
EDUCATOR'S GUIDE

Artemis I

Preparation

Overview and Objectives

This lesson is geared toward adults interested in learning about the Artemis I mission and zero gravity indicators.

Participants will learn about the Artemis I mission and its role in future space exploration. The Orion space capsule will be tested during this mission and host a Snoopy doll as its zero gravity indicator. The Orion space capsule is a spacecraft that can sustain a crew of four astronauts and shield them from the heat of reentry to earth at the end of their mission. A zero gravity indicator is a small object, often a stuffed animal, that indicates when a spacecraft enters zero gravity by floating freely within the cabin. Participants will have the opportunity to create their own zero gravity indicator with hot glue, crochet or sewing.

At the end of this lesson participants will be able to describe the objective of the Artemis I Mission, explain what a zero gravity indicator is and create a zero gravity indicator.

This lesson includes a [slideshow](#) in which an instructor can lead participants through various crew patches as they interpret which department created each individual crew patch.

Instructional Modalities

This activity was designed for both synchronous or asynchronous instruction.

For **synchronous instruction**, we recommend a platform that allows both for whole class discussion and for participants to interact in small groups.

For **asynchronous adaptations**, participants can guide themselves through the lesson at their own pace and complete activities in their own time.

Materials

- [Artemis I Slideshow](#)
- **Choice of Materials for Zero Gravity Indicator (Slide 19)**

- **Material Set 1:** hot glue gun, sock, felt, scissors, polyfill
- **Material Set 2:** crochet hook, yarn, polyfill, scissors
- **Material Set 3:** fabric, needle, thread, scissors, polyfill

Lesson

1. Introductory Activity

- Participants will watch [beginning of video on Artemis I and zero gravity indicators](#) of jobs on board *Intrepid* and answer these questions:
 - **What is the Artemis I Mission?**
 - **What is an Orion Space Capsule?**
 - **What is a zero gravity indicator?**
- Ask participants to discuss the answers to the questions above

2. Core Activity

- Go through slides 9 -11. Discuss what you see in the graphic on slide 11. Artemis I will not have any humans aboard but imagine what it would be like to follow its journey from the earth. Consider the following question:
 - **What considerations do you think NASA engineers take into account in preparation for each step of the journey?**
- Go through slides 12-13. Discuss what your ideal lunar base camp would look like.
 - **What would you need with you on the Moon to stay happy and healthy for an extended amount of time?**
- Go through slides 14-15. There is a long history of zero gravity indicators. Ask the group to discuss what they would take on board a spacecraft as their zero gravity indicator.
- Take some time to discuss the reflection questions on slide 16
 - **What experiments would you like to conduct if you traveled to the Moon?**
 - **What object would you send to space as a zero gravity indicator?**
 - **What do you want to learn more about?**
- Share one or more of the material sets with participants and have them create their own zero gravity indicator based on the instruction links in slide 17

3. Project

- Follow along the [instructional slides](#) to create your own zero gravity indicator using felt, cotton balls and embroidery floss.

Asynchronous Adaptation

Have participants go through the [slideshow](#) on their own and create their own zero gravity indicator using materials of their choice.. Have participants take a picture of their zero gravity indicator and share it on a Padlet or Google Doc.

Extension Activities

To deepen participant engagement with this content, you may choose to add the following activity :

Interview with Artemis I Engineer

Watch the entire [Artemis I video](#) to hear from a communications engineer who worked on Artemis I.

Additional Resources/ References

Visit [Intrepid's digital collection](#) to discover the ship's role in the space race and more about the space shuttle Enterprise.

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