Warm-up

First, write *science, internet, research,* and *women* on the board. Then, in small groups, ask students to predict how the words relate to the text. Next, elicit the predictions and summarize them on the board. After students have read the text, ask groups to identify what was accurate or inaccurate about their predictions.

Teaching Tip

For Exercise 2
First, tell students: *Today, we are in the Innovation Courtroom. There is one case: What is the greatest obstacle to scientific innovation in the modern world? You will represent different arguments, supported by evidence, and try to convince the judges.* Then, divide the class into four groups, each representing one major obstacle from the reading: lack of access to the internet, underfunded education/science programs, underrepresentation of women, and regional inequality. In each group, two students are lawyers who will present and defend the issue, and the rest are researchers who help them build the argument with examples/statistics from the text. Next, choose two students and the teacher to listen and decide which obstacle is most urgent and solvable. Afterward, in groups, students choose one main argument, find one piece of evidence from the reading, and think of one real-world example (use mobile phones in rural areas, STEM scholarships, etc.). Encourage the use of persuasive phrases. After that, each group gets 90 seconds to present their claim, supporting evidence, and one suggested solution. Finally, judges confer quickly and choose the most urgent obstacle, the most convincing group, and the best solution idea. After finishing the tasks, ask students to work in small groups to decide the following:
1. One thing related to science that they learned
2. One new word that they learned
3. One question they still have

Differentiation Strategy

For Exercise 1
Go to the Differentiation Strategies Bank and adapt this exercise using Strategy 2a.

9.5

Studying Science for Innovation

Science is the motor that moves innovation. We know more about the world thanks to the curious and daring minds that have come before us, such as Isaac Newton and Galileo Galilei. Still, their discoveries were built upon the work of previous thinkers and scientists whose ideas laid the groundwork for further investigation and research.

Nowadays, science continues to promote innovation. However, due to a lack of information, mainly from a lack of access to the internet, decreased investment in the sciences at schools, or underfunded programs for research and development at a country level, many countries and social groups are still underrepresented in the sciences. For example, countries in sub-Saharan Africa account for less than ten percent of the number of researchers globally compared to those in more developed regions. In comparison, women only account for 31 percent of researchers worldwide. Access to the internet also remains a problem in sub-Saharan Africa, where only around 80 percent of the population has access, and in Oceania, with around 65 percent access.

To encourage innovation within these communities, the general population must have better access to the internet and better awareness of basic scientific principles. Increasing awareness of key principles will further address the inequalities at an individual and regional level.

01 Present!
Once your Maker is done, take pictures of the process and assemble them into a how-to diagram. Alternatively, create a how-to video with instructions for making your heliocentric model.

02 Discuss!
In your groups, decide the best way to promote knowledge about the heliocentric model online to reach underserved populations.

03 Get Informed!
Expand your heliocentric model to include more planets and their moons.

04 Take It on the Road!
Organize a training day for people of all ages to learn more about heliocentrism and using the internet.

DO

Heliocentric Model

MAKER ZONE

In this Maker, you will build a model. Visualizing the relative positions of the objects in our Solar System can be difficult, given that we are in a fixed position and lack access to high-resolution technology to view it. To better understand the Sun's place in our Solar System, it is possible to build a simple model that provides a clear illustration for young minds.

1. In small groups, investigate the sizes of the Sun, the Earth, and the Moon, particularly the radius and diameter. Calculate the sizes of scale models of all three.
2. Using a compass, draw the three celestial bodies on thick card stock and color them. Laminate the circles and poke holes in the centers of all three.
3. Draw and cut a strip of paper extending from the center of the Sun to the center of the Earth and another that extends from the center of the Earth to the center of the Moon. Laminate those as well.
4. Attach the three circles with the paper strips using paper fasteners, ensuring they can fully rotate and orbit one another.
5. Move the circle simultaneously to reflect the Earth's and Moon's orbits and rotations.

Week 2

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Shaping My Knowledge

Teaching Tip

For Exercise 2

After students write their notes expressing appreciation, elicit the different language used. For example: *I am thankful for…, I appreciate that…, I would like to thank...* Encourage students to review their notes and use various expressions to express gratitude. Then, ask students to sit in a large circle. Tell students to play Hot Potato with a ball and sing the song. Finally, the student with the ball must read one of their notes of gratitude aloud to thank their classmates for their help.

Wrap-up

First, divide students into five groups. Then, assign each group a topic from the "Be Aware of Your Progress" table to reflect upon. Next, tell the groups to summarize what they learned about their topic and share it with the rest of the class.

Afterward, in small groups, students brainstorm and present three creative strategies to boost gratitude at school or home, such as a weekly gratitude jar, writing notes to friends, or a digital gratitude wall. Encourage the use of expressions from the text. Finally, each group shares ideas briefly with the class.

BE Aware of Your Progress

01 It's time for your assessment. First, ask a classmate to help you assess your performance during this week (Peer Assessment). Allow your classmate to provide you with some feedback. Later, assess yourself (Self-assessment) based on how you felt during this week.

VG – Very Good	G – Good	N – Need to Improve

I can...	Peer Assessment	Self-assessment
exercise gratitude.		
analyze gravitation and its role in explaining the movement of the planets and the falling of bodies (attraction) on Earth's surface.		
review the heliocentric model.		
understand and describe the characteristics of the silent era in cinema.		
use **Modals** (*might, could, may,* and *can*) in different tenses to express permission, offers, requests, certainty, ability, and criticism.		

02 Reflect on the people and resources that helped you be successful this week. In the organizer below, mention who/what helped you and how. Include a quick note of thanks to express your appreciation.
Answers will vary.

WITHOUT USING WORDS, HOW DO YOU EXPRESS YOURSELF?

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