

ACTIVITY 1

STATION INFORMATION

Objective

Students share and evaluate their knowledge of the International Space Station (ISS).

Standards

Science, Mathematics, Technology, Language Arts

Materials

- Chart paper, 1 piece
- Drawing of the ISS (Figure 1, page 73), colored
- Individual journal or paper, 1 piece per student
- Markers, crayons, and pencils
- Photographs of the ISS

Educator Information

- Read the background information provided on the ISS and rockets. Be prepared to share this information with students.

- Have books on the International Space Station available to share with the class. See the *Suggested Reading* section for suggestions or select books from other sources.
- Use this activity as the opening and closing lesson on the International Space Station. This lesson can be used to enhance the review found in *Activity 20*, page 68.
- This lesson is designed to find out what students know, what they want to learn, and what they learned about the space station.

Procedure

Opening Activity:

1. Students will create a KWL (Know Want Learn) chart to organize information on the ISS.
2. Write the words *International Space Station* on chart paper. Explain to the class that the ISS is another name for the International Space Station. Tell the students that the ISS is a science laboratory and home for astronauts in space.



3. Draw three columns under the words. Label one column, *What We Know*. Label the second column, *What We Want to Know*. Label the third column, *What We Learned*.
4. Ask the students what they know about the space station. Answers will vary. Write the answers in the *What We Know* column. Some students will know little or nothing about the station.
5. Share some background information on the space station. Ask students what they would like to learn about the ISS. Write these answers in the column labeled, *What We Want to Know*.
6. Leave the final column, *What We Learned*, blank. Complete this column as part of a closing lesson when students share what they have learned. Refer to *Activity 20*, page 68.
7. Display the chart in the classroom.
8. Share background information on the ISS with students. Have drawings and photographs available to show students. Read books on the ISS to the class.
9. To help students better understand the space station, relate it to something familiar in their lives, their homes. Ask students where they live. Explain that the ISS is a home in space. Encourage students to describe their homes. Compare the ISS to the places where students live.
10. Compare the rooms in a home to the parts of the space station. Both have kitchen areas, bathrooms, and bedrooms.
11. Ask students about the materials that make up their homes. Compare them to the materials that make up the ISS.
12. Ask students to describe how they think their homes were constructed. Encourage discussion on who built the homes and how the parts were put together. Ask students if

there was a plan or design for their home that ensured it was built correctly. Compare the construction of the ISS with the construction of homes on Earth. Discuss the plans that are used for both homes and space stations. Ask why having a plan is important in construction.

13. Compare the people who build homes and the people who build the ISS. Discuss the challenges of construction in space in a microgravity environment.
14. Share with the class that the space station is also a place for people to work. It is a science laboratory in space. Compare the ISS to the school building in which students and educators work.

Closing Activity:

1. Use this activity as the final lesson on the ISS. Use this activity as a review. Refer to *Activity 20*, page 68.
2. Ask students to look at the comments in the column, *What We Want to Learn*, on the chart created in the opening lesson. Read the comments to students. Ask the class if they learned more about these topics.
3. Ask students what they learned about the ISS. List their comments in the *What We Learned* column of the chart created in the opening lesson.
4. Encourage students to discuss and evaluate what they learned.

Assessment

- Evaluate students during the opening lesson. Listen as they orally share information about the ISS. After the closing lesson on the ISS, listen as students share what they learned.



- In a journal or on a piece of paper, have students draw a picture of the ISS. Depending on the ability level of the student, the student or the educator writes a student-generated fact about the ISS under the picture. Using the drawing and sentence, evaluate what the student learned.

Enrichment

- If appropriate, have students create and complete individual KWL (Know Want Learn) charts.
- Students draw a picture of the ISS. The student or the educator writes a student-generated ISS fact on the paper. Put the drawings together into a class book. Read together as a class or have students read individually.
- Use this same activity to determine what students know about rockets. Ask students to list what they know about rockets and list

what they wish to learn. At the conclusion of the lessons selected, repeat the activity. Have students share what they learned about rockets.

- Students create a class book using the large rocket drawing (Figure 6, page 78). Give the class a “writing prompt” such as “A rocket has...” or “My rocket is ...” Either the student or educator writes a student-generated sentence on the rocket pattern using the prompt. Students color and decorate the rockets. Put rockets together in a class book. Read together as a class or have students read individually.
- Find books on the ISS to share with the class. See the *Suggested Reading* list for selections. Students may enjoy reading or listening to *The International Space Station* by Franklyn M. Branley or *Space Stations* by Diane M. and Paul Sipiera. Discuss with students what they learned from the books.



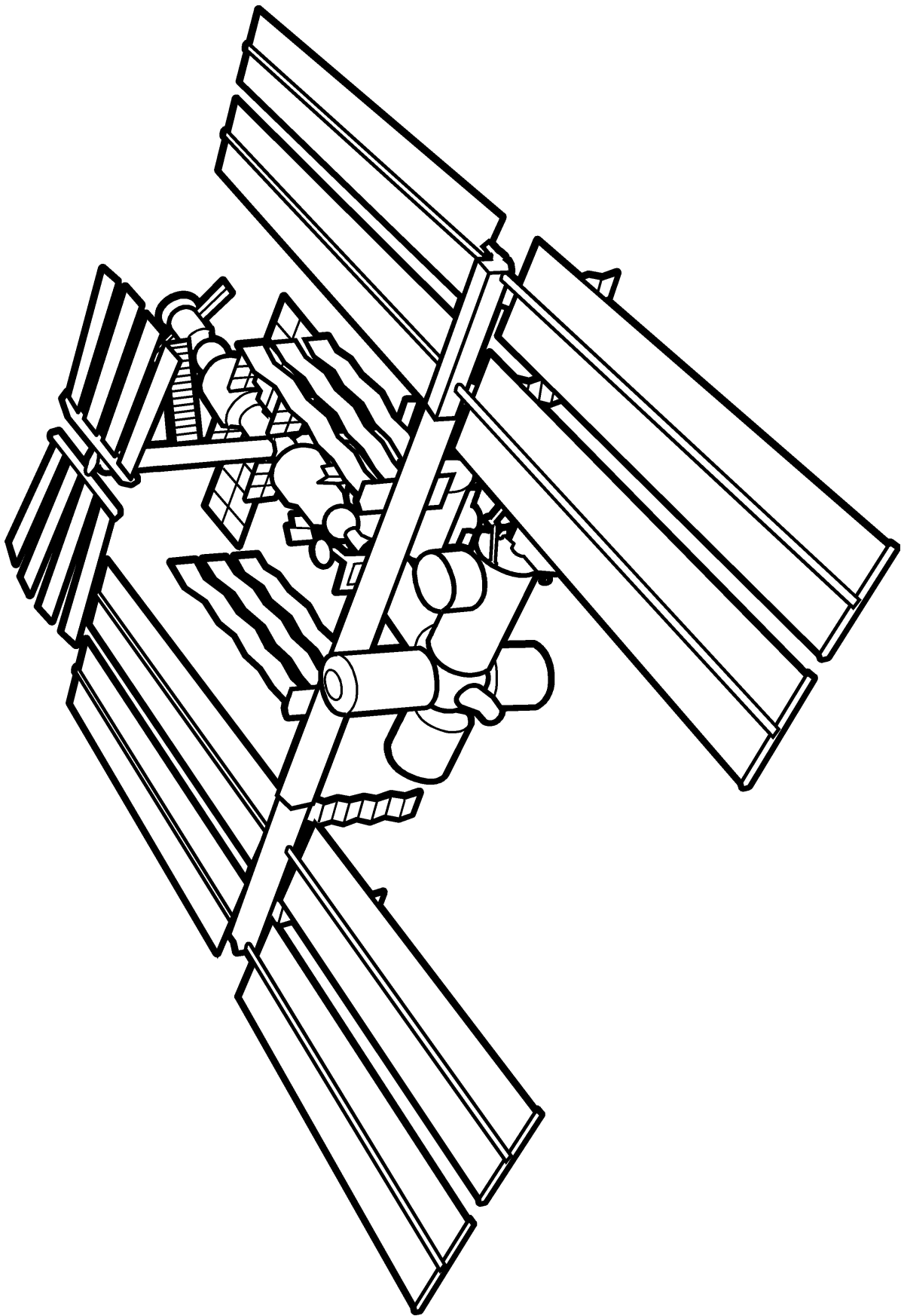


Figure 1. International Space Station (ISS)