

CONDENSATION OF Women in Physics

By Mary Wissinger

Illustrated by Danielle Pioli

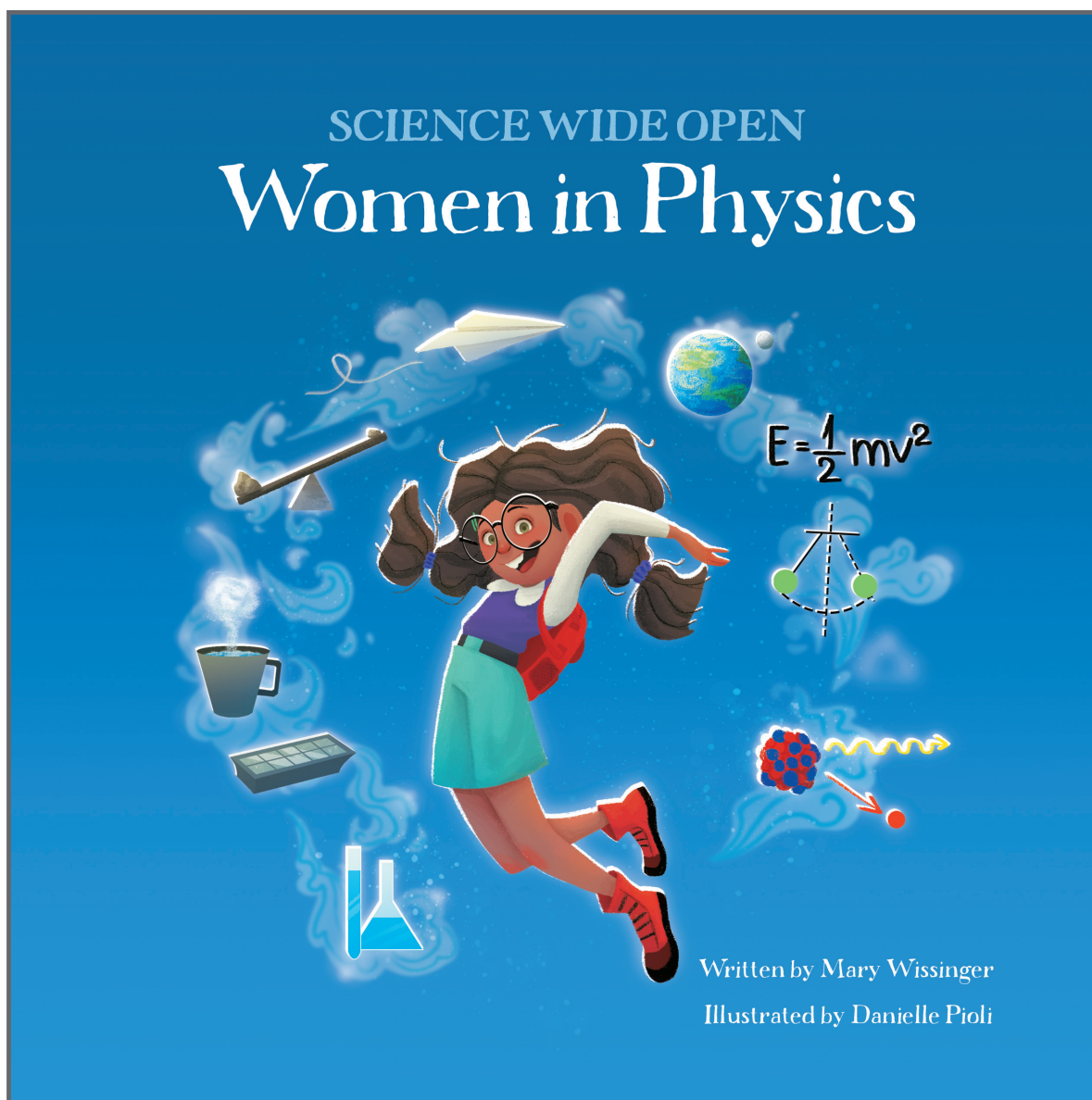
Includes pages 4, 5, 6, 7, 8, 9, 10, 11, 18, 19, 26, 27, 36, 37

Hardcover (\$14.99) ISBN 13: 978-1-945779-11-4

Paperback (\$12.95) ISBN 13: 978-1-938492-34-1 • Coming 2021

Ebook (\$8.99) ISBN 13: 978-1-945779-14-5

March 2016 • 40 Pages



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Originally created by Genius Games

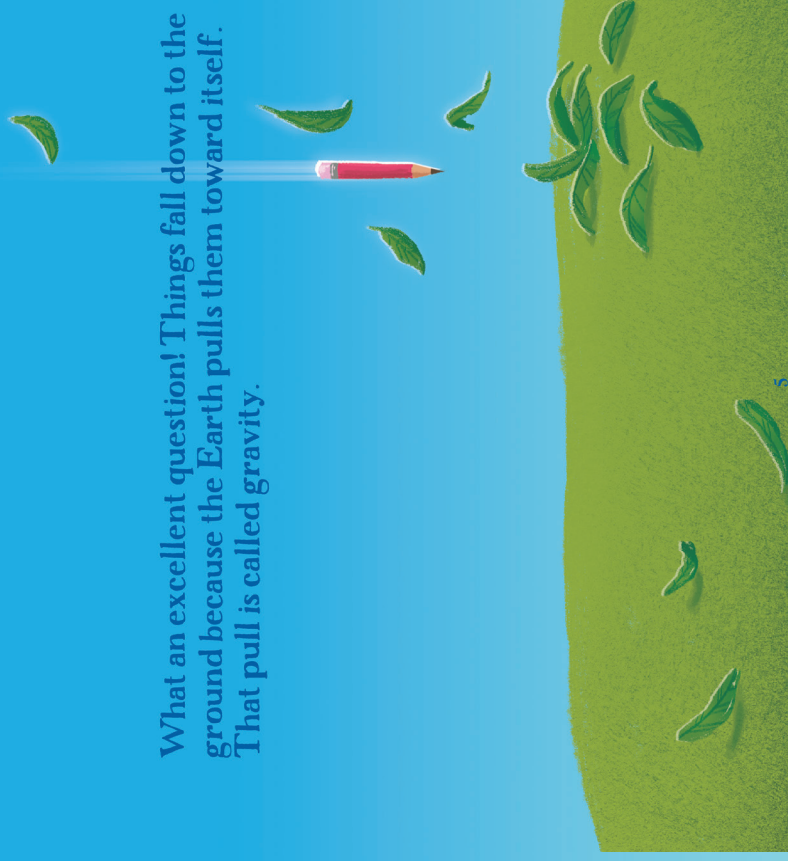
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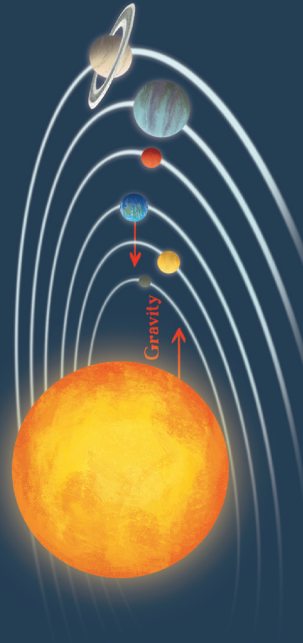




Why do things fall down?

What an excellent question! Things fall down to the ground because the Earth pulls them toward itself. That pull is called gravity.





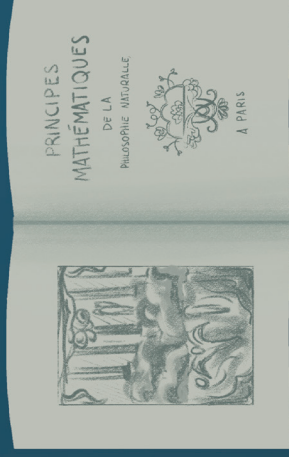
Émilie du Châtelet was also curious about gravity, but finding answers wasn't easy.

People talked about big ideas in cafés, but back then only men were allowed. Émilie dressed in men's clothing so she could join the conversation.

To make it tougher, the best book on things like gravity—Newton's *Principia*—was written in a foreign language.

But that didn't stop a brave woman like Émilie.





Émilie spent four years translating the entire book into her language. Her research and experiments helped her create equations and form new ideas about gravity. She got people around the world excited about physics, and her work inspired future scientists like Einstein.

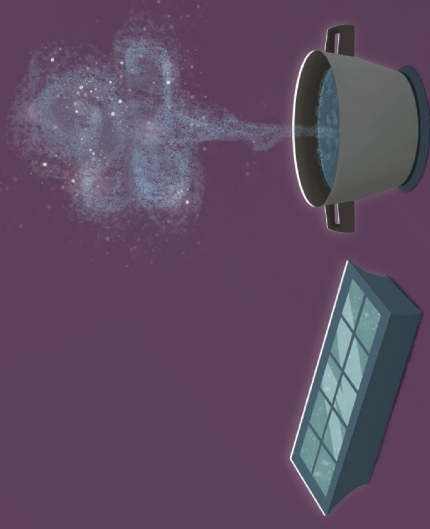




That sounds important. But what's physics?

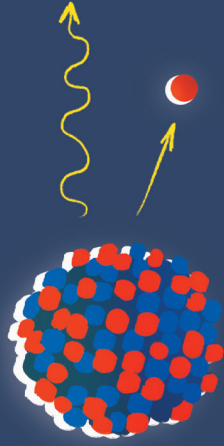
10

So glad you asked! Physics is the study of how and why everything in the universe moves and works. Physics helps us explain how birds can fly, or why water freezes when it's cold and turns into steam when it's hot.



11

Radioactive Atom



Marie Curie was famous for her experiments with radioactivity, a type of energy that can move in invisible waves.

Marie won a Nobel Prize for her work—the first one ever awarded to a woman. She kept experimenting and won another Nobel Prize for discovering two new radioactive elements: Radium and Polonium.



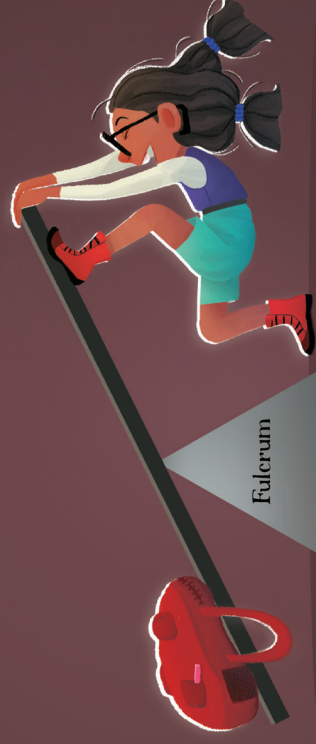


I want to discover something!

26

You can!

We're always learning new things about how the universe works, but it takes patience and lots of hard work to make discoveries.



27

Glossary

ATOMS: Atoms are like the building blocks that put together our universe. Different kinds of atoms are made by combining different numbers of protons, neutrons and electrons.

ELEMENT: A basic substance made of one type of atom that usually cannot be separated into simpler substances.

ENERGY: The ability to do work.

EXPERIMENT: A test to collect information about the world to see if a hypothesis is correct.

FORCE: The push or pull on something when it interacts with something else.

GRAVITY: A force that attracts ALL objects toward each other. This force gets bigger as the objects get bigger, which is why our bodies feel the force of gravity from the earth, but not from a spoon or apple.

HYPOTHESIS: A scientific guess that a scientist makes to explain something they think is true or think will happen.

36

MASS: A measure of how much a thing resists being moved.

MATTER: Anything that takes up space and has mass.

NOBEL PRIZE: An award given for amazing work in chemistry, physics, physiology, medicine, literature, or economics. Being given a Nobel Prize is one of the greatest honors a scientist can get!

OBSERVATION: Using our senses to collect information about the world around us.

PHYSICS: The study of matter and energy, and how they interact.

RADIOACTIVITY: The particles and energy an atom gives off when its nucleus is broken apart.

RESEARCH: To investigate and study something in order to learn new things about it.

X-RAY: Invisible rays of high energy and short wavelength that can pass through things and make it possible to see inside them.

37



Why do things fall down?

Discover the wonders of physics! Along the way, meet the incredible women who've taught us how the universe works. Inquisitive kids will love learning about the world through this engaging and accurate tale about physics.

$$E=mc^2$$



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