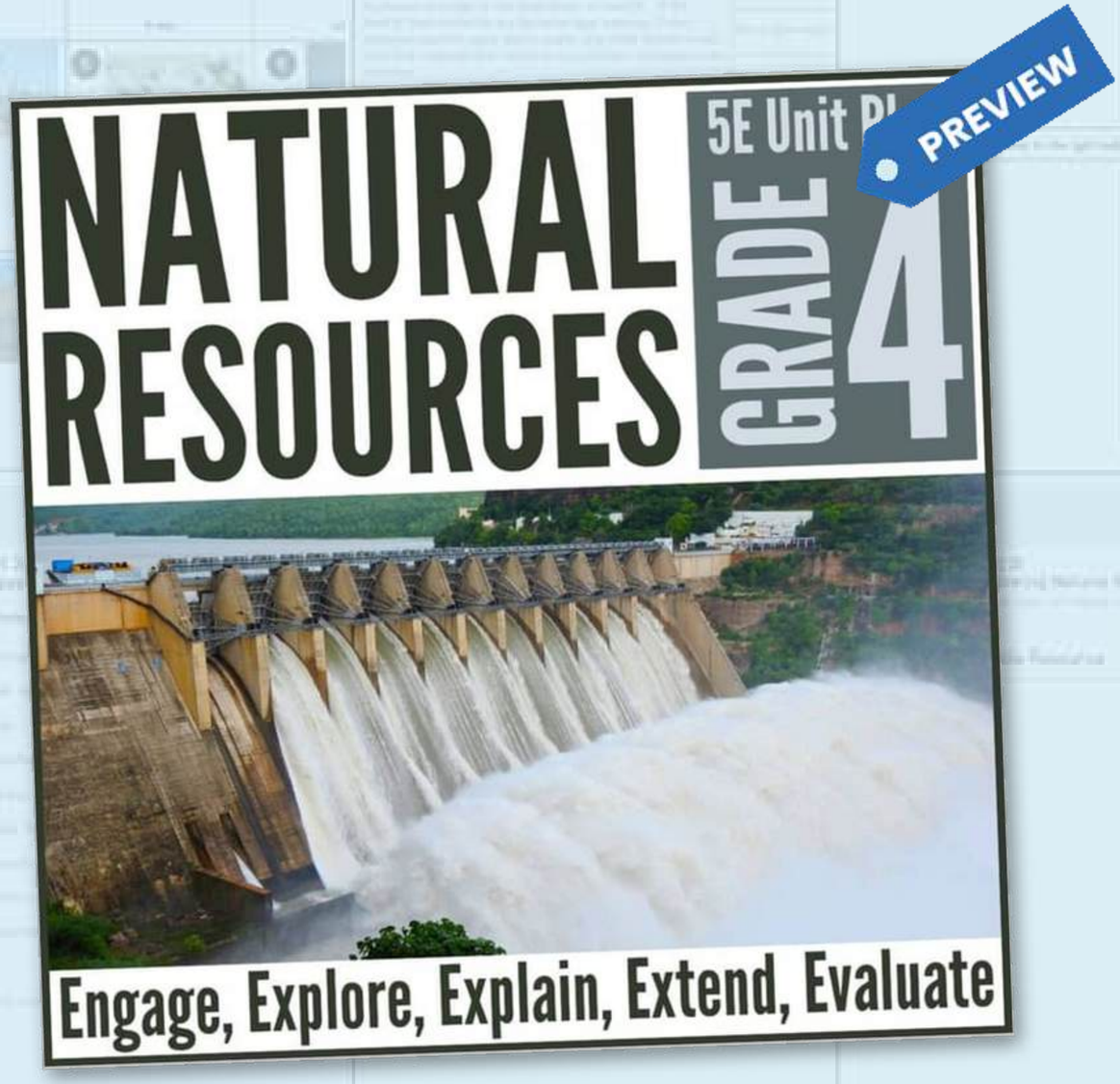


A Complete 5E Science Unit with Lesson Plans

4TH GRADE

NATURAL RESOURCES

Engage, Explore, Explain, Extend, Evaluate

NGSS 4-ESS3-1

KEEP SCROLLING TO SEE WHAT'S INSIDE!

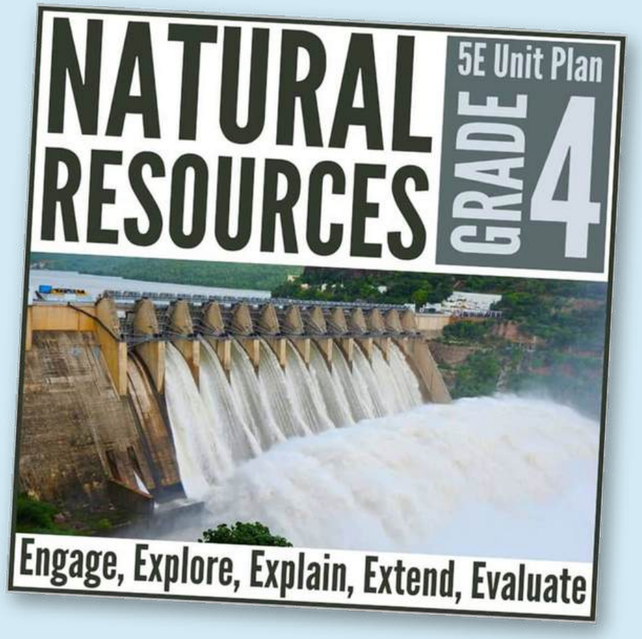
WHAT'S INCLUDED

5E NATURAL RESOURCES UNIT

- 210+ Page 5E Unit Plan
- Lesson Plans for All 5 Phases
- Teacher Notes and Misconceptions
- Materials Checklist and 4 Timelines
- Hands-On Wind Turbine and Recycling Activities
- Reading Passages on Natural Resources
- Vocabulary Cards and Big Idea Posters
- Exit Tickets in 3 Formats
- Performance Assessment and Model
- Answer Keys for Student Pages
- Google Slides and Google Forms Versions



UNIT AT A GLANCE



- Students build a wind turbine, recycle paper, and compare renewable and nonrenewable resources.
- Teacher background, lesson plans, and student pages in every phase.
- Aligned to NGSS 4-ESS3-1.

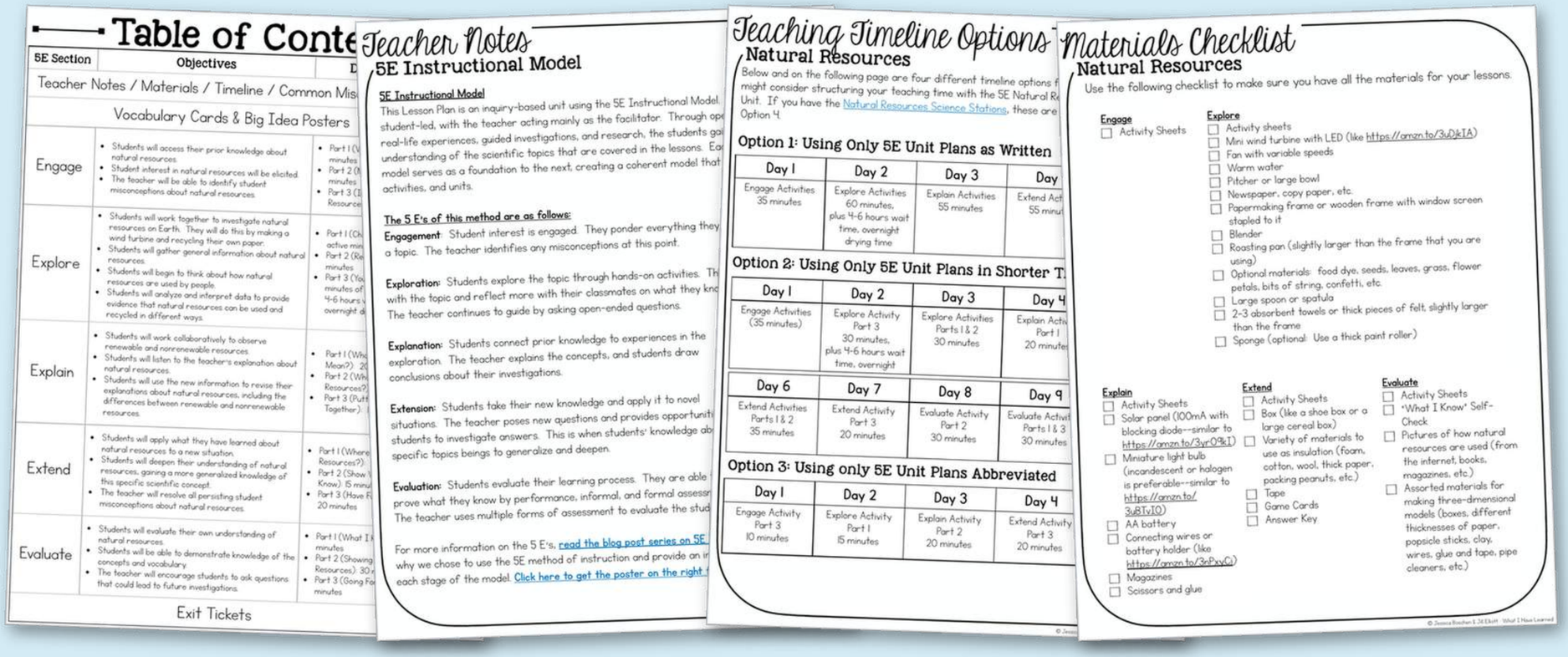


Table of Contents **Teacher Notes** **Timeline Options** **Materials Checklist**

ENGAGE



Teacher background, lesson plans, student pages, and answer key

E E E E E

Spark curiosity about natural resources

1 What Is This?

Students study pictures of natural resources and explain how people use them.

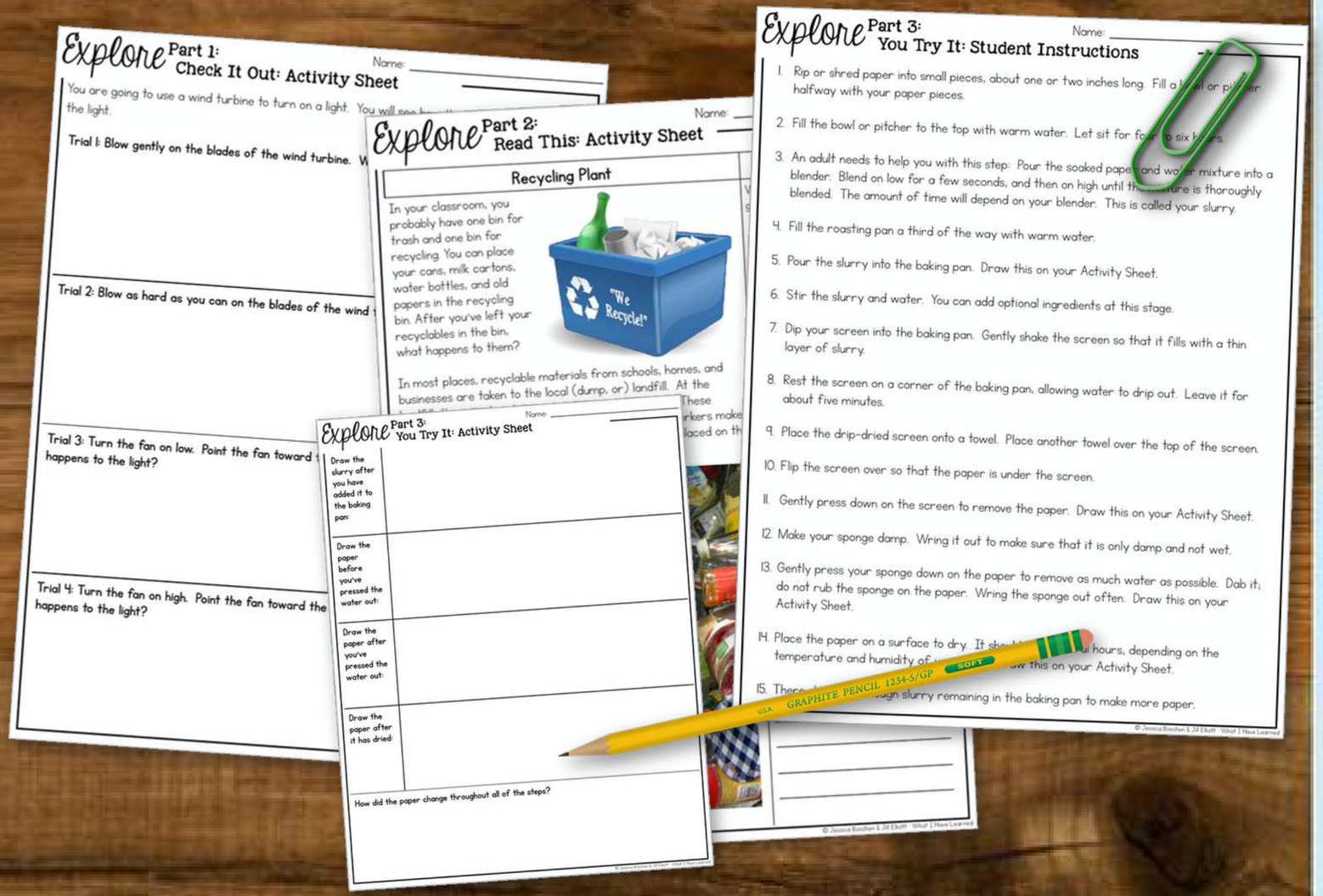
2 My Experiences

Students identify energy and natural resources they use in everyday life.

3 Introducing Natural Resources

Students sort examples and begin asking questions about resources.

EXPLORE



Teacher background, lesson plans, student pages, and answer key

E E E E E

Investigate wind power and recycling

1 Check It Out

Students use a wind turbine to investigate how wind speed affects a light.

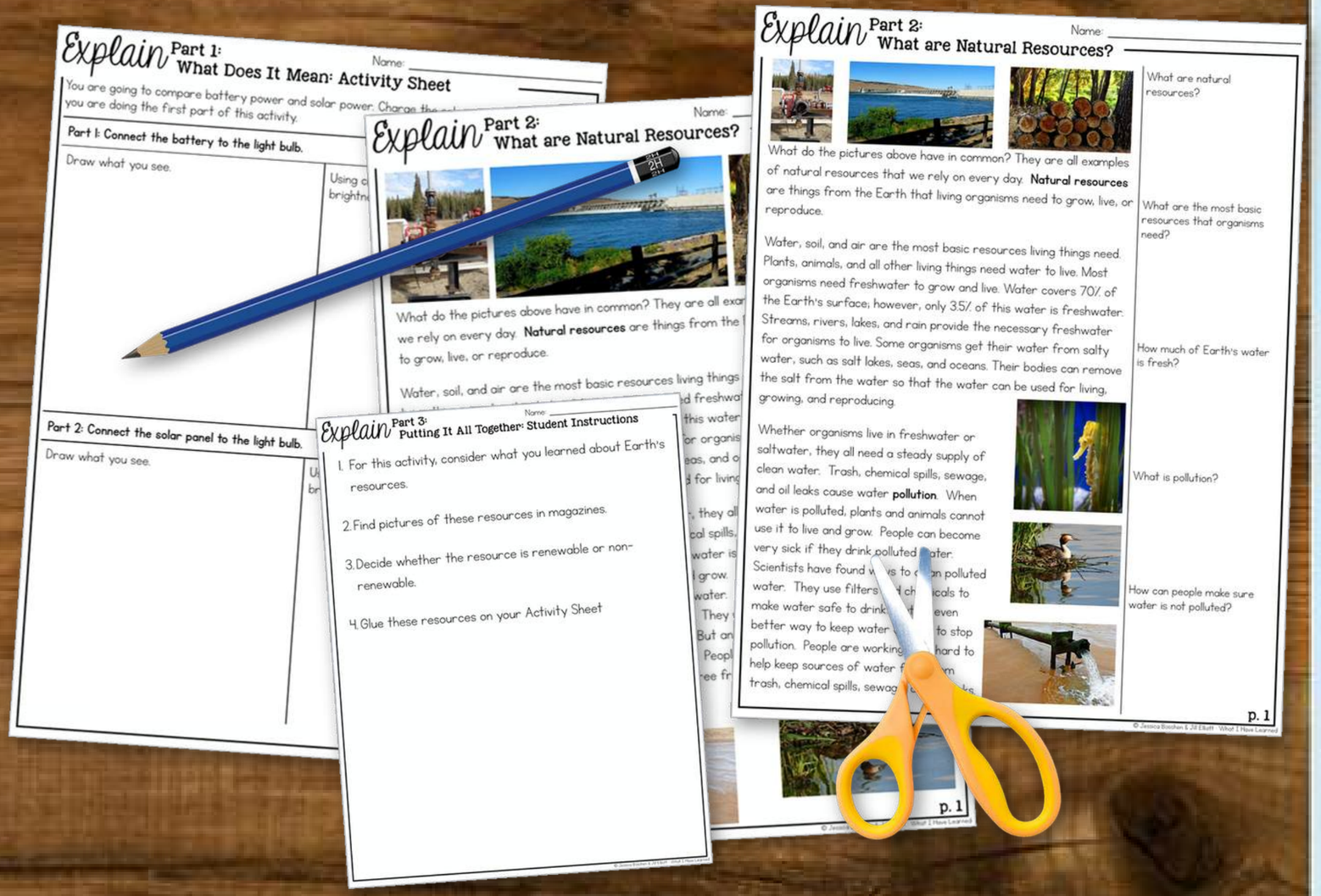
2 Read This

Students read about recycling plants and take notes on how materials are separated.

3 You Try It

Students make paper and record what happens during the process.

EXPLAIN



Teacher background, lesson plans, student pages, and answer key

E E E E E

Build explanations from renewable resources

1 What Does It Mean?

Students connect a battery and light bulb, then describe what they observe.

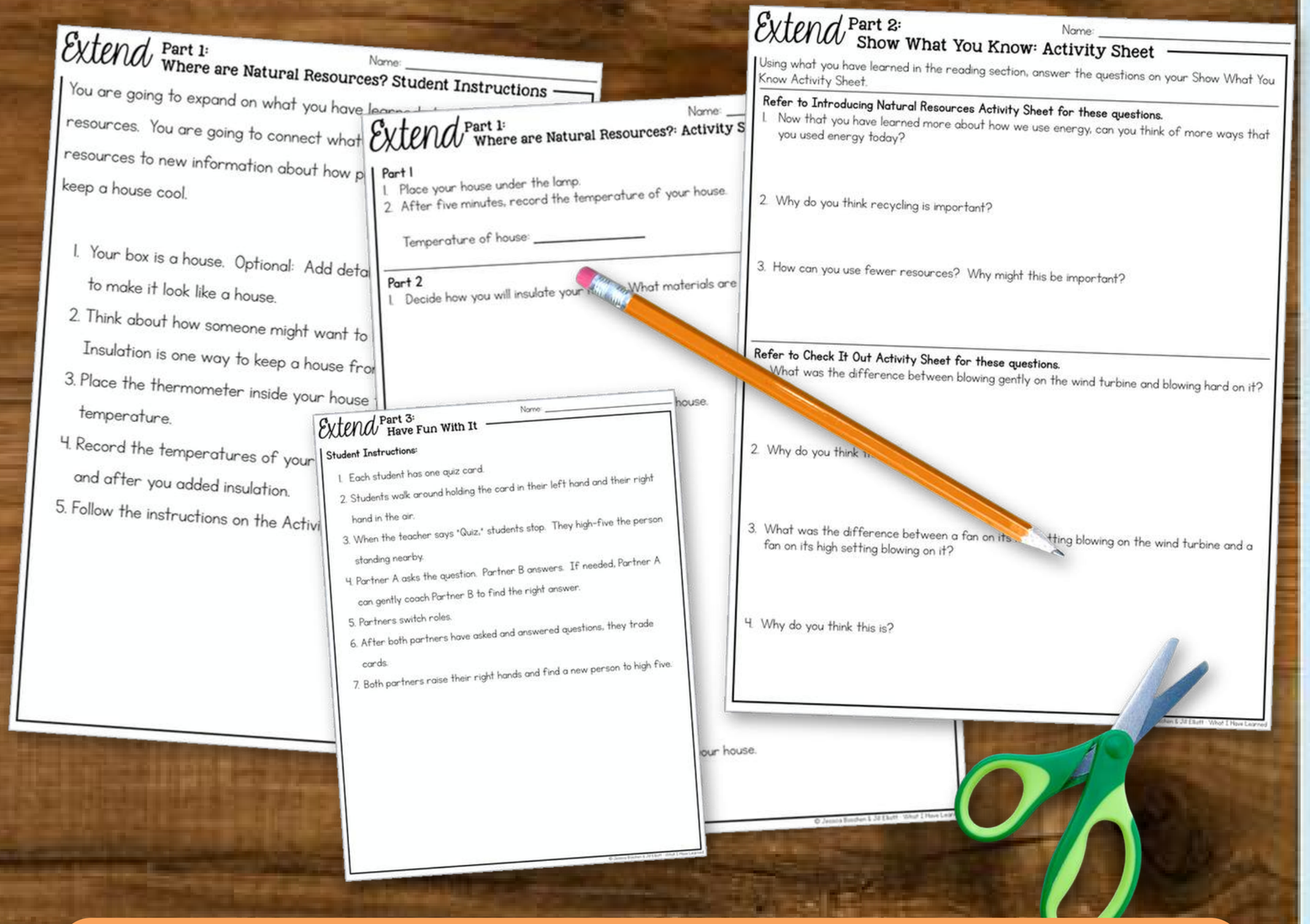
2 What Are Natural Resources?

Students read about renewable and nonrenewable resources and their uses.

3 Putting It All Together

Students organize evidence and explain how resource use affects the environment.

EXTEND



Teacher background, lesson plans, student pages, and answer key

E E E E E

Apply natural resources to new situations

1 Where Are Natural Resources?

Students apply what they learned to a community and its resource needs.

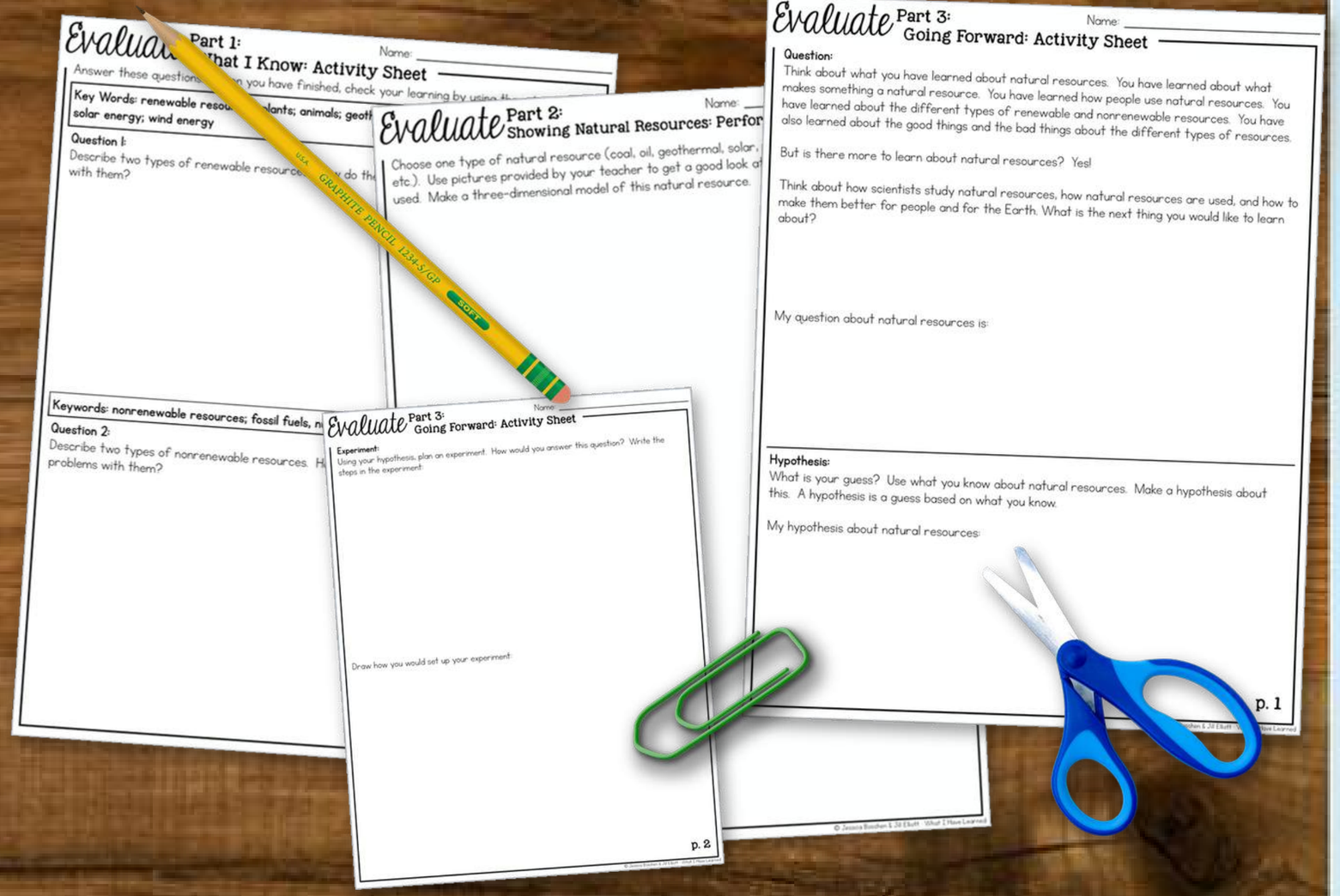
2 Show What You Know

Students use evidence from the unit to explain natural resources.

3 Have Fun With It

Students review vocabulary and concepts with a question game.

EVALUATE



Teacher background, lesson plans, student pages, and answer key

E E E E E

Show understanding with resource evidence

1 What I Know

Students answer questions about key concepts and vocabulary.

2 Showing Natural Resources

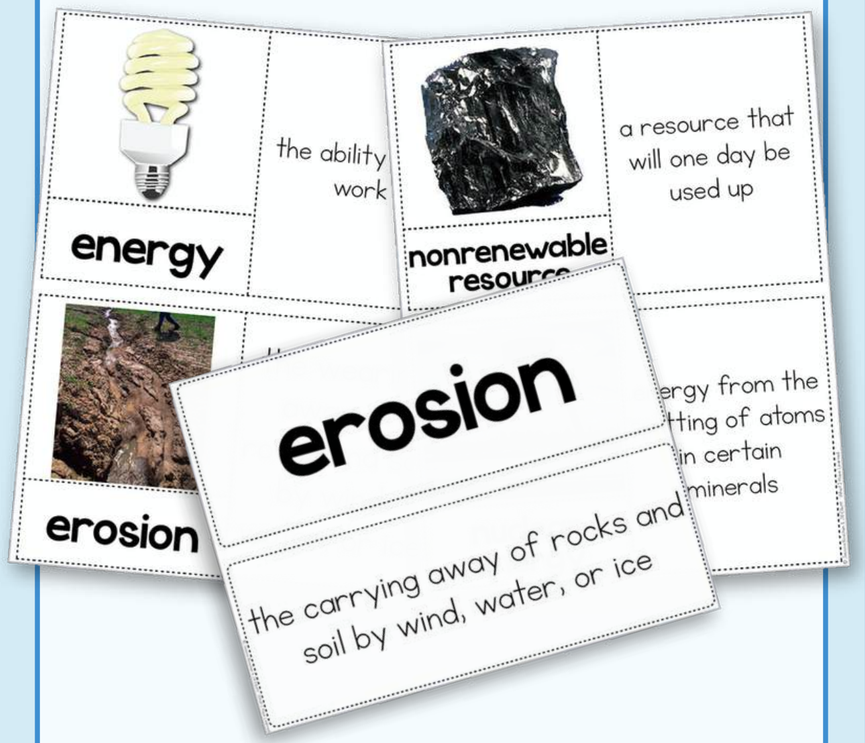
Students sort examples and show how people use a natural resource.

3 Going Forward

Students write a question and plan an investigation about natural resources.

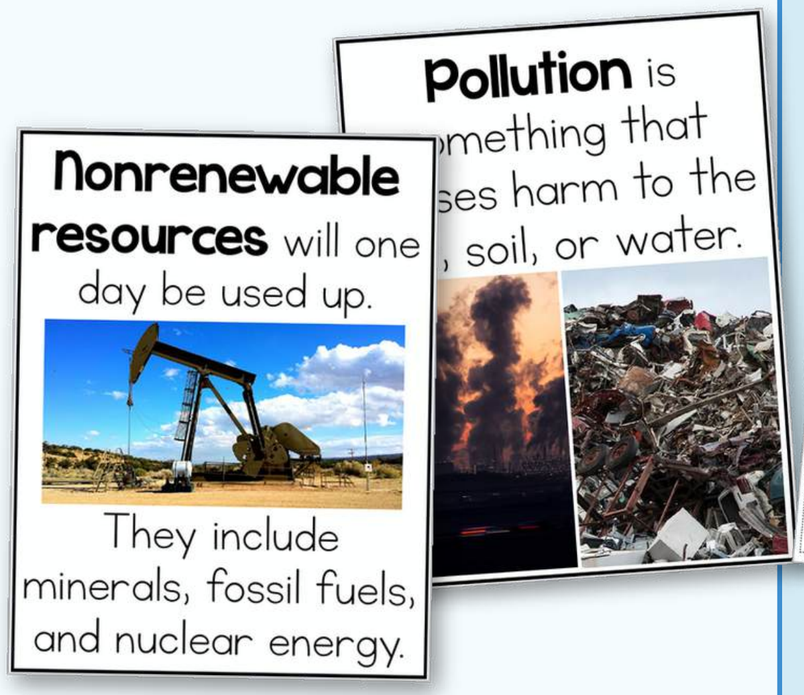
VOCABULARY, POSTERS & EXIT TICKETS

VOCABULARY CARDS



Picture cards and word cards for renewable resources, fossil fuels, energy, and related vocabulary.

BIG IDEA POSTERS



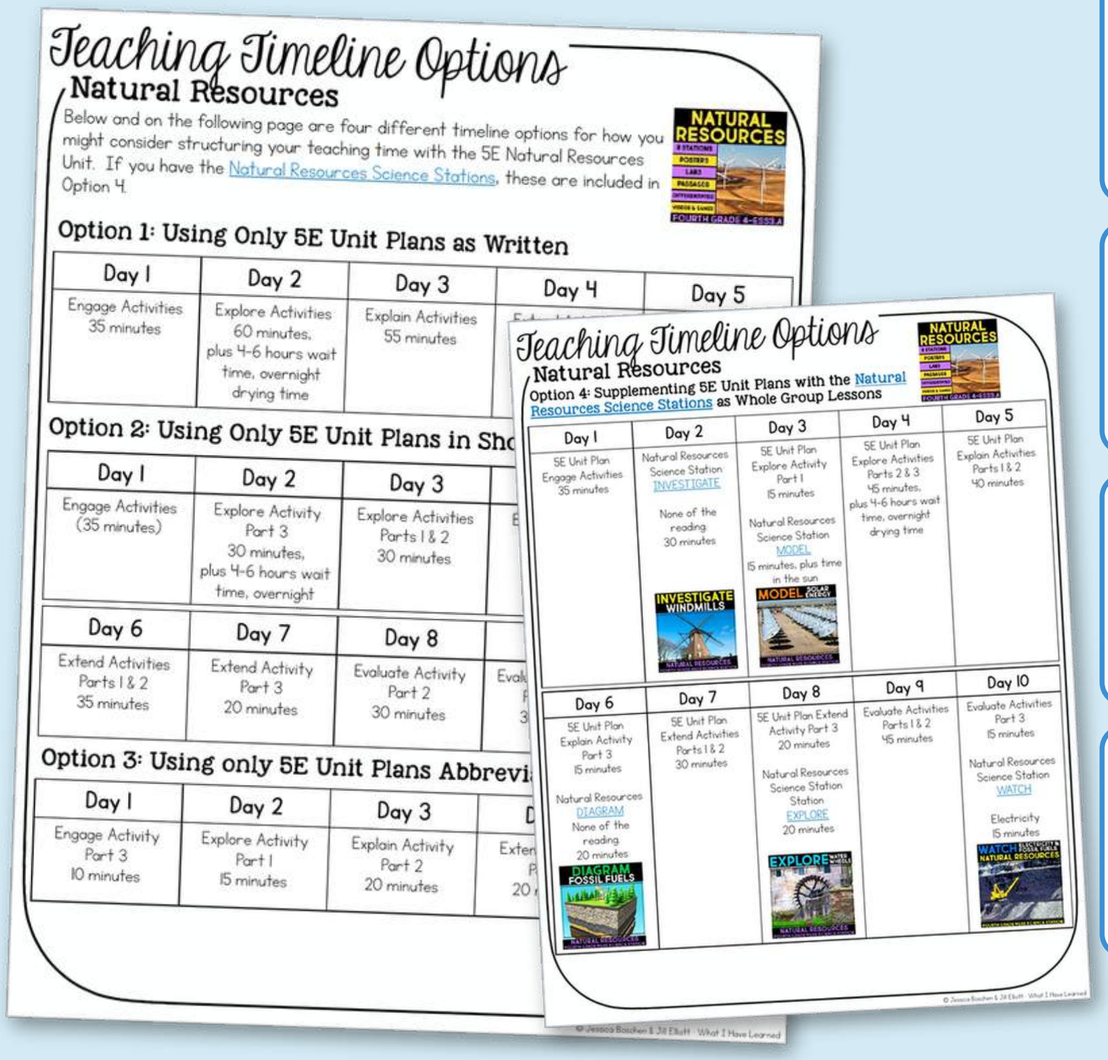
Big idea posters on energy, renewable and nonrenewable resources, and environmental effects.

EXIT TICKETS



Exit-ticket topics in short answer, fill-in-the-blank, and multiple-choice formats.

WAYS TO USE IN YOUR CLASSROOM



1

Whole-Class 5E Unit

Teach one phase a day over 5 days as written, with 35 to 60 minutes per phase.

2

Shorter Time Blocks

Spread the unit across 9 days when science minutes are limited, including time for paper to dry.

3

Alongside Science Stations

Add the Natural Resources Science Stations for a 10-day plan.

4

Formative Checks

Use the exit tickets throughout the unit and pair the performance activity with a final explanation.

TEACHING TIMELINE OPTIONS

Option 1 — 5 days
As Written

Day 1	Day 2	Day 3	Day 4	Day 5
Engage	**Explore**	**Explain**	**Extend**	**Evaluate**
35 min	60 min +4-6 hr wait	55 min	55 min	60 min

Option 2 — 9 days
Shorter Time Blocks

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9
Engage	**Explore 3**	**Explore 1-2**	**Explain 1**	**Explain 2-3**	**Extend 1-2**	**Extend 3**	**Evaluate 2**	**Evaluate 1 & 3**
35 min	30 min +4-6 hr wait	30 min	20 min	35 min	35 min	20 min	30 min	30 min

Option 3 — 5 days
Abbreviated

Day 1	Day 2	Day 3	Day 4	Day 5
Engage 3	**Explore 1**	**Explain 2**	**Extend 3**	**Evaluate 1**
10 min	15 min	20 min	20 min	15 min

Option 4 — 9 days
With Science Stations

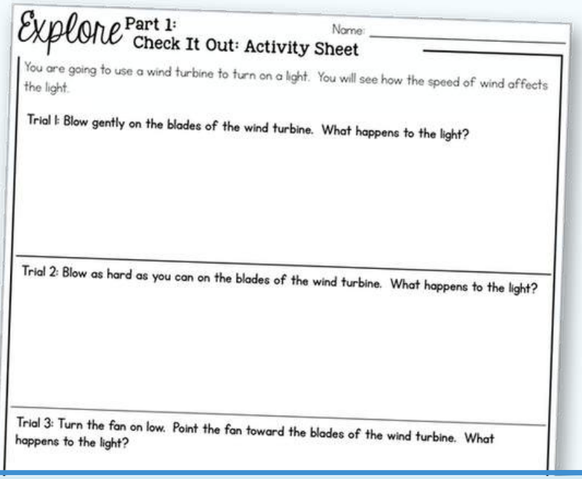
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9
Engage	**Explore Station**	**Explore 1**	**Explore 2-3**	**Explain 1-2**	**Diagram**	**Extend 1-2**	**Extend 3**	**Evaluate 1-2**
35 min	30 min	15 min	45 min +15 station	40 min	20 min	30 min	20 min +20 station	45 min +15 station

Orange days are Science Station lessons. Magenta notes are extra station activities you can add that day.

YOU WILL LOVE THIS BECAUSE

Hands-On From Day One

Students build a wind turbine, recycle paper, and sort renewable and nonrenewable resources.


Explore Part 1: Check It Out: Activity Sheet

Name: _____

You are going to use a wind turbine to turn on a light. You will see how the speed of wind affects the light.

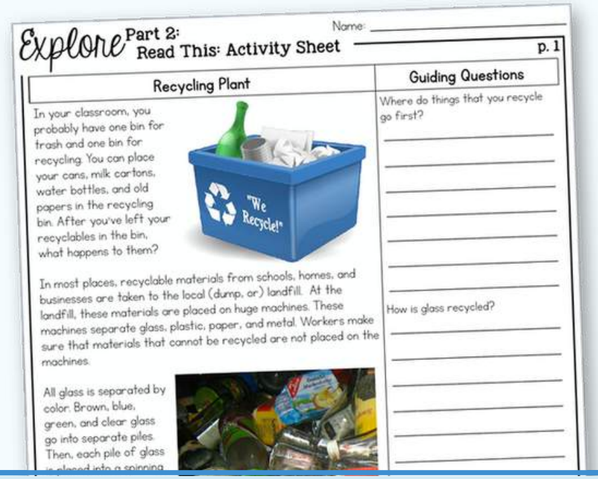
Trial 1: Blow gently on the blades of the wind turbine. What happens to the light?

Trial 2: Blow as hard as you can on the blades of the wind turbine. What happens to the light?

Trial 3: Turn the fan on low. Point the fan toward the blades of the wind turbine. What happens to the light?

Planned and Ready to Teach

Teacher notes, a misconceptions guide, a materials checklist, and answer keys are done for you.


Explore Part 2: Read This: Activity Sheet

Name: _____

p. 1

Recycling Plant

In your classroom, you probably have one bin for trash and one bin for recycling. You can place your cans, milk cartons, water bottles, and old papers in the recycling bin. After you've left your recyclables in the bin, what happens to them?

"We Recycle!"

In most places, recyclable materials from schools, homes, and businesses are taken to the local (dump, or) landfill. At the landfill, these materials are placed on huge machines. These machines separate glass, plastic, paper, and metal. Workers make sure that materials that cannot be recycled are not placed on the machines.

All glass is separated by color. Brown, blue, green, and clear glass go into separate piles. Then, each pile of glass

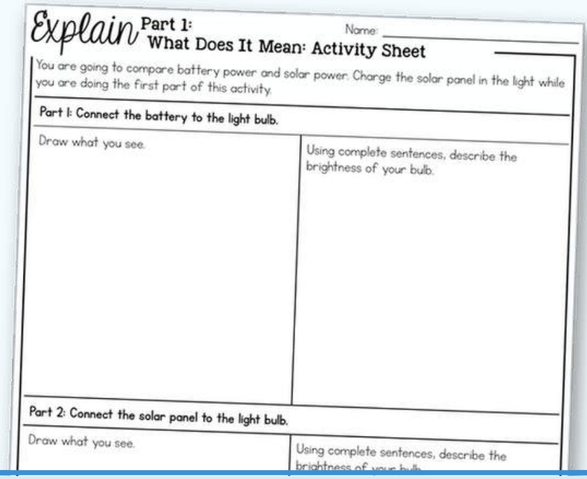
Guiding Questions

Where do things that you recycle go first?

How is glass recycled?

Fits Your Schedule

Choose from 4 timeline options, and use the Google Slides and Google Forms versions for a print or digital classroom.


Explain Part 1: What Does It Mean: Activity Sheet

Name: _____

You are going to compare battery power and solar power. Charge the solar panel in the light while you are doing the first part of this activity.

Part 1: Connect the battery to the light bulb.

Draw what you see.

Using complete sentences, describe the brightness of your bulb.

Part 2: Connect the solar panel to the light bulb.

Draw what you see.

Using complete sentences, describe the

TEACHERS LOVE IT!

★★★★★

Loved using this unit plan with my students. They were engaged and it had everything I needed to teach the unit.

Tessa Grund

★★★★★

Students loved this activity. Very informative and interactive.

Cultivating Curiosity with Ms C

★★★★★

I love these resources. They are so helpful and my students love completing the work here.

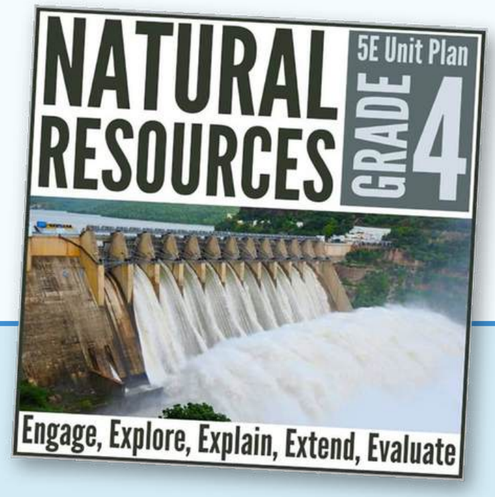
Felicia C.





READY FOR YOUR CLASSROOM

- **Instant digital download**
- **Print and use the activities**
- **Google Slides and Forms versions**

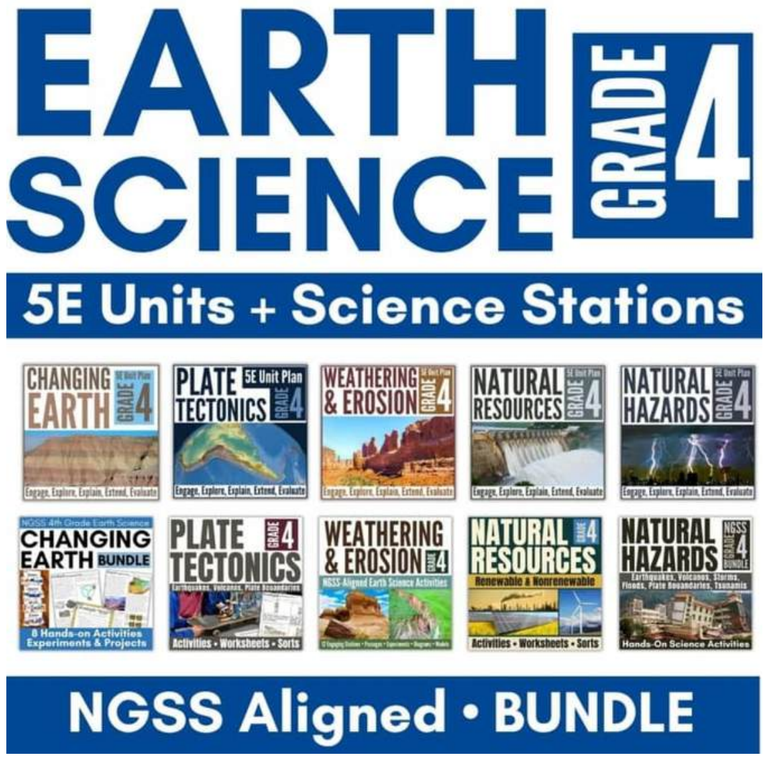


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Save with a topic bundle or the full-year bundle.

TOPIC BUNDLE

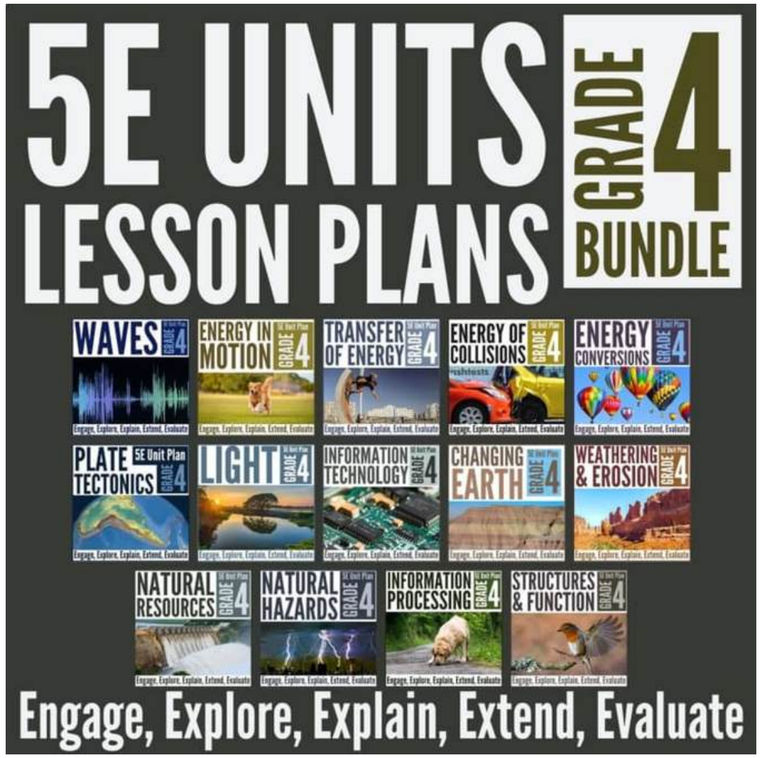
GOOD VALUE



SEE THE BUNDLE

FULL-YEAR BUNDLE

BEST VALUE



SEE THE BUNDLE

My passion is making learning accessible to all students.
I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections.
I love figuring out the small components that build up to the big ideas and helping students see it all.



teach MATH | teach SCIENCE | teach READING | teach WRITING

What I have LEARNED