GRADES 3-5

PEANUTS AND NASA:
A 50th Anniversary Celebration

Dear Educator,
This spring marks the 50th anniversary of Apollo 10, the NASA mission that orbited the moon in May 1969 as a "dress rehearsal" for the Apollo 11 moon landing in July. But Peanuts fans remember Apollo 10 as the mission that made Charlie Brown and Snoopy part of the U.S. space program when their names were adopted as the official call signs of the Apollo 10 command module and lunar landing module.

So start the countdown for a space-age celebration!

NASA has big plans for future space travel, and your students can be part of that future, with help from the Peanuts gang. This teaching kit is designed to excite students in grades 3-5 about the possibilities of space exploration and help them develop the STEM skills they will need to follow our astronauts as they venture to Mars. Developed by the curriculum specialists at YMI, in support of a unique partnership between NASA and Peanuts Worldwide, the kit provides you with three easy-to-implement, standards-aligned classroom activities that introduce students to the history of space flight and the amazing technologies NASA will use to land astronauts on Mars within the next decade.

Please copy and share this program with other teachers in grades 3-5 at your school. And let us know your opinion of the program by visiting ymiclassroom.com/feedback-peanuts. We look forward to your comments and suggestions.

Sincerely,

Dr. Dominic Kinsley
Editor in Chief
Young Minds Inspired

Program Objectives

- ★ To instill enthusiasm for space exploration and interest in the accomplishments of past space missions
- ★ To fuel STEM learning by tapping into students' eagerness to imagine what space science can achieve
- ★ To engage students and their families as active participants in the next phase of our nation's real-life space adventure

Target Audience

Students in grades 3-5

How to Use This Program

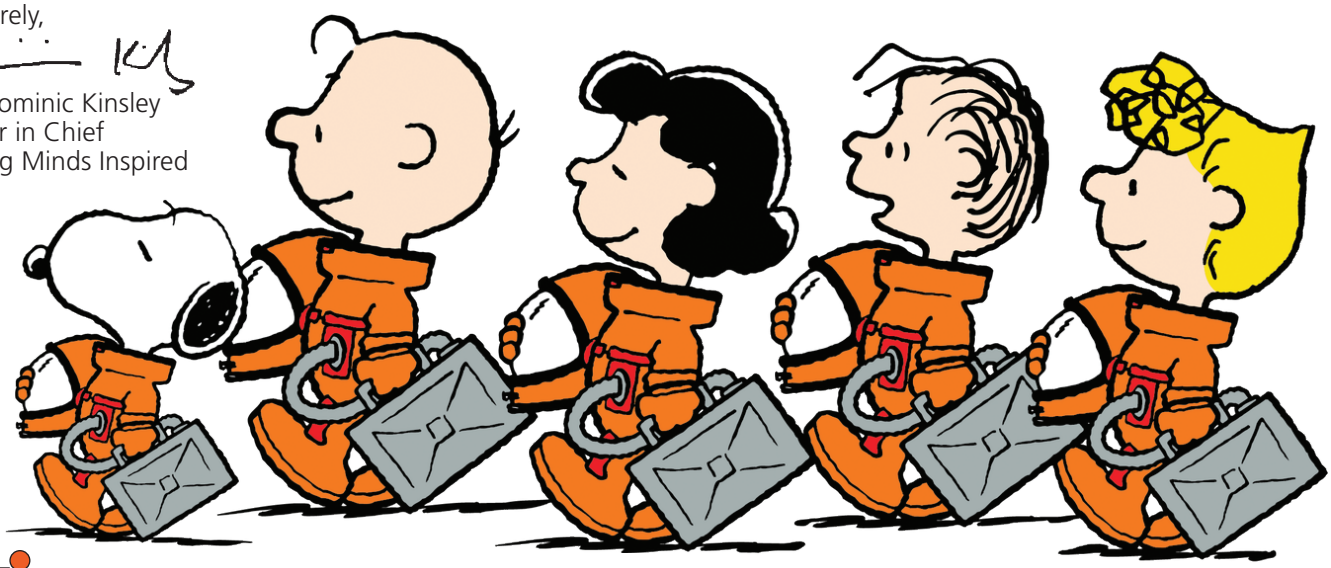
Photocopy and distribute the three reproducible activity sheets and award template. Prepare the materials for each activity in advance. Visit ymiclassroom.com/peanuts for standards alignment.

Activity 1
Back to the Moon!

In this activity, students are introduced to the Apollo 10 mission and learn how Snoopy and Charlie Brown "traveled" with the astronauts. Then students learn the fundamentals of the engineering design process as they are challenged to make a lunar rover to demonstrate how Snoopy can explore the moon.

Materials needed: Equip each group with materials that will challenge your students to problem-solve during the engineering design process, but will also work as needed to create a rover. Suggestions include wheels of any shape or size (alternately, pasta wheels or circle-shaped candies with holes in the middle can be used as wheels), small paper cups, index cards, rolls of masking tape, wooden sticks, straws, pipe cleaners, or other similar materials you have on hand.

Ask students to share what they already know about space, space travel, or simply which planet is their favorite, and why. Remind students that humans have been traveling to space for many years now. Back in the spring of 1969, NASA sent Apollo 10 into space to orbit the moon and test the equipment for the first moon landing by Apollo 11. The astronauts on Apollo 10 did everything that Neil Armstrong and the other astronauts on Apollo 11 would do a few months later, except for actually landing on the moon. And to make their mission extra fun, they brought two members of the Peanuts gang along with them by naming their command module Charlie Brown and their lunar landing module Snoopy. They also used pictures of Charlie Brown and Snoopy to help them explain their mission when they sent videos back to Earth.



Questions? Contact YMI toll-free at 1-800-859-8005 or by email at feedback@ymiclassroom.com.

May 18, 2019 marks the 50th anniversary of the launch of Apollo 10. Tell students that, in honor of this milestone, they are going to help Snoopy make a lunar rover he can use to explore the moon if NASA calls on him to travel there again.

Distribute the activity sheet, review the mission instructions, and remind students about the steps in the engineering design process—asking questions, imagining a strategy, planning to achieve it, and then creating it. Divide students into small groups and pass out the materials. Give students about 30 minutes to engineer and test their rover designs.

Extension: Download the grades 3-5 version of the Silver Snoopy Award template at ymiclassroom.com/peanuts and distribute copies to students. Tell them that this award is given to outstanding NASA and contractor employees who work as a team to ensure safety and success during missions to space. Have students write a letter naming someone they feel deserves a Peanuts gang version of the award for being a good teammate and why. Remind them that their nominees don't have to travel to space!

Activity 2
On to Orion!

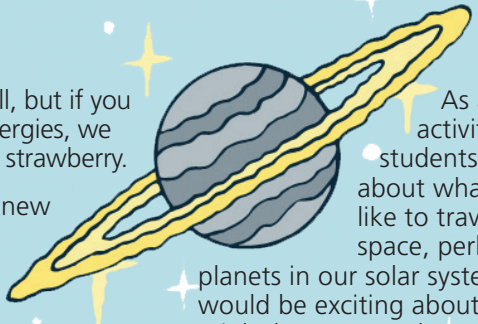
In this activity, students learn that NASA is developing a new spacecraft, Orion, that lands with parachutes. Students will try to create a parachute that will keep a hard-boiled egg or alternate object from breaking when it is dropped from a height of a few feet.

Materials needed: Equip each group with materials that will challenge your students to problem-solve during the engineering design process, but will also work as needed to create a parachute. Suggestions include coffee filters, aluminum foil, plastic bags or newspaper for the parachute, cotton balls or fabric for shock absorption, pipe cleaners, wooden craft sticks, string, masking tape, and other similar materials you have on hand. For the "astronaut", a hard-boiled egg works well, but if you have students with egg allergies, we suggest using a tomato or strawberry.

Tell students that NASA's new and exciting spacecraft, Orion, will go faster than any spacecraft before, and will use parachutes to land safely and gently back on Earth. Remind students that Snoopy is a pro when it comes to parachutes. He knows how to land safely, even when he's being pursued by enemy planes!

Today, students will help Snoopy design a parachute and an Orion-like capsule that will safely land an astronaut-egg without breaking. The Orion capsule parachutes will open at a height of about 6 miles, so your challenge to students is to create a parachute that will safely drop their object from a height of 6 feet.

Distribute the activity sheet and review the mission instructions aloud, along with the steps in the engineering design process. Divide students into small groups and give them about 20 minutes to engineer their designs. Then have them drop the Orion astronaut-eggs!



As an extension activity, engage students in thinking about what it would be like to travel to deep space, perhaps to other planets in our solar system. What would be exciting about it? What might be scary? Ask students to write a paragraph about what they think it would be like to travel through space in the Orion.

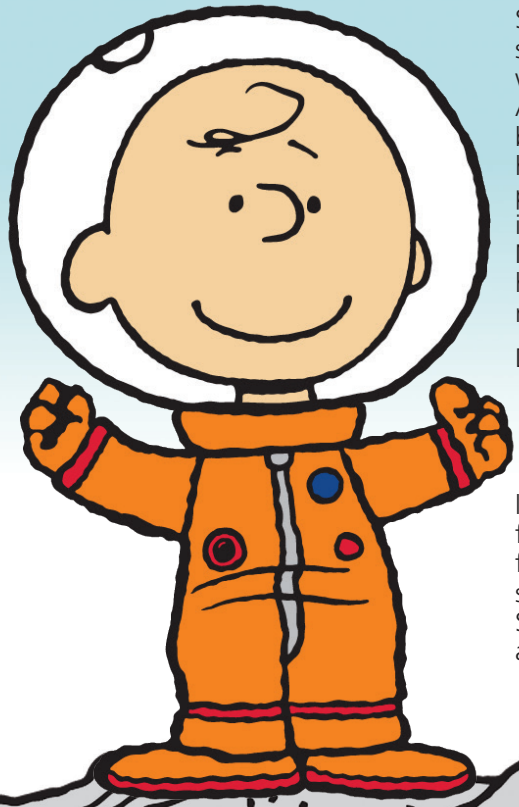
Activity 3
Moving to Mars!

In this activity, students will learn about NASA's plans to send astronauts to Mars, and what life on Mars will be like for them when they first step foot on the red planet. Students will then use their imaginations to help Snoopy reach one of his goals—writing the next Great American Novel about this experience!

Tell students that the astronauts aboard Apollo 10 had all been in space before, but they were excited to be going all the way to the moon. Now, NASA is making plans to send astronauts all the way to Mars! The explorers who go to Mars will undoubtedly have dreamt about and prepared for such an adventure, and they will be excited by the challenges they will face on this alien landscape.

Ask students to imagine what might happen if Snoopy joined the NASA mission to Mars. Remind them that Snoopy is not only an experienced space "traveler," but also an author who dreams of writing the next Great American Novel. Tell students they will be helping Snoopy take notes about his imaginary expedition to Mars in preparation for turning his adventure into a novel. Students might explore NASA's site to learn more about Mars: https://spaceplace.nasa.gov/all-about-mars/en.

Distribute the activity sheet and review the mission instructions. Have students help Snoopy create an introduction to his book by writing a descriptive paragraph about what it's like to travel to Mars—what it might feel like and what he and his astronaut friends might see there. Finally, have students create a title and cover for Snoopy's book on the back of the activity sheet or separate paper.



BACK TO THE MOON!

May 18, 2019 is the 50th anniversary of the Apollo 10 space mission. That's the mission that took two members of the Peanuts gang to the moon! The Apollo 10 command module was named Charlie Brown. The landing module was named Snoopy. All through the mission, the astronauts talked about Snoopy and Charlie Brown as they tested equipment for the first moon landing a few months later.

Snoopy is hoping that NASA will ask him to travel to the moon again. This time he'll need a lunar rover to explore the moon! Can you help Snoopy make a rover?

Use the materials your teacher gives your group and follow the steps in the engineering design process to create your rover. Begin by asking questions. Next, imagine what you can create. Talk to your teammates and make your plan. Write about your plan and draw what you will create here:

_____

_____

_____

Now, build it! Engineer and test your design, then answer the questions below:

1. Did your design work on the first try? _____ If not, how did you improve it?

_____

2. How else could you improve your design? What materials would you use?

_____

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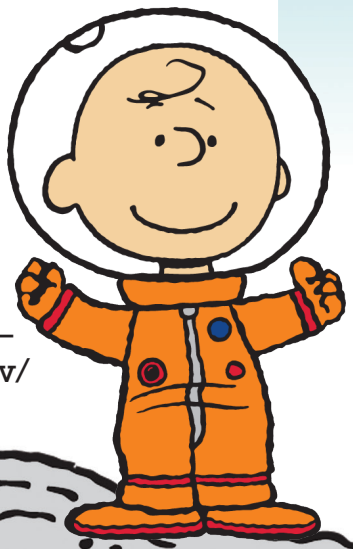
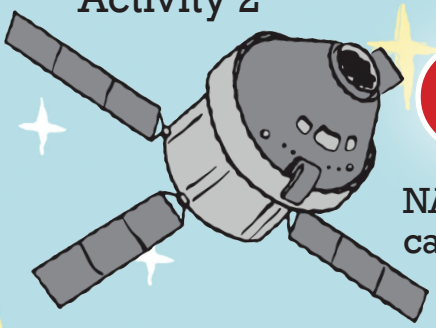


It's been 50 years since Apollo 10 took the final step toward landing astronauts on the moon. Today, NASA is preparing to travel even farther — to Mars! Start your own adventure to Mars by visiting https://mars.nasa.gov/participate/funzone to learn more about NASA's plans!

Activity 2

Reproducible Master



ON TO ORION!

NASA is building a new spacecraft called Orion. It will have a capsule where the astronauts sit during their journey. When they get back, parachutes will help their capsule land safely on Earth.

Imagine that the egg (or object) your teacher gives you is an astronaut testing the Orion capsule. It's your mission to help Snoopy make a parachute that will bring the astronaut back to Earth — without cracking! Ready to try?

Use the materials your teacher gives your group and follow the steps in the engineering design process to create a parachute that will prevent your astronaut-egg from breaking when dropped from a height of 6 feet. Begin by asking questions. Next, imagine what you can create. Talk to your teammates and make your plan. Write about your plan and draw what you will create here:

_____

_____

_____

_____

_____

Now, build it! Engineer and test your design, then answer the questions below:

1. Did your design work on the first try? _____ If not, how did you improve it? _____

_____

_____

2. How else could you improve your design? What materials would you use? _____

_____

_____

_____

How would you feel about traveling through deep space on the Orion? On the back of this sheet, write a paragraph about what you think it would be like to have such an experience.

It's been 50 years since Apollo 10 took the final step toward landing astronauts on the moon. Today, NASA is preparing to travel even farther — to Mars! Start your own adventure to Mars by visiting https://mars.nasa.gov/participate/funzone to learn more about NASA's plans!

MOVING TO MARS!

NASA is planning a mission to Mars. Imagine what might happen if Snoopy went along. Remember, Snoopy was part of the Apollo 10 mission to the moon. And he is a famous author who wants to write the next Great American Novel.

Help him create an introduction to his book by writing a descriptive paragraph of what a day on Mars might be like and what he and his astronaut companions might see. Use the back of this sheet if you need more space.

DID YOU KNOW?

★ The atmosphere on Mars is very thin. It is primarily made up of carbon dioxide and just a tiny bit of oxygen. Mars is also very cold, with an average temperature of -81° Fahrenheit. Astronauts will need spacesuits to protect them from the extreme cold, and to help them breathe.

★ Mars is smaller than Earth, so gravity there is not as strong. Astronauts on Mars will weigh only about one-third of what they weigh here.

★ Mars is farther from the sun than Earth, so a year there lasts much longer—687 days versus 365 days on Earth!

★ Mars really is red—iron oxide particles in the soil give the planet a rusty red color. And because Mars can be windy, those particles can be stirred up to create a red sky.

Hello Mars!

_____

_____

_____

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Design a Cover!

On the back of this sheet or on a separate page, create a design for the cover of Snoopy's book.

Create a title for the book:_____

It's been 50 years since Apollo 10 took the final step toward landing astronauts on the moon. Today, NASA is preparing to travel even farther — to Mars! Start your own adventure to Mars by visiting https://mars.nasa.gov/participate/funzone to learn more about NASA's plans!

GRADES 3-5

SILVER SNOOPY AWARD

Silver Snoopy Award

The Silver Snoopy Award honors a person who works as part of a team to help make sure that astronauts going into space are safe during their journey.

Do you know someone you think deserves a team-player award? Write a letter about this person using the template below.

I think _____ deserves a Silver Snoopy Award

because he/she is _____

_____.

Some examples of why I think he/she deserves the award are

_____

_____

_____

_____.