Grades 4-5 Developing a Point of View on a Topic
Reading Lesson

OBJECTIVE
The student will read an informational article, synthesizing the information in that article and identifying her or his perspective on the topic of the article as a result.

MATERIALS
- Class set of the article "An Astronaut's Life on International Space Station" adapted from NASA.gov (see below)
- blank piece of lined paper and pencil for each student

PROCEDURES

PHASE 1 MEET THE SOURCE
1. Introduce source, a new vocabulary word, and then preview. You might start by saying, "This article is about how astronauts live and work in space. One of the main ideas in this article is that astronauts do some of the same things we do, but in different ways." Introduce the phrase "daily routines" using the following steps: ○ Share definition: daily routines – tasks or chores that are done regularly (or everyday) ○ Share an association: "I start every day by making a cup of coffee. That is a daily routine for me. Thumbs up if you can think of a daily routine you have." ○ Ask student to turn & talk: "Turn & talk about one of your daily routines with a partner. You might start with 'One of my daily routines is…'" ○ Link to text: "In this article you will be reading about the daily routines or tasks the astronauts engage in on a regular basis." Move into previewing the article by noticing the headings and making predictions.
2. Coach students as they read. Questions to pose as you confer include: • "What did you just learn in this part of the source?" (*within the text* understanding) • "How is what you learned similar to or different from daily routines on Earth?" (*beyond the text* understanding) • "Why do you think the author chose that detail to include in the article?" (*about the text* understanding)
3. Discuss. Pose a question like one of the following: "What did you learn about how astronauts do things differently from us? What else did you learn that you found interesting?" Notice which details the students seem to have understood easily and which details they perhaps did not understand as well. This will help you determine which portions of the article to reread closely during the next phase of the lesson.

PHASE 2 MEET THE STRATEGIES
1. Introduce the strategies and model. Introduce the concept of synthesis (specifically, identifying a main idea) by stating the *what, why,* and *how* of synthesis. You might say the following: *In this lesson, we are going to revisit the article "A Day in Space" and think about it in a special way. Let me explain.*

(The WHAT) *Readers know that as we read a source, we may develop a perspective or point of view on a topic. We do this as we notice important details and think about all of those details or, in other words, synthesize the information in a source.*

(The WHY) *Identifying our point of view on a topic as we synthesize information in an article can help us remember the details in that topic and help us persuade others to take our point of view.*

(The HOW) *One way to identify your perspective or point of view is to think about your emotional response to the topic as you read. You might ask questions like, "Does this information excite me? Or depress me? Why?" or "How would I feel if…?" and "What details in the text make me feel like this?"*

Let's think about our response to the article "An Astronaut's Life on International Space Station" by asking "What would I feel like if I was an astronaut?"

At this point, you might need to post vocabulary students can use to respond emotionally, words like *fascinating (very interesting), challenging (difficult but worth trying because you're interested, exasperating (extremely irritating or annoying)* with quick definitions for each.

Then model for students how you responded. (Choose one of the words posted.) Post a section of the article for all students to view and then underline key details that jumped out at you. For example, if you choose the response "fascinating," you might think aloud about the details in the article related to the liquid salt and pepper. Start by thinking aloud about what you understand—your literal understanding of these details. Then think aloud about why you find these details fascinating. Annotate the text—with notes about what you learned and how you responded.

2. **Guided and independent practice.** Ask the students to choose a response to the article by responding to a question like "Would I find being an astronaut *fascinating, challenging, or exasperating*?" Next ask them to mark one to three sections in the article that they think would help them articulate *why* they had this response. Coach them as they closely read those sections and annotate with notes about what they learned and why they found those details fascinating, challenging, or exasperating.

3. **Discuss.** Pose a prompt like the following: "If you went home tonight and told someone about your response to this article, what would you say?**"** Encourage students to think-pair-share. Close by asking a question like, "What did you do as a reader today that will help you remember the details in this text?"

PHASE 3 MEET THE RESPONSE
1. **Introduce the prompt and plan.** Pose the prompt, "What is your point of view on an astronaut's life on the International Space Station? Would you find this job fascinating, challenging, and/or exasperating?" Provide a sticky note for each student to jot down a response and then bulleted details below. Ask them to share with a partner some of the details they think they will include in their response.
2. **Coach students as they write a response.** See sample student response and analysis.
3. **Provide an opportunity for students to share their responses in small groups.**

An Astronaut's Life on the International Space Station Adapted from NASA.gov

Have you ever wondered what it would be like to live and work in space? Astronauts live and work on the International Space Station (ISS) which orbits the Earth at an altitude of about 250 miles. The ISS is about the size of a five-bedroom house and is able to support a crew of up to six people, plus visitors. The space station's laboratories allow crew members to do research that could not be done anywhere else. Astronauts who live in space have to work and take care of themselves just like we do on Earth. However, because of the microgravity environment, an environment with a very small amount of gravity where people and things appear to be weightless, the astronauts' daily routines look a bit different than ours.

Morning Routine in Space

Astronauts living and working in space have the same hygiene needs as people on Earth. They wash their hair, brush their teeth, shave and go to the bathroom. All of these routines include the use of water but in space water just floats through the air in weightless blobs. So how do the astronauts take care of themselves?

Astronauts wash their hair with a small pouch of warm water and a "rinseless" shampoo that was originally developed for hospital patients who were unable to take a shower. Any water that escapes becomes humidity in the air that is collected by the air conditioning system.

Because of microgravity, the space station toilet is more complex than what people use on Earth. The astronauts have to position themselves on the toilet seat using leg restraints. The toilet basically works like a vacuum cleaner with fans that suck air and waste through a funnel and a hose into the wastewater tank.

Space Station Menu

Imagine going camping for more than a week with several of your friends. You would make sure you have plenty of food and the gear to cook and eat it with. The food would have to be stored properly and be nonperishable to avoid spoilage. After finishing your meal, or at the end of your camping trip, you would then stow all your gear and dispose of your trash properly just before the ride home.

Astronauts basically do the same thing when they go to space. Preparation varies with the food type. Some foods can be eaten in their natural forms, such as nuts and fruit. Other foods, such as macaroni and cheese or spaghetti, require adding water. Of course, an oven is provided in the space station to heat foods to the proper temperature. There are no refrigerators in space, though, so space food must be stored and prepared properly to avoid spoilage, especially on longer missions.

Condiments, such as ketchup, mustard and mayonnaise, are provided. Salt and pepper are available but only in a liquid form. This is because astronauts can't sprinkle salt and pepper on their food in space. The salt and pepper would simply float away. There is a danger they could clog air vents, contaminate equipment or get stuck in an astronaut's eyes, mouth or nose.

As on Earth, space food comes in disposable packages. Astronauts must throw their packages away when they have finished eating. Some packaging actually prevents food from flying away.

Working in Space

The space station is designed to be a permanent orbiting research facility. The station crew spends their day working on science experiments. They also take part in medical experiments to determine how well their bodies are adjusting to living in microgravity for long periods of time.

Working on the space station also means taking care of the station. Crew members are constantly checking support systems and cleaning filters, updating computer equipment, doing many of the things homeowners must do to ensure their largest investment stays in good shape. Similarly, the Mission Control Center on Earth constantly monitors the space station and sends messages each day through voice or email with new instructions or plans to assist the crew members in their daily routines.

Free Time

Aboard the space station, crew members have many opportunities to relax and play. Like most people who work full time, astronauts get weekends off. On any given day, though, crew members can watch movies, play music, read books, play cards and talk to their families. They have an exercise bike, a treadmill and various other equipment to help keep their bodies in shape.

Sleeping in Space

After a long day at work, nothing is better than a good night's sleep! Just like on Earth, in space a worker goes to bed at a certain time, then wakes up and prepares for work again. There are a few differences though. Space has no "up" or "down," but it does have microgravity. As a result, astronauts are weightless and can sleep in any orientation. However, they have to attach themselves so they don't float around and bump into something. Space station crews usually sleep in sleeping bags located in small crew cabins. Each cabin is just big enough for one person.