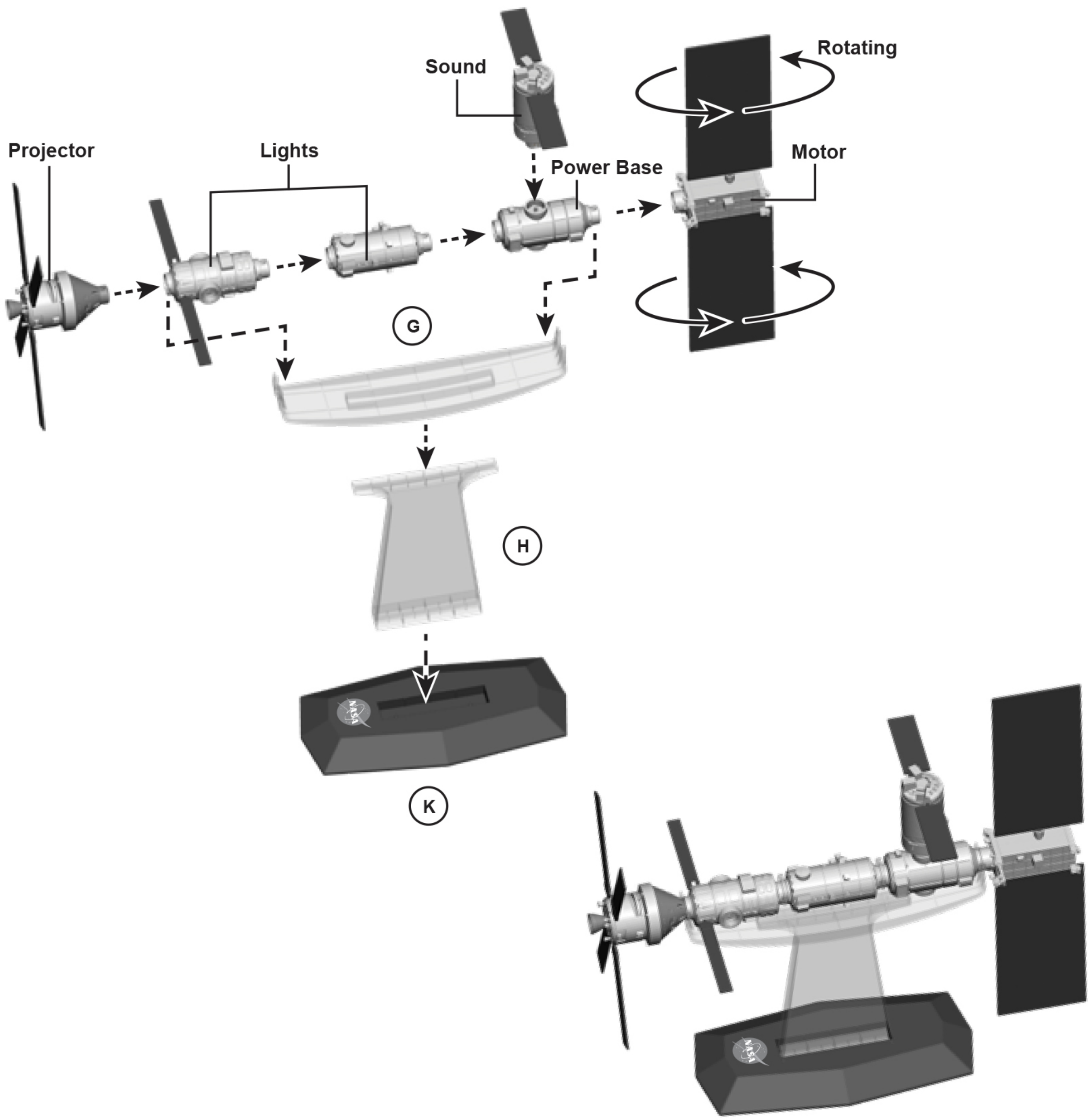

26. Your PPE is almost finished now. Carefully attach the large solar panels to the sides. Once connected to power, these solar panels will rotate slowly. There is an on-off switch on the top of the PPE.



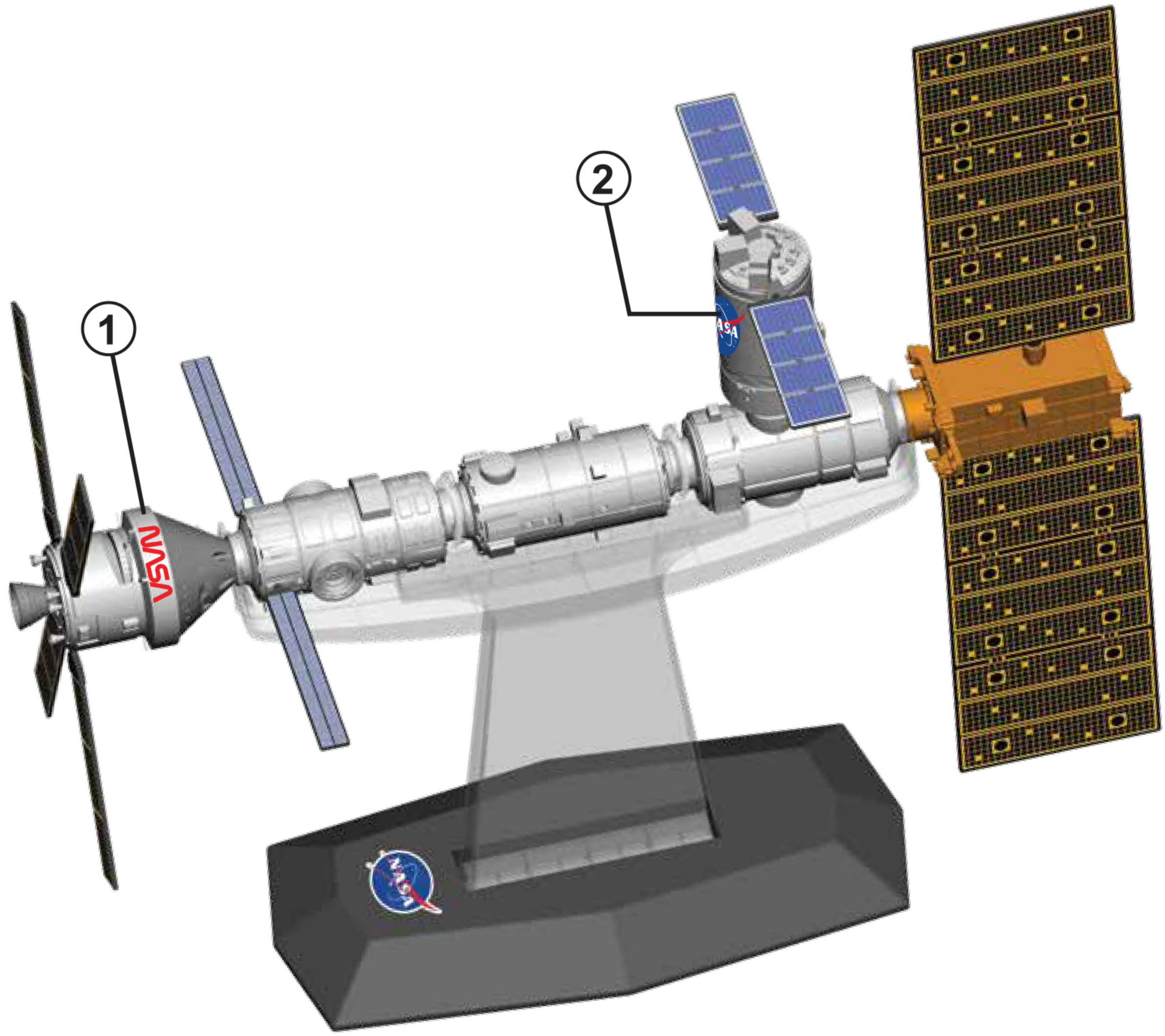

27. You are now ready to "dock" or connect your Gateway together. Although there are several different configurations you can use for your Gateway, the most common one is shown below.

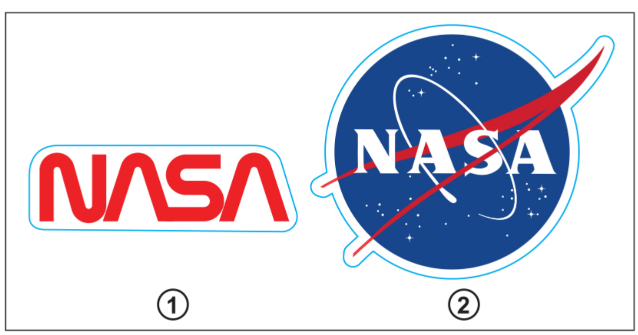


28. The figure below illustrates the most usual way to assemble your Gateway. Ensure that all module ends smoothly connect with the next module. Be cautious not to damage the connectors, as they can break. Assemble the stand (G, H, and K) to securely position your Gateway for testing and final solar panel assembly. Turn on the Power Base and test each module. Start with the rotating panels in the PPE, then check the lighting in TBD1 and I-HAB, followed by the audio player in ESPIRIT, and finally the projector in Orion (remember to test the projector in a dark room). The optimal distance between the projector and a wall is about 50 cm or less than 2 feet.



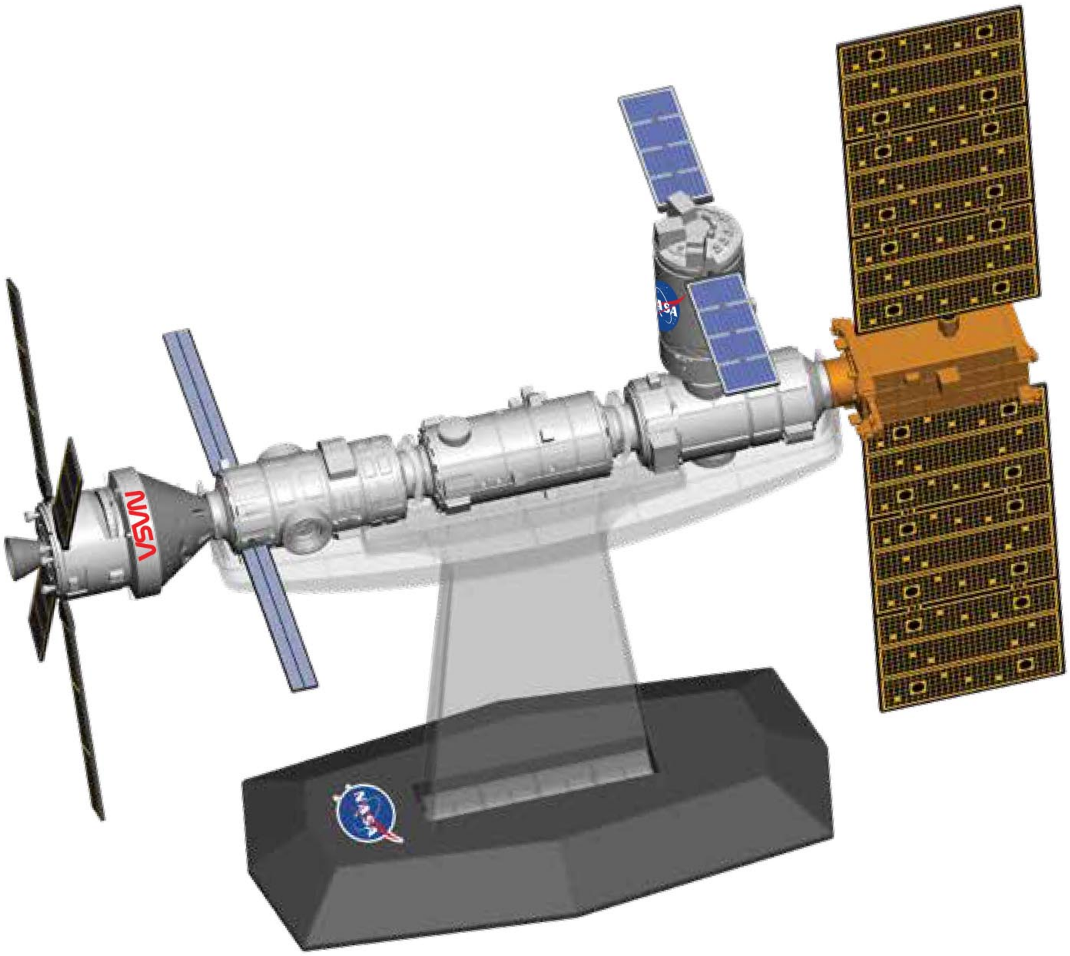
29. You will find some stickers to install on your gateway. Please adhere them as shown below.




STICKERS

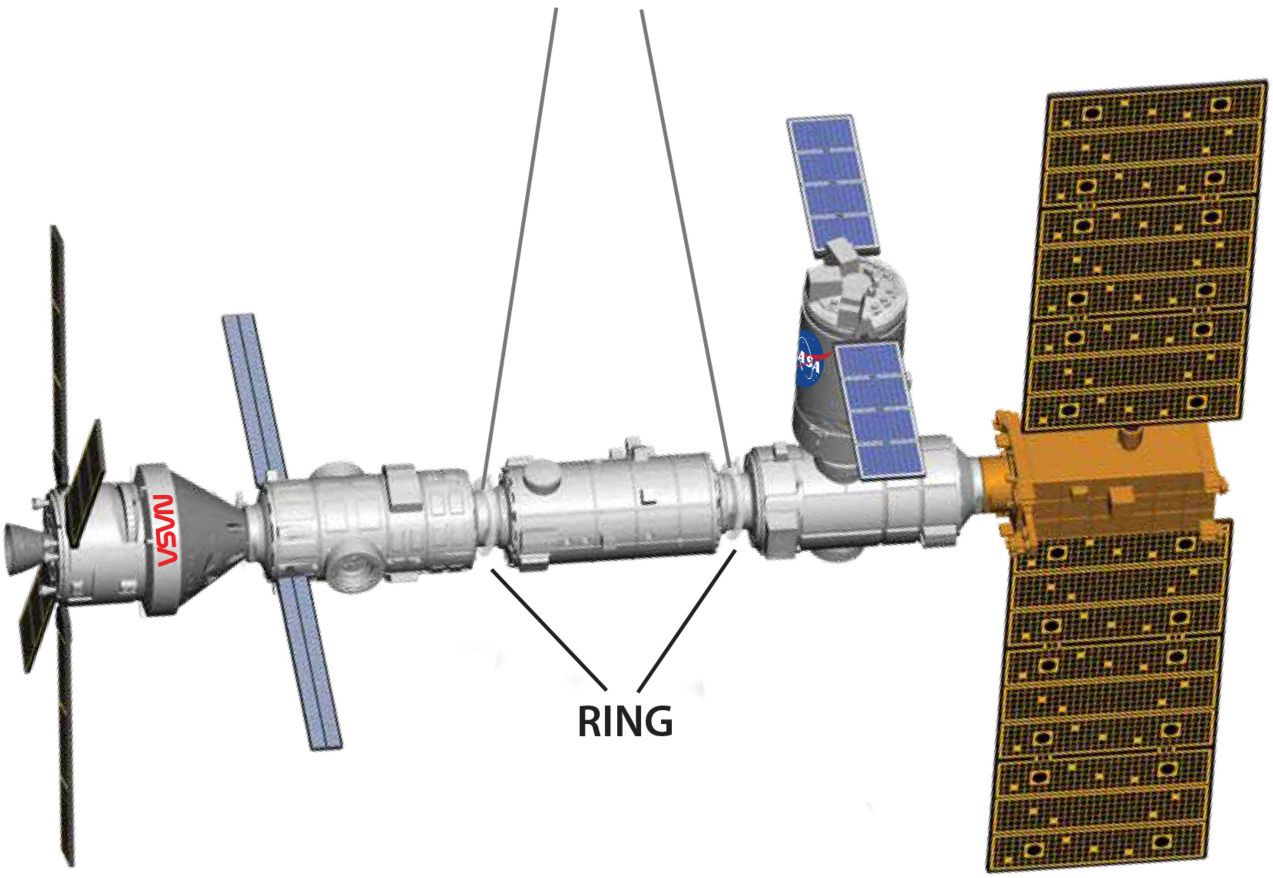
30. The following image showcases one configuration of your completed Gateway.



**STAND MODE**

31. Additionally, we have included two plastic rings that you can use to hang your model from the ceiling, if you prefer.


**RING**

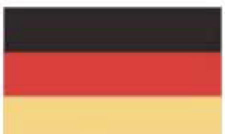



# HANG MODE

I hope you enjoyed learning and assembling Gateway, the first lunar orbital station. There is much more to learn about space!
For more space educational toys, please visit our website at
**www.futureexplorers.us**

Para instrucciones de armado en su lenguaje, por favor visite nuestro sitio web: **https://www.futureexplorers.us/**

Per le istruzioni di montaggio nella vostra lingua, vi preghiamo di visitare il nostro sito web: **https://www.futureexplorers.us/**



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Para as instruções de montagem no seu idioma, por favor, acesse o nosso site: **https://www.futureexplorers.us/**

Pour les instructions de montage dans votre langue, veuillez vous rendre sur notre site Web : **https://www.futureexplorers.us/**

الإنترنت: على موقعنا زيارة يرجى بلغتك، التجميع تعليمات على للحصول

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Inspired by NASA's Space Projects

# GATEWAY SPACE STATION INTERACTIVE MODEL

## REFERENCE, USER AND ASSEMBLY MANUAL


STEM.ORG AUTHENTICATED EDUCATIONAL PRODUCT

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MADE IN CHINA

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PLAY MIND®