



## Teacher's Notes: International Space Station

**General Tips:** The goal is to build background knowledge while leading an engaging discussion on any and all information that can be talked about on a given page. The items that you choose to bring up or focus on can be modified for the students you are working with. For example, if you have a student who can point to something in the picture, answer yes/no questions be sure to incorporate a lot more of that as you go through the book. On the same token, be sure to ask a lot of comprehension questions and critical thinking questions at the level appropriate for students working on those skills. There is something for everyone.

**Addressing problem solving:** Throughout the e-book, help students identify the problems that are involved and choice making opportunities throughout the article.

**Page 1:** ISS stands for International Space Station. ISS is a short way to say International Space Station. The ISS is a satellite that goes around Earth. It is up in space. Astronauts can live in the space station. The people who are on the space station do experiments to learn more about Earth and space. **Point:** Earth, International Space Station **Questions:** What does the International Space Station go around? What is another name for International Space Station? **Connect:**

**Page 2:** The ISS moves fast! It goes around all of Earth 16 times in one day. Sometimes people can see the ISS at night when they look up at the sky. Have students view a few minutes of the following video of Earth orbit in real time. <https://www.youtube.com/watch?v=9mCgb-ff3U0> **Point:** Earth, stars, ISS **Questions:** How many times does the ISS go around Earth? **Connect:** Do you like to look up at the stars at night?

**Page 3:** The ISS never lands on Earth. It moves around Earth all of the time. It has been doing this for 20 years. That is a long time! **Point:** Earth, ISS **Questions:** Where does the ISS stay? How long has the ISS been moving around Earth? **Connect:** How old are you? The ISS has been moving around Earth for 20 years. Do you know anyone who is 20 years old?

**Page 4:** The ISS does not land on Earth. Whenever astronauts want to get to the ISS, they have to go on a spacecraft. A spacecraft is a special kind of airplane that goes into outer space. The spacecraft takes the astronauts to the International Space Station. Have the students view the following video of a spacecraft heading towards the ISS. <https://www.youtube.com/watch?v=iwwE-m917CY> **Point:** Earth, spacecraft, International Space Station, astronauts **Connection:** Have you ever been on an airplane? Would you like to travel on a spacecraft to outer space?

**Page 5:** The International Space System is big. Astronauts can live there. It is as big as a house. The ISS has solar panels. The solar panels are on the parts of the space station that look like wings. The solar panels use the heat from the sun to give the space station electricity. Electricity is important. Electricity is needed to charge our phones and computers, to watch TV, and to have lights at night. **Point:** house, International Space Station, solar panels **Questions:** How big is the ISS? What does the ISS use solar

panels for? **Connect:** What do you use electricity for? What do you think the astronauts use electricity for?

**Page 6:** The ISS is called International because astronauts from different nations or countries live and work there. **Point:** count the astronauts **Questions:** How many astronauts work on the ISS? **Connect:** Do you think it would be fun to work on the ISS? The ISS is the size of a house. Three to six astronauts live and work in the ISS. How many people live in your house?

**Page 7:** The astronauts who live and work on the ISS are scientists. They do experiments when they are on the ISS. **Point:** astronaut, inside the ISS **Questions:** What do astronauts do on the ISS? **Connect:** Have you ever done an experiment before? Do you think it would be fun to do experiments on the ISS?

**Page 8:** There is no gravity in outer space. Gravity is what keeps us on the ground, in our chairs, in our beds. The astronauts in the ISS are floating around. There is not gravity in the International Space Station. The astronauts are floating around. Have students view the following two videos showing life on the ISS. <https://www.youtube.com/watch?v=tgRMAVoHRbk>  
[https://www.youtube.com/watch?v=yk\\_p3CoRGPE](https://www.youtube.com/watch?v=yk_p3CoRGPE) **Point:** astronaut floating **Questions:** What do astronauts do in ISS? Does the ISS have gravity? Do the astronauts float around? **Connect:** Do you think it would be fun to float around? Would you like to float around in outer space?

**Page 9:** It would be hard to live and work on the ISS all of the time. Astronauts come and leave the ISS. On March 14, three new astronauts took a space craft to the ISS. One of the astronauts is a female. Two of the astronauts are males. **Point:** astronauts, female astronaut, US, Kazakhstan, space craft, ISS **Questions:** When did the astronauts go to the International Space Station? How many astronauts went? **Connect:** How do you think the new astronauts felt about going to the ISS?