BLOSSOM & ROOT

ELEMENTARY SCIENCE // LEVEL 4

Wonders of the Physical World

PARENT GUIDE

LEVEL 4

Exploring Physics, Engineering, and Human Anatomy

www.blossomandroot.com

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Blossom & Root

Elementary Science,
Level 4:

Wonders of the Physical World

A Complete, Hands-On Secular Science Curriculum

Adaptable for Grades 1 - 6

Blossom & Root Elementary Science
Level 4: Wonders of the Physical World

By Kristina Garner - www.blossomandroot.com

Find Us on the Web at https://www.blossomandroot.com

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Welcome to a Year of Wonder

A Relaxed, Hands-On, and Adventurous Approach to Science in the Early Grades

When I decided I wanted to homeschool my daughters, one of the most difficult tasks I faced was finding a science curriculum that suited our needs. We wanted curriculum that was completely secular, hands-on, and full of opportunities to take our learning outside. We wanted books, and lots of them! We wanted permission to explore, dig deeper, and go off to explore rabbit trails from time to time. But we also wanted structure--just enough to build concepts upon one another in a linear way without the pressure of a rigid schedule. When it came to recording our discoveries, we wanted freedom from the worksheets, tests, and time-consuming lap books that seemed to dominate most of our options--something more akin to a scientist's field journal.

When I couldn't find this particular unicorn, I decided to do what I had done for my early years and kindergarten curriculum--I created it. Since I knew we couldn't be the only family looking for such a thing, I put my heart, soul, and complete focus into crafting a solution for those families too. I created *Wonders of the the Physical World*, the fourth of six planned years of science curriculum, brought to you by Blossom and Root. It is designed to be flexible, adaptable, inspiring, and gentle. My fondest hope is that it will provide discovery, joy, and wonder for the families that use it.

Thank you for your support of Blossom and Root. Please feel free to reach out to me at any time--I am always happy to help!

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Options for Scheduling This Curriculum:

Traditional Schedule:
Aim to complete one entire wonder per week, in order, for a 36-week school year. Please note that the first 18 wonders contain two individual components: a physics unit and an engineering unit. For this reason, we recommend doing science at least twice a week for the first 18 weeks. We recommend that you cover physics in the first session(s), and engineering in the second session(s). For wonders 19 - 36, you could potentially cover each wonder in a single weekly session.

Relaxed Schedule:
Begin at the beginning and spend as much or as little time in each unit (or "wonder," as we call them) as desired. You can even split this curriculum into two year's worth of science by doing half of it in the first year, and half in the second. This will allow ample time for families that like to incorporate lots of field trips and projects, without added pressure to complete the entire curriculum in one school year.

How to Plan Out Each Unit (the Simple Way):
A few weeks before you begin a unit, look over it and decide which books or video links you'd like to use and which projects you'd like to do. Highlight them in the parent guide here or write them into a separate planner. Refer to the Laboratory Guide for specific supplies you'll need to gather for the activities you'd like to include.

Important Note: Even though our level 4 language arts curriculum is designed to begin transitioning the student into more independent work, we do not recommend the same for our level 4 science. We highly recommend that an adult leads the child through the lessons and activities in this curriculum. A parent or guardian should always screen books and videos, and will need to supervise the recommended activities, for safety purposes.

Notebook entries and the optional weekly profiles are an exception, and are a good task to hand over to a child for independent work if they are ready.

Make It Yours

How to Teach This Curriculum

This curriculum is designed to provide support and inspiration to the parent educator. Above all else, please make it *yours*!

Step One: Wonder
Each unit begins with an introduction to the wonder at hand--whether that is electricity, flight, or the respiratory system. Together, you and your child will delve into the topic through engaging literature, videos, and guided conversations.

Step Two: Explore
The next step is to explore the topic through hands-on activities, projects, demonstrations, and experiments. Our curriculum is flexible, providing several options for each wonder so that you may tailor it to your budget, time available, personal preferences, and your child's learning style.

Step Three: Record
The final step is to allow your child to record their experiences. Once again, our curriculum allows for maximum flexibility. Children who are already eager, confident writers may use the student notebook to employ written narration. Others may wish to draw or color a picture of their experience, and their parent can dictate their oral narration. Still others may prefer to tape or paste in photographs taken of their adventures and activities during that unit--the choice is yours!

Permission to Go Off the Grid
One of the greatest gifts of homeschooling is the ability to follow rabbit trails, and to delve deeper when inspiration calls. We fully encourage this, and promise that the curriculum will be here, waiting for you when you're ready to come back and move on to the next wonder!

Step One: Wonder

Setting the stage for discovery

"*Wisdom begins in wonder.*"
Socrates

The Main Goal
You will begin each unit (or "wonder" as we call them) by introducing the topic to your child through books, videos, and guided conversations. **The primary goal of this stage is simply to introduce the topic and inspire curiosity.**

Options for Step One
As with the rest of this curriculum, we focus on providing multiple options for you to choose from, unit by unit:

Category 1: For the Minimalists
If you're pressed for time, short on resources, or simply not as excited about a specific unit, stick with Category 1: For the Minimalists to introduce the topic. This category is designed to touch on the main points with as few resources and as little time as possible.

For each unit, choose from one or multiple categories to introduce the topic and inspire curiosity.

Category 2: For the Book Basket Folks
This category will provide a rich list of engaging literature to pick and choose from for your initial introduction. ***You absolutely do not need to provide all of these books, every week.*** This list is meant to provide *options* for families that prefer a literature-based approach to learning.

Category 3: For the Visual Learners
Some children prefer a more visual model for receiving information, and some topics can be difficult to explain without a visual demonstration. Therefore we provide suggested video links, most of which are hosted on YouTube, to help introduce each topic. **Please screen them ahead of time to be sure they are in line with your family's values and developmental appropriateness for your child.**

Please note that a PDF with clickable links is included in your purchase. Use this guide to easily access video content from your computer, phone, or tablet during lessons.

Step Two: Explore

Choose your own adventure

The Main Goal
The next step for each unit is to explore the topic through hands-on activities, demonstrations, projects, and experiments. **The primary goal of this stage is to allow your child the opportunity to make discoveries about the topic at hand.**

Options for Step Two
As with the rest of this curriculum, we focus on providing multiple options for you to choose from, unit by unit:

Category 4: For the Outdoor Learners
This category was designed for families that prefer to do their learning outdoors. If you and your children love to explore, take field trips, and get your hands good and muddy, this is the category for you!

Category 5: For the Table-Lab Crowd
For families that love "table science" we have designed activities that can be done indoors using (mostly) common household objects. These activities and demonstrations can bring big ideas closer to home and provide hands-on fun for children of multiple ages.

Category 6: For the Crafts-and-Projects Families
Some families really love projects--hand-made exploration of a topic through art projects, crafts, and writing activities. For these families, we have provided suggested projects that are designed to be "on display."

Mix and Match to Choose Your Own Adventure!
Pick and choose from any of these categories to design a unit of science for your family. If you're short on time, one activity will do--you can even stick to the "minimalist" category in step one and call it a week. If you're loving a topic, you may wish to combine multiple categories for exploration and extend your learning for several weeks.

For each unit, choose from one or multiple categories to provide rich and engaging opportunities for discovery.

Step Three: Record

Documenting the journey

The presentation of the topic belongs to you, the parent educator. What your child takes from that presentation belongs to them.

The Main Goal
The final step for each unit is to give your child a chance to document their experiences through the student notebook. **The primary goal of this stage is to allow your child to record whatever they are inspired to, concerning the topic you investigated together during the previous two steps.**

Options for Step Three
As with the rest of this curriculum, we focus on providing multiple options for you to choose from, unit by unit:

For each unit, have your child document their experiences using one of these options for the student notebook.

Oral Narration

For this option, your child will give a brief oral narration of what they have learned. You, the parent, may choose to take dictation of their words into the student notebook. They may wish to draw or color something before or after the oral narration in the student notebook. This can also be done in the form of casual conversations together.

Written Narration

If your child is already confidently writing, and enjoys doing it, they may wish to record their own written narration, with or without a drawing, in their student notebook.

Scrapbooking with the Student Notebook

You may wish to treat the student notebook as a scrapbook instead, allowing your child to tape or glue photographs into it that you (or they) take during your activities together. They may wish to add brochures or postcards from field trips, make drawings or notes in the margins, or have you take dictation.

Step Three, cont.: The Optional Profiles

Learning How To Learn

Optional Profiles: An optional extension to explore a specific person's contributions to science, and to begin making the connection between science and history.

The Profiles
Each week, your child will have the option to learn about a specific person, or group of people, and their contributions to science. Each week, we provide suggested profiles to study, along with books and video links, but you can pick any person you want for each profile--you do not have to use our suggested profiles. You do not have to complete a profile every week, either. You can sprinkle these in here and there. Your child will use the profile pages at the back of the student notebook to document their discoveries.

Step One: Choose a Profile
Decide on a person to learn about. You can use our suggested profiles, or you can choose someone else. The following books can be used to source optional or additional profiles to study each week:

- *Black Women in Science: A Black History Book for Kids* by PhD Kimberly Brown Pellum
- *Black Pioneers of Science and Invention* by Louis Haber
- *1001 Things Everyone Should Know About African American History* by Jeffrey C. Stewart
- *Black Stars: African American Women Scientists and Inventors* by Otha Richard Sullivan
- *African American Inventors* by Otha Richard Sullivan
- *Who Did It First? 50 Scientists, Artists, and Mathematicians Who Revolutionized the World* by Julie Leung
- *Women in Science: 50 Fearless Pioneers Who Changed the World* by Rachel Ignotofsky
- *Girls Think of Everything: Stories of Ingenious Inventions by Women* by Catherine Thimmesh

Read, Watch, and Learn
Use books, videos, and (if possible) field trips to learn about the person you've selected.

Record What You've Learned
Complete a profile page at the back of the student notebook. You can draw pictures, tape pictures in that you print off the internet, take notes, or write a short paragraph about what you've learned.

Learning how to learn is one of the most important skills to reinforce with your child. Learning is, after all, a lifelong endeavor.

Permission to Go Off-Grid

"*Curiosity is the wick in the candle of learning.*"
William Arthur Ward

It's All About the Journey, NOT the Map!

As you move through the following "wonders," you will naturally come across forks in the road where your child wants to stop and dig deeper or follow a rabbit trail that springs up. These side-trails can provide some of the richest learning opportunities there are--curiosity-driven, interest-led investigations--so don't ignore them if you can help it.

Many of us feel nervous about "veering off the path" of a curriculum. The thought of learning gaps and self-imposed deadlines can keep us awake at night. We are here to assure you that it is 100 percent a-okay to follow your child's curiosity. This curriculum will be here when you are ready to come back and continue on.

It is also 100 percent a-okay to hurry through a topic that is not very interesting to you, or skip it entirely. We want this curriculum to be yours, so take the liberty to mold it the way you want it and be sure to indulge in those rabbits trails! *(We love them so much that we even flag you down in places where side-voyages may feel natural! If you see the rabbit icon, it means there's an opportunity for a possible rabbit trail.)*

Follow those rabbit trails

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Book List: Spines

Required Books:

There are no required books for this curriculum. Theoretically, you could complete this curriculum without using any books at all, simply by using our "big picture" messages listed in each unit and our suggested video links. However, we do have several books that are highly recommended (see below) to help truly bring each topic to life in a visual way for your child. Further in this guide, you will find many pages of optional supplemental books to consider as well.

Highly Recommended Books:

Wonder #	Book
Most 1 - 18	*DK Smithsonian Explanatorium of Science* ISBN 978-1-4654-8244-0 This is one option for the main spine for the physics portion of Wonders 1 - 18, and is also used in several of the engineering lessons as well. It does not go into great depth, but is a good foundational teaching tool.
	OR
Most 1 - 18	*Professor Astro Cat's Atomic Adventure* by Dr. Dominic Walliman and Ben Newman ISBN 978-1-909263-60-4 This is the other option for the main physics spine for Wonders 1 - 18, and in some ways is the stronger contender. We recommend looking closely at both options (via preview on Amazon) before choosing.
3, 5, 11 - 16, 18	*DK Find Out*! *Energy* by Emily Dodd ISBN 978-1-46547445-2 We feel that this resource fills out the energy, force, and motion units more than the two books listed above. For this reason, it is recommended as a supplement for the listed Wonders.
Most 1 - 18	*The Way Things Work Now* by David Macaulay ISBN 978-0-544-82439-6 The main spine for the engineering portion of Wonders 1 - 18, recommended for ages 9 and up.
1 - 4	*Engineered*! *Engineering Design at Work* by Shannon Hunt and James Gulliver Hancock ISBN 978-1-77138-560-2 An excellent introduction to engineering and the engineering process. Could be assigned as independent reading for a confident reader, age 9+.
All 19 - 36	*DK Smithsonian Human Body*! ISBN 978-1-4654-6239-8 This is one option for the anatomy portion of the curriculum, covered in Wonders 19 - 36. We chose this spine primarily for its visual content.
	OR
All 20 - 36	*The Fantastic Body: What Makes You Tick and How You Get Sick* by Dr. Howard Bennett ISBN 978-1-62336-889-0 This is the second option for the anatomy portion of the curriculum, covered in Wonders 19 - 36. This spine was chosen more for its informational content and approachable tone for elementary learners. You could certainly combine both of the anatomy spines, if you'd like.
Most 19 - 36	*Anatomicum* Curated by Katy Wiedemann and Jennifer Z Paxton ISBN 978-1-78741-492-1 A good alternative to the DK anatomy book for visual learners and fans of the *Welcome to the Museum* series. Not as extensive as the DK book, but the illustrations are wonderful.

Physics Wonder No. 2: Matter

Welcome to Physics Wonder No. 2: Matter.

In this unit, you will learn about matter--what it is, what it's made of, how it behaves, and how it changes. You will also explore some important terms you'll need to know for future units: "force" and "work."

There are 10 "big picture" messages to focus on during this unit:

1) Matter is anything that takes up space and has mass. Mass is a measurement that tells us how much matter something is made of. It is not the same things as weight. Weight measures the force of gravity pulling on an object. Weight changes when gravity changes, but matter does not change.

2) Everything around you is made of matter. The floor under your feet is made of matter. Your breakfast is made of matter. The tree outside the window is made of matter. You are made of matter.

3) Matter is made from very small particles called atoms. Atoms are very tiny--you can't see them, even with most microscopes. Atoms join together to form molecules*. Think about water for a moment. If you pour a glass of water, the water in the glass is made of many, many water molecules. Each water molecule is made of two hydrogen atoms and one oxygen atom, joined together to form that water molecule.

4) Matter can exist in different states. It can be in a liquid state, a solid state, or a gaseous state. It can also be in a plasma state.

5) Again, let's think about water. You are familiar with water already, and the states it can exist in. When we pour water into a glass, it is in a liquid state. **Liquids flow, and they take the shape of the container they are in (whether it's a glass or a crater.) They flow because, in a liquid state, the particles that make up that matter are touching, but they are still able to move around.**

6) If we put the water into the freezer, it changes states. This does not mean it isn't water anymore. It is still water, and it still has the same mass. But now it's in a solid state. **The particles in a solid are packed together very tightly--there's no room to move around, though they do vibrate against one another. Solids keep their shape, until something causes them to change to another state.** If you slide the frozen water out of its container, it will keep its shape until it melts, and changes form back into a liquid.

*At this stage, we are merely introducing the idea of atoms and molecules. We'll go into much more depth on this topic in our chemistry curriculum in a future level.

"Big picture" messages, cont.:

7) If we pour water into a pan, put the pan onto a stove, and apply heat, the water will change states again. Have you ever watched someone heat up a pan full of water on the stove? Do you notice the steam rising out of the water as it heats? The steam is water in the third state, gas. When water is in the form of a gas, we call it vapor or steam. It's still water, but it has changed states. **The particles in a gas are far apart with a lot of space between them. They can move freely, and they move very quickly in all directions. They can fill spaces easily and quickly, and they can escape those spaces easily and quickly, too.**

8) Substances change their state depending on temperature.* When we apply enough heat energy to a solid, it melts into a liquid. If we apply enough heat energy to a liquid, it becomes a gas. If the temperature drops enough, gases can condense and become liquid again, or liquids can become solids. If you've learned about the water cycle, you're already familiar with how these changes in temperature change the state of water in our world, over and over again.

9) Force is a word you need to be familiar with as we move forward. **A force is a push or a pull. A force can be applied to something with or without touching it.** We'll dive into forces more in Wonder No. 4.

10) Work is a term you need to be familiar with as we move forward. **Work is done when a force that is applied to an object moves the object.** Pushing a box of books across the carpet is work. Lifting a bucket onto a shelf is work. Pulling a sled behind you as you climb a hill is work. Sometimes, the term "work" can be confusing, because we use it in normal conversation to mean effort. But work and effort in physics are not the same. In physics, work only happens if the object moves. We'll be exploring work more in the next several engineering wonders.

*DK *Explanatorium of Science*, page 16

Physics Wonder No. 2: Matter

1. For the Minimalists:
Talk about the "big picture messages" together and read the following pages:

- *Explanatorium of Science*: pages 12 - 21, 24 - 25, 28 - 29, 46 - 47, 292 - 293
- *Professor Astro Cat's Atomic Adventure*: pages 10 - 23
- *The Way Things Work Now by David Macaulay*: pages 92 - 93

2. For the Book Basket Folks:
Queen of Physics: How Wu Chien Siung Helped Unlock the Secrets of the Atom by Teresa Robeson; *Changing Matter* by Karen Larson; Basher Science *Physics* by Basher

3. For the Visual Learners (always screen first):
From SciShow Kids, "Fun With Bubbles!": https://www.youtube.com/watch?v=XxU_QenIO54

From Crash Course Kids, "Matter Compilation": https://www.youtube.com/watch?v=wyRy8kowyM8 (better for grades 2+)

Magic School Bus Rides Again Season 1, Episode 7 "Three in One"

From Peekaboo Kidz, "What Is Matter?": https://www.youtube.com/watch?v=QQsybALJoew, and "What Is An Atom?": https://www.youtube.com/watch?v=jMW_0Ro6b5c (these are better for k - 2)

Magic School Bus Season 4, Episode 1 "Meets Molly Cule" (Please note: At the time when this curriculum is being written, these episodes can be found on Netflix.)

From Tidlybit - about Science!: "What's Inside an Atom? Protons, Electrons, and Neutrons!": https://www.youtube.com/watch?v=e9GuJUaX0UM; and "What are Atoms?": https://www.youtube.com/watch?v=c9uB6VVJxGE

From the Laboratory Guide:

4. For the Outdoor Learners:
Physics Wonder No. 2 "Exploring the States of Matter with Water"

5. For the Table-Lab Crowd:
Physics Wonder No. 2 "Exploring the States of Matter with Balloons"
Physics Wonder No. 2 "Crushed Can Demonstration"

6. For the Crafts-and-Projects Families:
Physics Wonder No. 2 "Melting Ice Art"
Physics Wonder No. 2 "States of Matter 3-D Collage Poster"

From the Student Notebook:
Complete Wonder No. 2 Entries

Engineering Wonder No. 2: Inclined Planes & Wedges

Welcome to Engineering Wonder No. 2: Inclined Planes and Wedges.

In this unit, you will learn what a simple machine is. You will begin your investigation of simple machines with inclined planes and wedges.

There are 5 "big picture" messages to focus on during this unit:

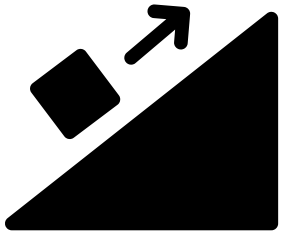
1) In the physics portion of Wonder 2, you learned that work is done when a force that is applied to an object moves the object. Pushing a box of books across the carpet is work. Lifting a bucket onto a shelf is work. Pulling a sled behind you as you climb a hill is work. **A simple machine is a device that makes work easier.** Simple machines are all around us, and we use them all the time, whether or not we realize it.

2) An inclined plane is a simple machine. Sometimes, we call an inclined plane a ramp. An inclined plane can help to get work done with less force, over a greater distance. Imagine you need to move a box of rocks from the ground into the bed of a truck. You could lift the box of rocks into the truck--that would require a lot of force. You could lay a wooden plank from the bed of the truck to the ground, creating a ramp (inclined plane) and pull the box of rocks into the truck--that would require less force. You could find an even longer wooden plank and create a longer ramp to pull the box up--that would require even less force. The greater the distance of the inclined plane, the less force is required to do the work.

3) Inclined planes are all around us, and we use them all the time. Ramps at the loading dock of the grocery store, slides at the park, switch-back hiking trails and roads on hills and mountains, the sloping sidewalk that leads you into the library, the stairs that you use to get from one level of your house to another--these are all inclined planes.

4) A wedge is a form of inclined plane. A wedge is thin on one end and wide on the other. Think of the blade of an ax--it has a sharp, thin end and a blunt, wide end. Wedges make it easier to push into something. Knives, chisels, axes, plows, and even our teeth are wedges. Imagine that you want to cut a log in half. You could bang the log over and over with a hammer, or you could use an ax--a wedge--to split it. Which of these two tools would require less force to split the log?

5) Cutters are usually wedges that work together to change forward movement into parting movement. Think of a pair of scissors. Each blade is a wedge. You apply force to both blades, bringing them together. Their wedges push into a piece of paper from opposite sides, parting the paper as they go.



Engineering Wonder No. 2: Inclined Planes & Wedges

1. For the Minimalists:
Talk about the "big picture messages" together and read the following pages:

- *The Way Things Work Now:* pages 8 - 17 and related inventions on page 374
- *Explanatorium of Science*: pages 182 - 183
- Highly recommended for Wonders 1 - 4: *Engineered*! *Engineering Design at Work* by Shannon Hunt and James Gulliver Hancock (break up reading over Wonders 1 - 4, good choice for independent reading for older students)

2. For the Book Basket Folks:
Simple Machines by D.J. Ward; *Simple Machines: Wheels, Levers, and Pulleys* by David A. Adler; Basher Science *Engineering* by Basher

3. For the Visual Learners (always screen first):
From SciShow Kids, "Ramps: A Super, Simple Machine!": https://www.youtube.com/watch?v=3COvm0TtxWg

From funsciencedemos:

- "Simple Machines: The Inclined Plane": https://www.youtube.com/watch?v=5c4J_PW9wsg
- "Simple Machines: The Wedge": https://www.youtube.com/watch?v=No5Df2231YA
- Good intro to simple machines: "Simple Machines in the Kitchen": https://www.youtube.com/watch?v=9npdijCLbYI&list=PLat8Jejmdx1tsFo72_p159DE5-2-oW_qJ&index=6
- Good intro to simple machines: "Simple Machines in the Bathroom": https://www.youtube.com/watch?v=w-i0M2jKyDo&list=PLat8Jejmdx1tsFo72_p159DE5-2-oW_qJ&index=7

From Free School, "Simple Machines for Kids: Science and Engineering for Children": https://www.youtube.com/watch?v=fvOmaf2GfCY&list=PLHsQF936ghDVTxQF-79ns_HqDFSrq2xq8

From SmarterEveryDay, "How Lawn Mower Blades Cut Grass": https://www.youtube.com/watch?v=-GlJFVTzEsI

From Science With Sophie, "Inclined Plane & Screw": https://www.youtube.com/watch?v=00Kd--_vuHQ (appropriate for Wonders 2 and 6)

From the Laboratory Guide:

4. For the Outdoor Learners:
Engineering Wonder No. 2 "Playing with Inclined Planes"

5. For the Table-Lab Crowd:
Engineering Wonder No. 2 "Inclined Plane and Wedge Scavenger Hunt"
Engineering Wonder No. 2 "STEM Challenges Using Inclined Planes and Wedges"

6. For the Crafts-and-Projects Families:
Engineering Wonder No. 2 "Model of an Inclined Plane"

From the Student Notebook:
Complete Wonder No. 2 Entries

Optional Profile: Wu Chien Shiung

Profile: Wu Chien Shiung

In this profile, you will learn about the life and contributions of Wu Chien Shiung. (*Wu* is her family name, *Chien Shiung* is her given name.) Born in Shanghai, China in 1912, Chien Shiung was a woman of many "firsts." She was the first woman to receive the Wolf Prize in Physics, the first woman to receive an honorary doctorate degree from Princeton, the first woman hired as an instructor at Princeton, and the first woman elected president of The American Physical Society. She performed important experiments and made significant contributions in the field of nuclear physics.

Recommended Literature:

- *Queen of Physics: How Wu Chien Siung Helped Unlock the Secrets of the Atom* by Teresa Robeson
- page 66 - 67 *Women in Science: 50 Fearless Pioneers Who Changed the World* by Rachel Ignotofsky

Recommended Video Links:

Both video links below are made with an older audience in mind, so some of the content will likely be over the heads of most elementary students. However, the heart of the story is still there and her story is so important. Please screen first.

From cowlib, "Hidden Science Superstars: Chien-Shiung Wu": https://www.youtube.com/watch?v=7PWUsiqn0bI (a shorter video)

From The STEMulus, "STEM HISTORY - Chien-Shiung Wu": https://www.youtube.com/watch?v=qPIuWaOrIvk (a longer video)

From the Student Notebook:

Complete a profile page (located at the end of the notebook)