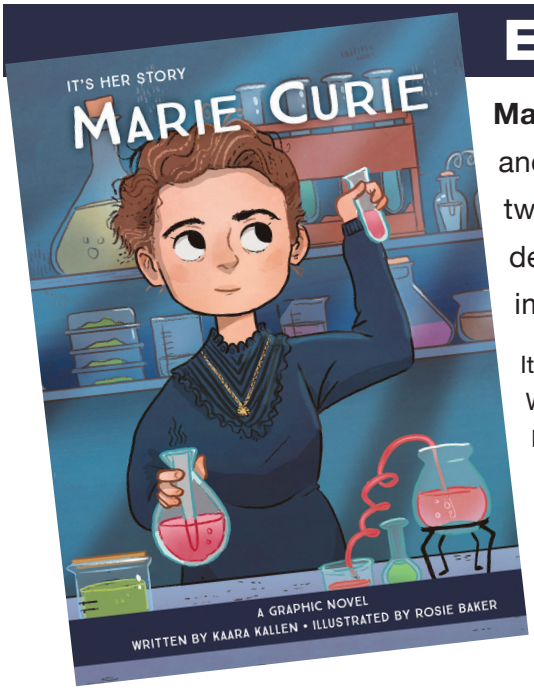
It's Her Story: Marie Curie - A Graphic Novel

EDUCATOR GUIDE



Marie Curie was the brilliant, trailblazing scientist who discovered radium and coined the term radioactivity. She was the first person ever awarded two Nobel Prizes—one in physics and one in chemistry. She helped develop the use of X-rays and radiation therapies that have had a lasting impact on medicine and human health.

It's Her Story: Marie Curie
Written by Kaara Kallen
Illustrated by Rosie Baker
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48 pages
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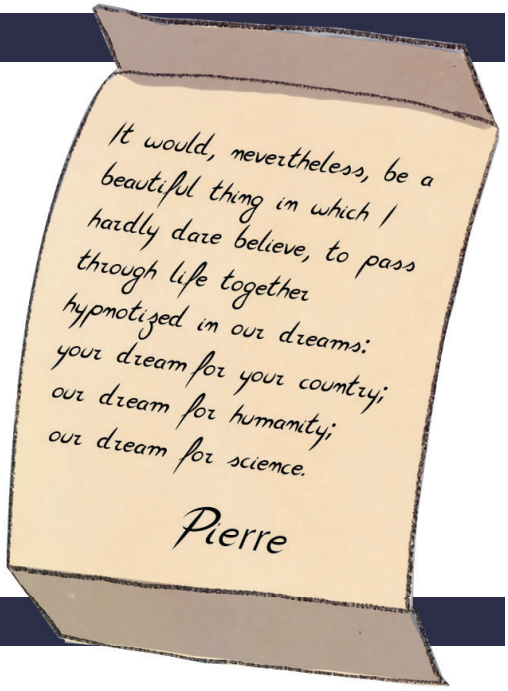
Hardcover, 6.2 x 8.6 inches

DISCUSSION



Ask these questions to the class as a whole or have students discuss in small groups. For each question, encourage students to think about the entire arc of Marie's life, from her childhood to her research and studies to her family life to her presiding over the Marie Curie Institute.

1. Look at Pierre's letter to Marie (p. 20). Throughout her life, how did Marie help people through her love of science?

2. What are three words that describe Marie Curie? What are some things she did that show this character trait?

3. Think about the important events in Marie Curie's life. Which event would you most like to travel back in time to see? Why?

PERSONAL CONNECTION

Ask students to write about, discuss, or draw their responses to the following prompt. (The discussion questions above will help prepare students for their response.)

Marie Curie said: "We must believe that we are gifted for something and that this thing, at whatever cost, must be attained." (p. 43)

1. What does this quote mean, in your words?

2. What gifts do you have that you can use to help people? Consider your skills, interests, and personality traits.

Guide created by
Kaara Kallen, M.A. Ed.

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SCIENCE CONNECTION

Important to Marie Curie's work, and to many scientific inquiries, is the practice of observing and documenting changes. Guide students in this fun and easy experiment growing crystals. An adult is needed for this experiment since it involves handling hot water.

Materials:

- Epsom salt (found at the grocery store or drug store)
- Water
- A shallow bowl, such as a pie tin
- An observation notebook

STEPS	ASK STUDENTS TO:
1. Combine one-half cup of very hot tap water and one-half cup of Epsom salt.	Record the materials, procedure, and a hypothesis in their observation notebooks.
2. Stir the water until all the Epsom salt dissolves, about two minutes. Note: If the salt does not completely dissolve, try using slightly hotter water.	Observe the mixing process and describe and/or sketch their observations (the salt seems to disappear).
3. Transfer the mixture to a shallow bowl and put it in the fridge, uncovered.	Note the time the mixture is put into and removed from the refrigerator.
4. After a couple hours, take the bowl out of the refrigerator. Pour out the excess liquid. What do you see?	Describe and/or sketch the resulting crystals. If possible, have them measure the crystals.
5. Do the procedure again, but this time leave the mixture in the fridge overnight. How are the resulting crystals different? How are they the same? (They should be the same shape, but larger.)	Repeat their observations and note-taking for each variation of the experiment. Observe how variations in the procedure change the results. Older students may be able to create a table that shows this.

Try other variations:

- Put the mixture on a sunny windowsill instead of in the fridge (leave two days for this process; crystals will form more slowly but may be larger).
- Put a sponge on the bottom of the pie tin (may produce more crystals).
- Add food coloring during the mixing stage (colors the crystals).
- Use more Epsom salt (no change to crystals) or less (yields few or no crystals).
- Change one thing at a time, so young scientists can observe, record, and compare.

After the experiment, ask students to find places in the book that depict Marie Curie observing, taking notes, comparing, and coming to conclusions.