

2024 MCAS Educator Professional Development

Constructed-Response Participant Pack

English Language Arts (ELA)

Grades 3 and 4

Read the passage about the International Space Station (ISS), where astronauts live when they are in space, and then answer the questions that follow.

Home Address: ISS International Space Station

by James Buckley Jr.

Welcome Home

- 1 Good-bye, Earth! Hello, space! This huge machine will be your home for the next three months. The International Space Station, or ISS, flies 205 miles (330 km) above the Earth. It travels more than five miles (eight km) per second. That's one spin around our planet every 90 minutes!
- 2 Fifteen nations worked together to build the ISS. It took more than 10 years to finish. The ISS is bigger than a football field. It's the world's largest high-flying, fast-moving house!
- 3 First step on your mission: reaching the ISS! After about six hours, your rocket ship from Earth has nearly arrived at the space station. While you're on the rocket, you can take off your helmet. But when it's time to dock, helmets are on!
- 4 A smaller rocket connects with the ISS. When you glide onto the space station, you're greeted by an astronaut. There is always someone home at the ISS!



Good Space Morning!

- 5 After the flight from Earth, your first day on the ISS begins. Check it out—wake-up music! The controllers on Earth send up your favorite tunes. Some astronauts make requests. Others get a surprise, like a rock tune with their name in it!
- 6 In space, the sun comes “out” about every 90 minutes, so when does the day begin? You’ll live on the same schedule as the controllers on Earth.
- 7 Time to brush your teeth. On the ISS, people live and work close together. Good breath is a big plus! After you brush, just swish and swallow. There’s no spitting in space. You can even use your favorite brand of toothpaste. (Don’t let the cap float away!)
- 8 Need to wash up? There are no showers here, only sponge baths. To wash your hair, you use a special shampoo. You don’t need water—just squirt, scrub, and wipe!
- 9 Everybody has to “go” . . . even in space. Using the toilet in the ISS is a bit tricky. The space toilet is designed to keep liquids and solids from floating away. Liquid waste goes down a tube designed for men or women. For solid waste, you sit on a small seat in a compartment. A vacuum below sucks in while you let everything out.
- 10 Afterward, wash your hands with disposable¹ cloths like the hand wipes you use on Earth.
- 11 Like everything else on the ISS, eating takes a bit more work than it does on Earth. Here, most of your food is dehydrated. That means all the water has been taken out. So you add a bit of water, stir, and eat.
- 12 This is an international space station, so you might have food from different countries. Russian cosmonauts bring great spicy lamb soup. The Japanese crew has left behind fish soup for you. And there are always plenty of tortillas—some astronauts fill them with peanut butter and jelly!
- 13 Liquids can only be taken in with straws. An escaping blob of floating orange juice could damage ISS gear. And no crumbs, please!
- 14 After breakfast, you can put on your clothes for the day. You can’t waste water washing clothes on the space station. Instead, you’ll put on new clothes every two or three days. The tricky part is dressing while floating in zero gravity!

¹disposable—throwaway; single-use

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- 15 You won't wear shoes, either. Since you'll be floating around, your feet might touch pieces of gear. So soft slippers make your feet comfy and safe!
- 16 After everyone is ready, it's time for work. Each morning, the ISS crew gathers to plan the day. Part of the fun of living on the space station is working with people from other countries. You have to study languages to live in space. People could be speaking English, Russian, Japanese, or French!
- 17 The station commander makes sure the crew knows their jobs for the day. Up to six full-time crew members can be on board. When a spaceship is docked, that can add three more people!
- 18 After the morning meeting, the workday begins.

Astronauts at Work

- 19 It's very important that the ISS works properly. The crew checks all the space station's gear and machines every day. You might have to change an air filter. Even the toilet might need some attention to work perfectly. Just like in a home on Earth, there is always something that needs fixing!
- 20 If you use tools, you have to make sure they don't float too far away. You can hook your feet in straps if you need to stay in one place while you work.
- 21 Like most of the ISS crew, you are also a scientist. Living in space gives you a chance to do important experiments. Your tests can help people on Earth!
- 22 ISS studies have led to the invention of new medicines. Crews have learned how human bodies live in space. They have observed more about our galaxy. They have even grown plants and watched animals adapt to space.
- 23 It takes dozens of computers to run the International Space Station. They help you perform and record experiments, communicate with Earth, or operate the ISS. Making sure the computers are all working is a big part of your day.
- 24 You might even be the ISS computer expert. One of the crew is in charge of installing and repairing computer parts and programming. He or she works with a team on Earth to keep things humming along.

- 25 Nearly all your time is spent inside the ISS. But sometimes, you get to step outside . . . into space! You put on a huge space suit. This provides air and protects you from the cold of space. You connect yourself to the ISS with strong cords. Then you float!
- 26 A space walk is not playtime. Each space walk is like a mini mission. You need to have the right tools and training, and then get the job done. That might mean replacing a part, fixing a solar panel, or changing a window shield. It also means using tools while wearing huge, bulky gloves! . . .

Chores? In Space?

- 27 You have chores at home, you have chores in space! The whole crew works together to keep their space home tidy. No mops, though. Use hand wipes to clean surfaces. Vacuuming removes floating dust or crumbs from the air.
- 28 In a crowded space like the ISS, everything has a place. You have to make sure that all the gear is stowed properly and tied down. You never know when you might need it! Velcro is your best friend.
- 29 Teamwork is important on the space station. Everyone has to work together and get along. You can't go out somewhere to get away from one another.
- 30 The ISS is usually on autopilot.² But it still needs a driver. You have to practice steering, just in case. In an area called the central post, you look at a computer screen. It shows all the controls. You can make the space station rotate slowly or change direction. It's important for the ISS to keep the right orientation³ with the Earth and the sun. Why do you think that is? Here's a hint: The space station runs on solar energy.
- 31 You can also practice using one of the station's robot arms. They can work in space while you sit safely inside!
- 32 Your muscles won't work as hard in space. After all, you're just floating! To make sure your muscles stay strong during your long stay, you exercise every day. You can pedal on a machine that is like a bicycle without wheels. You can strap yourself in to a treadmill. The straps will keep you from floating away!

²autopilot—automatic control

³orientation—physical position

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33 A special machine called the A-RED helps you “lift weights.” Since everything is weightless in space, you’re really pushing against a machine, not raising heavy things. . . .

Good Night, Float Tight!

- 34 After a hard day’s work, it’s time for dinner. First, pick your packaged dinner. How about turkey tonight? If you want potatoes, too, you have to add water (carefully!) and then heat. Many ISS crew members like to add hot sauce. In space, food seems not to taste as good, and the spiciness helps. Since you have just arrived with fresh supplies, there are some apples and oranges to eat. Enjoy them now. With only a small fridge, you won’t have fresh fruit for long.
- 35 When the work on the station is all finished, it’s time to relax. You might float around and read a book. You can listen to music on your headphones. Some crew members read and send e-mail. It’s a great way to keep up with faraway family and friends.
- 36 You might take a break for a concert. Some astronauts have brought musical instruments. They had to learn how to move their hands in zero gravity to make music!
- 37 Finally, it’s time for bed. Well, time for sleep, anyway. You can spend the night in a sleeping bag stuck to a wall. Or you can slip into one of the space station sleeping pods. A fan will blow near your head. That pushes fresh air over your face. Otherwise, the air you breathe out would cover your face like a bubble. Some crew members wear earplugs, too. The ISS machines never sleep, so there is always humming, buzzing, and whirring going on around you.
- 38 When you fall asleep, you might just dream that you’re floating in space.
- 39 Now it is “night” on the ISS. You have been around the world more than seven times since you woke up!
- 40 While you sleep, one crew member is hard at work. He’s called Robonaut. He’s a robot astronaut! Robonaut helps keep ISS systems working while the human crew rests.
- 41 Good night, Robonaut.
- 42 Good night, ISS.

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Based on the passage, write a paragraph that explains why teamwork is important on the International Space Station. Support your response with important details from the passage.

Constructed Response Scoring Guide

Score Point	Description
3	<ul style="list-style-type: none">• Demonstrates full understanding of the reading material• Includes important and specific evidence/details for support
2	<ul style="list-style-type: none">• Demonstrates partial understanding of the reading material• Includes some important evidence/details for support
1	<ul style="list-style-type: none">• Demonstrates minimal understanding of the reading material• Includes little or no evidence/details for support
0	<ul style="list-style-type: none">• Demonstrates no understanding of the reading material• Includes insufficient evidence/details for support

Anchor Set of Student Responses (with scores)

Score: 3

Teamwork is important on the ISS because it keeps everything running. Teamwork is important because everyone needs to pitch in when it comes to cleaning and tidying up, otherwise the ISS will never stay clean. I know this because in the text it says, "The whole crew works together to keep their space home tidy." and "Teamwork is important on the space station." This shows that teamwork is very important because if no one did these things the space station would never be clean. Teamwork is also important because you will live with the people in the ISS for about 3 months. I know this because in the text it literally says, "This huge machine will be your home for the next three months." and "Everyone has to work together and get along. You can't go out somewhere to get away from one another." This shows that teamwork is important because if no one gets along then you can't really do anything about it. You have to live with everybody around you and learn to deal with it. Therefore teamwork is important on the ISS.

Score: 3

Teamwork is very important in the space station and here are some ways on how. The first way is that there are so many machine's on the space station and there is to many for only one person to do so you need your team because "The crew works together to check the machine's every day." The second reason is that the space station needs to be clean so "The whole crew works together to keep their space home tidy." The third and final reason is that there are a bunch of projects that you have to do so "Like most of the ISS crew you are a scientist and you need to help each other out with the projects." That is why you need teamwork while your in the space station.

Score: 2

Teamwork is important on the ISS. Astronauts work together to take care of the ISS. They help by bringing foods so the astronauts have something to eat. They help each other fix the ISS and check if it's working. They do most things together. Teamwork is essential to living on the ISS.

Score: 2

Based on the passage teamwork is important because in paragraph twenty nine it says " Teamwork is important on the space station. Everyone has work together and get along. You can't go out somewhere to get away from one another." Teamwork is very important especially in a cramped little house! It also said in paragraph twenty seven it says " You have chores at home, you have chores in space! The whole crew works to keep their space home tidy." Teamwork is important in many ways but those are some of the reasons teamwork is important in this passage.

Score: 1

Teamwork is important on the ISS because astronauts will be staying in the ISS for 3 whole months so they need to use teamwork in order to get along. Another reason why teamwork is important on the ISS is in case there is a major problem astronauts need to be able to work together to stay safe.

Score: 1

Teamwork is important on the space station. Everyone has to work together and get along. You can't go out somewhere to get away from one another.

Score: 0

up in space you run out of fresh fruit

Set of Student Responses without Scores (for educator practice)

Teamwork is important in ISS for many reasons. They all have different jobs because there can't just be one person doing all of the jobs and that shows teamwork. On the International Space Station, people live and work close together. People on the ISS have to learn different languages. The crew works together to keep their space home tidy. Everyone has to work together to get along.

Teamwork is important on the International Space Station, or ISS, in many ways. Here are some examples of why. One way teamwork is crucial on the ISS, as the article says in the section "Chores? In space?" is that the ISS is bigger than a football field, and it often needs to be cleaned. The whole crew needs to work together to clean, or if it's just you'll be cleaning for a very long time. Another reason teamwork is necessary on the space station, as it says in paragraph 29, is that you're stuck with 5 other people for three months, so you need to cooperate, because you can't go out of the house if someone's being annoying. Finally, teamwork is a big part of living on the space station because the text talks about all the work that needs to be done, and astronauts need to be able to work together. If they're unable to do that, nothing would ever get done! These are some ways that show why teamwork is important on the International Space station.

Response C

Score:

the space station takes 205 miles to go to space

Response D

Score:

teamwork is inportent on the space station because the astrounts have to live together for some time so they need to get along and when they fix somthing they will need each others help.

Teamwork is imporrtant because you have to work together to clean up I know this because in paragraph 27 it said " You have chores at home, you have chores in space! The whole crew works together to keep their space home tidy.No mops. though. Use hand wipes to clean surfaces. Vacuuming removes floating dust or crumbs from air." And it does say in paragraph 29 "Teamwork is important on the space station. Everyone has to work together and get along."