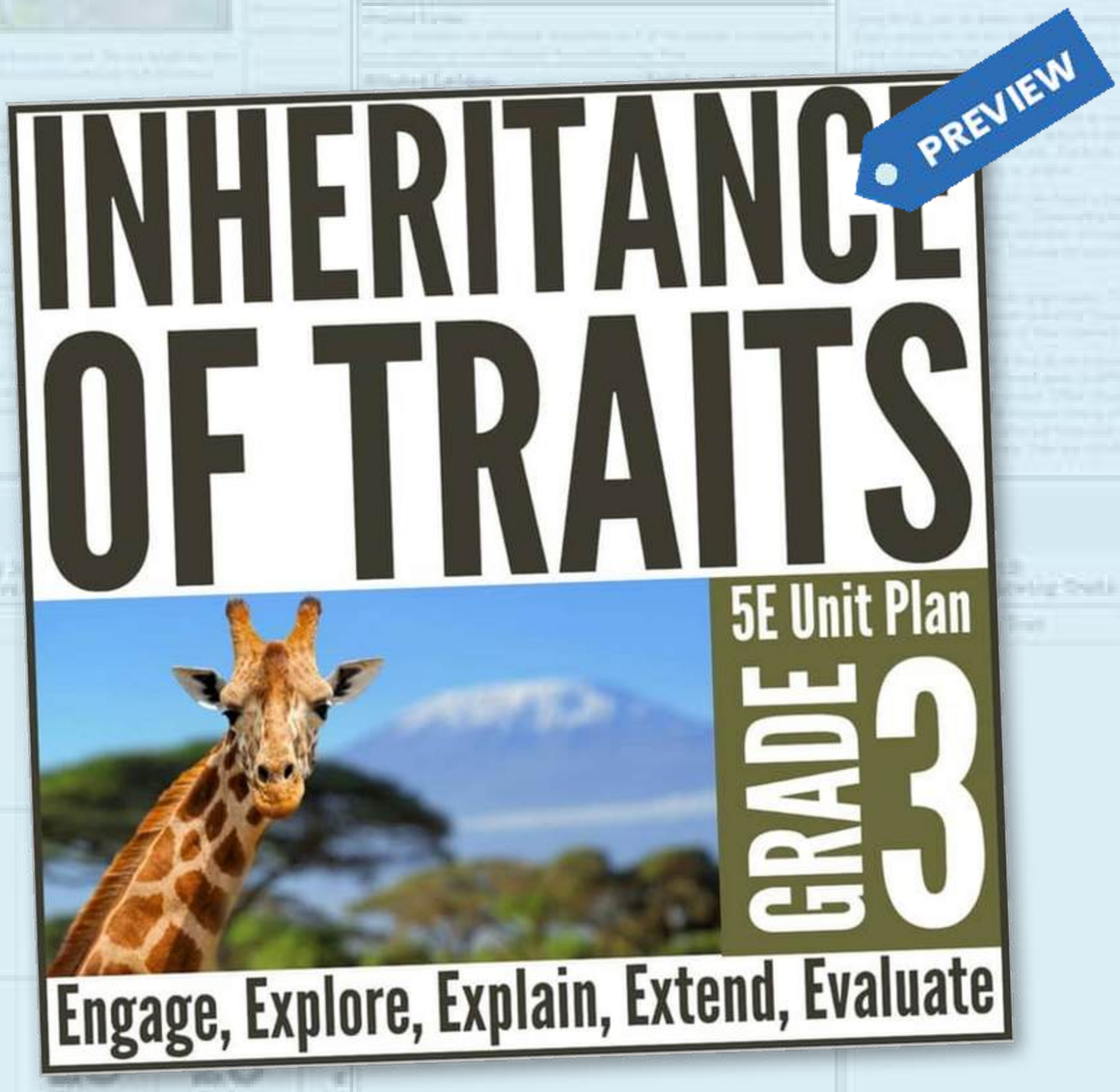


A Complete 5E Science Unit with Lesson Plans

3RD GRADE

INHERITANCE OF TRAITS

Engage, Explore, Explain, Extend, Evaluate

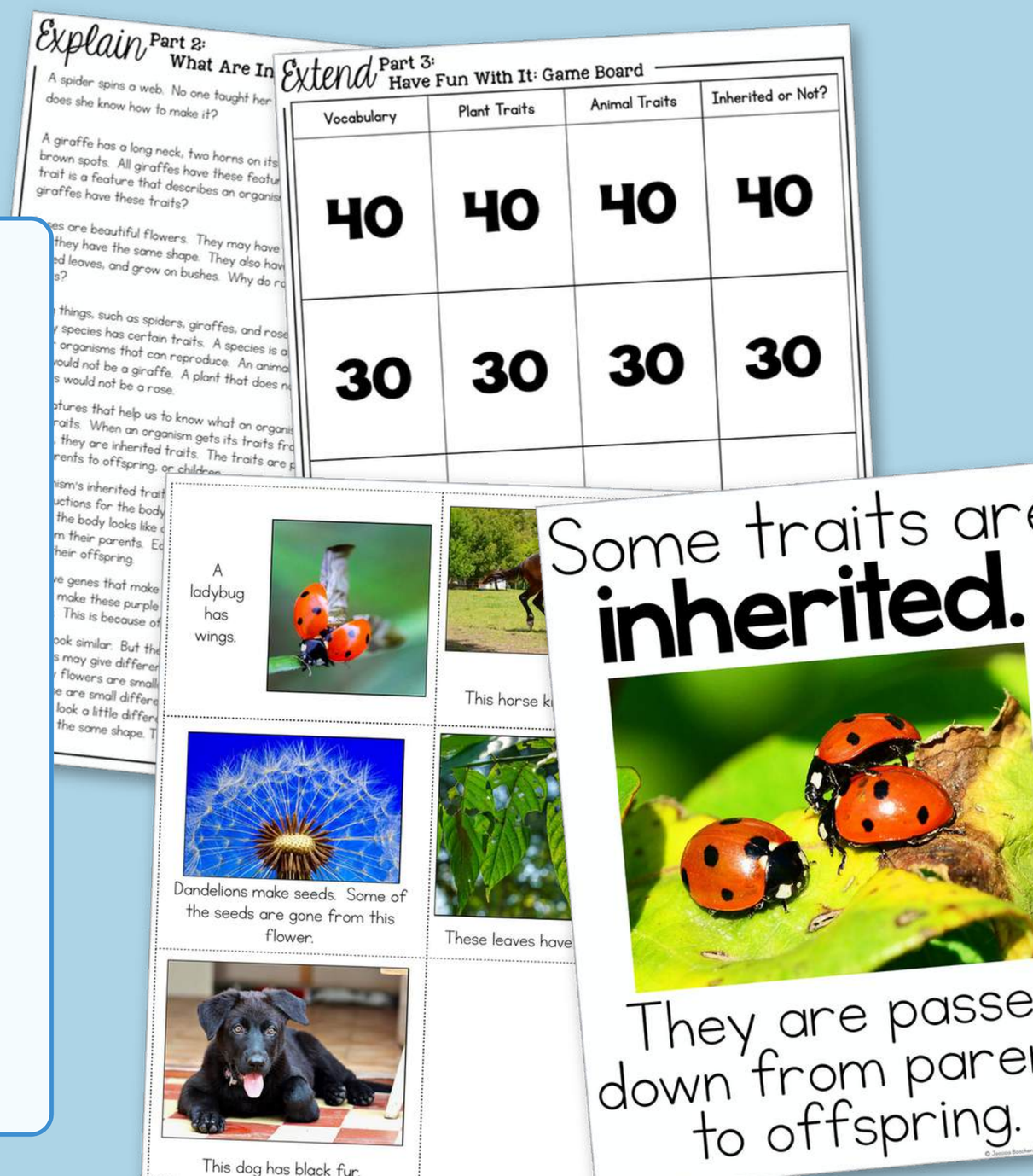
NGSS 3-LS3-1

KEEP SCROLLING TO SEE WHAT'S INSIDE!

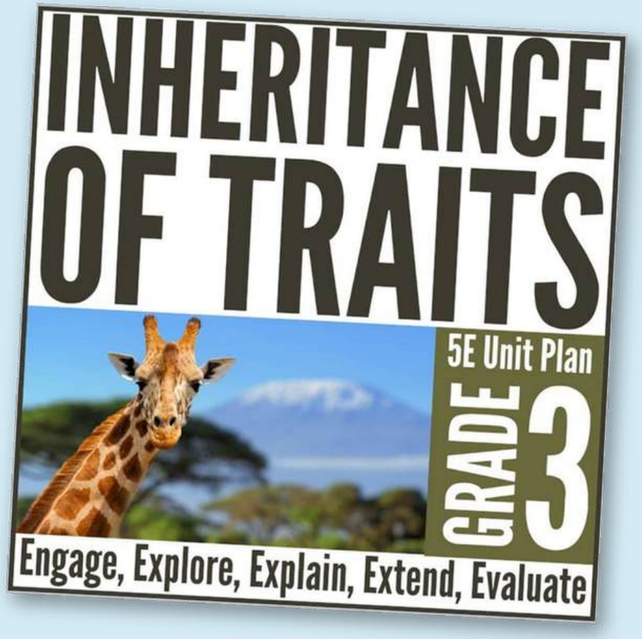
WHAT'S INCLUDED

5E INHERITANCE OF TRAITS UNIT

- 170+ Page 5E Unit Plan
- Lesson Plans for All 5 Phases
- Teacher Notes and Misconceptions
- Materials Checklist and 4 Timelines
- Plant and Animal Trait Investigations
- Reading Passages on Inherited Traits
- Vocabulary Cards and Big Idea Posters
- Exit Tickets in 3 Formats
- Performance Assessment
- Answer Keys for Student Pages
- Google Slides and Google Forms Versions



UNIT AT A GLANCE



- Students match parents to offspring, compare their own traits, and observe berries.
- Teacher background, lesson plans, and student pages in every phase.
- Aligned to NGSS 3-LS3-1.

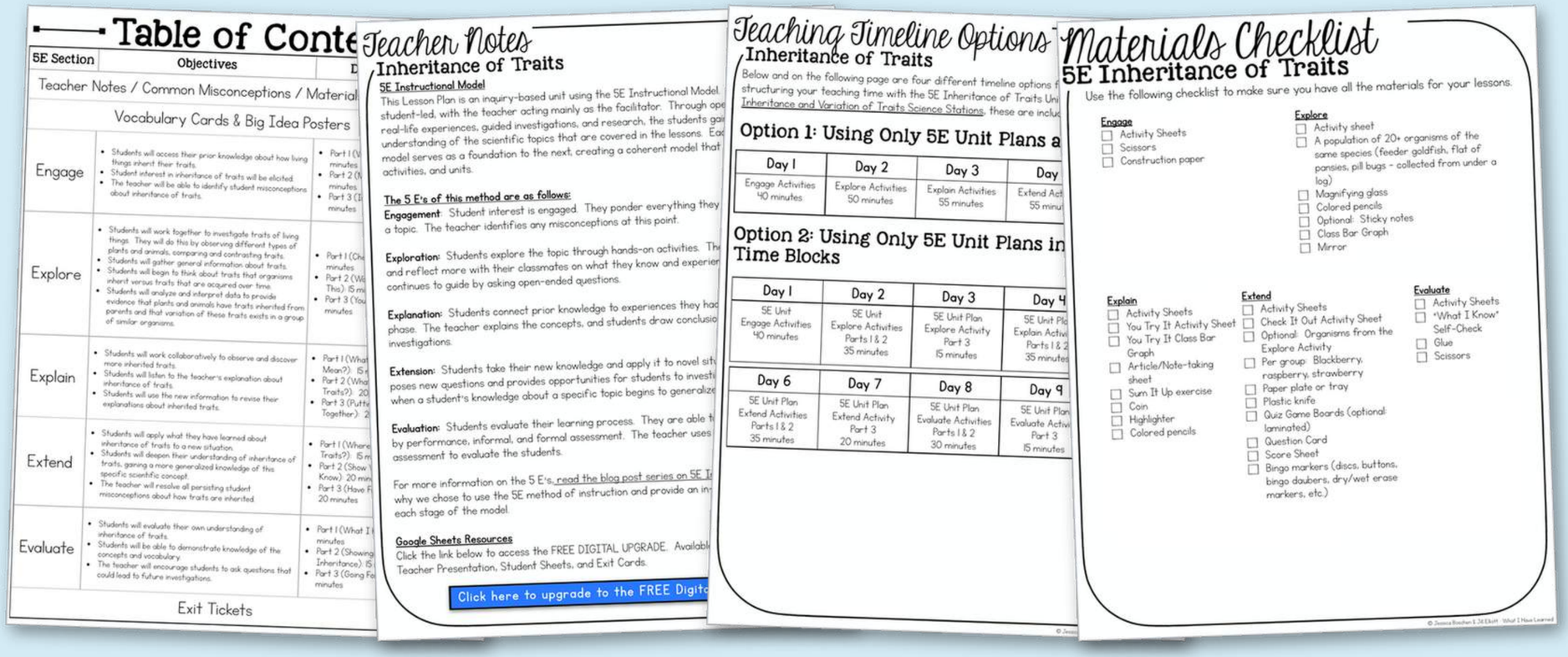
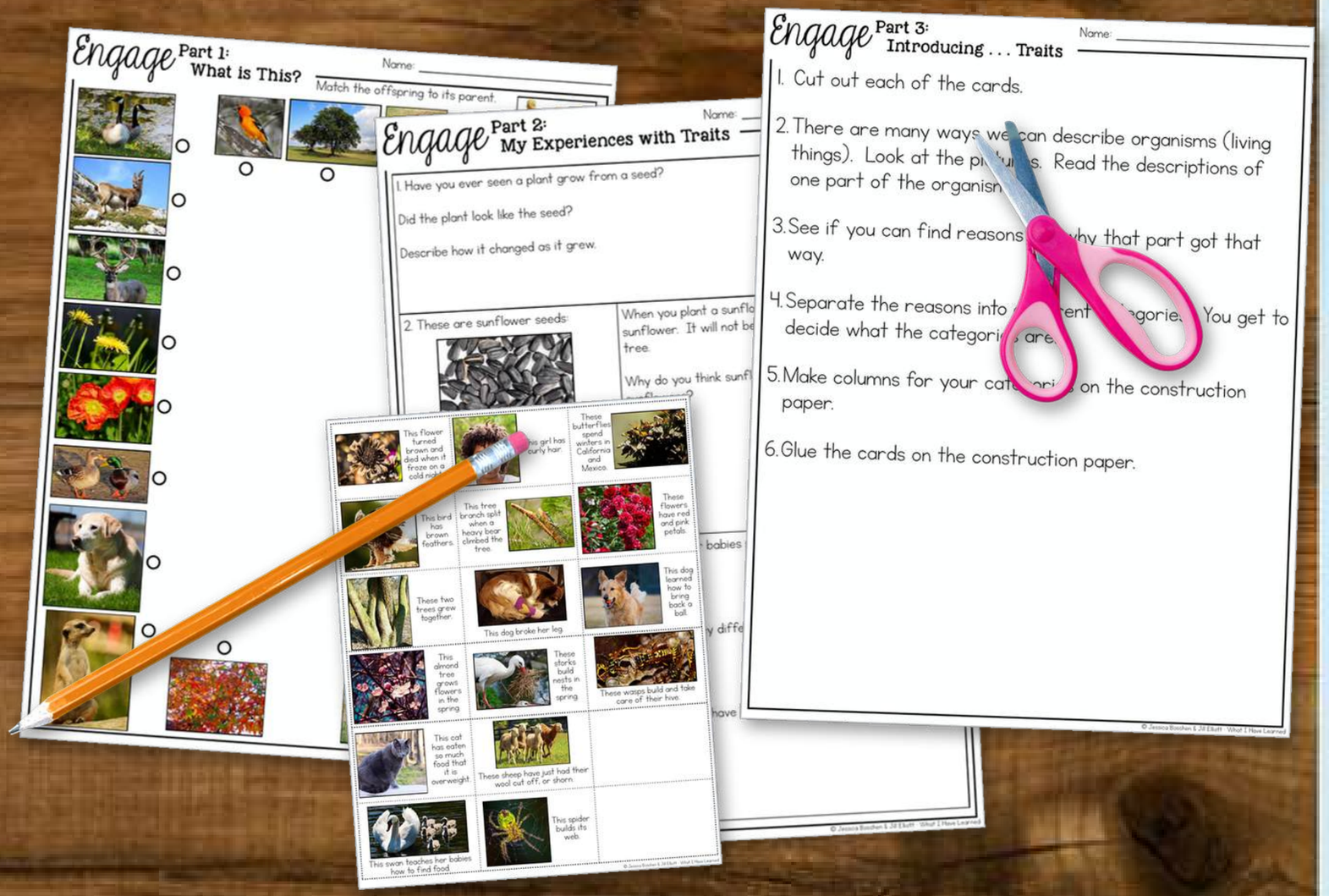


Table of Contents **Teacher Notes** **Timeline Options** **Materials Checklist**

ENGAGE



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

E E E E E

Spark curiosity with parents and offspring

1 What Is This?

Students match each animal or plant offspring to its parent.

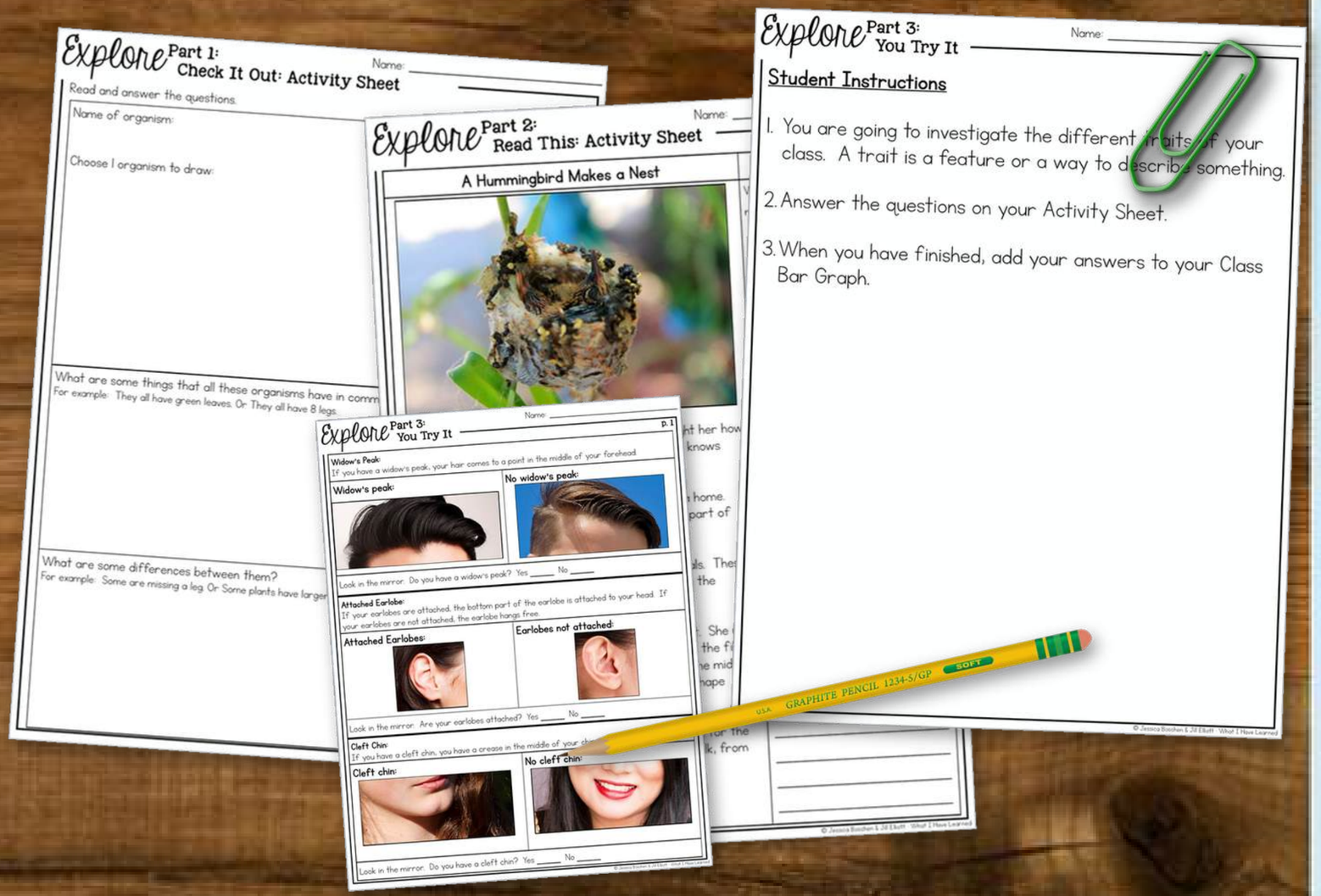
2 My Experiences

Students look at sunflowers and a mother cat with her kittens and explain what is alike and different.

3 Introducing Traits

Students cut out trait cards and sort them into categories they choose.

EXPLORE



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

E E E E E

Investigate traits in organisms and classmates

1 Check It Out

Students compare two organisms and list their similarities and differences.

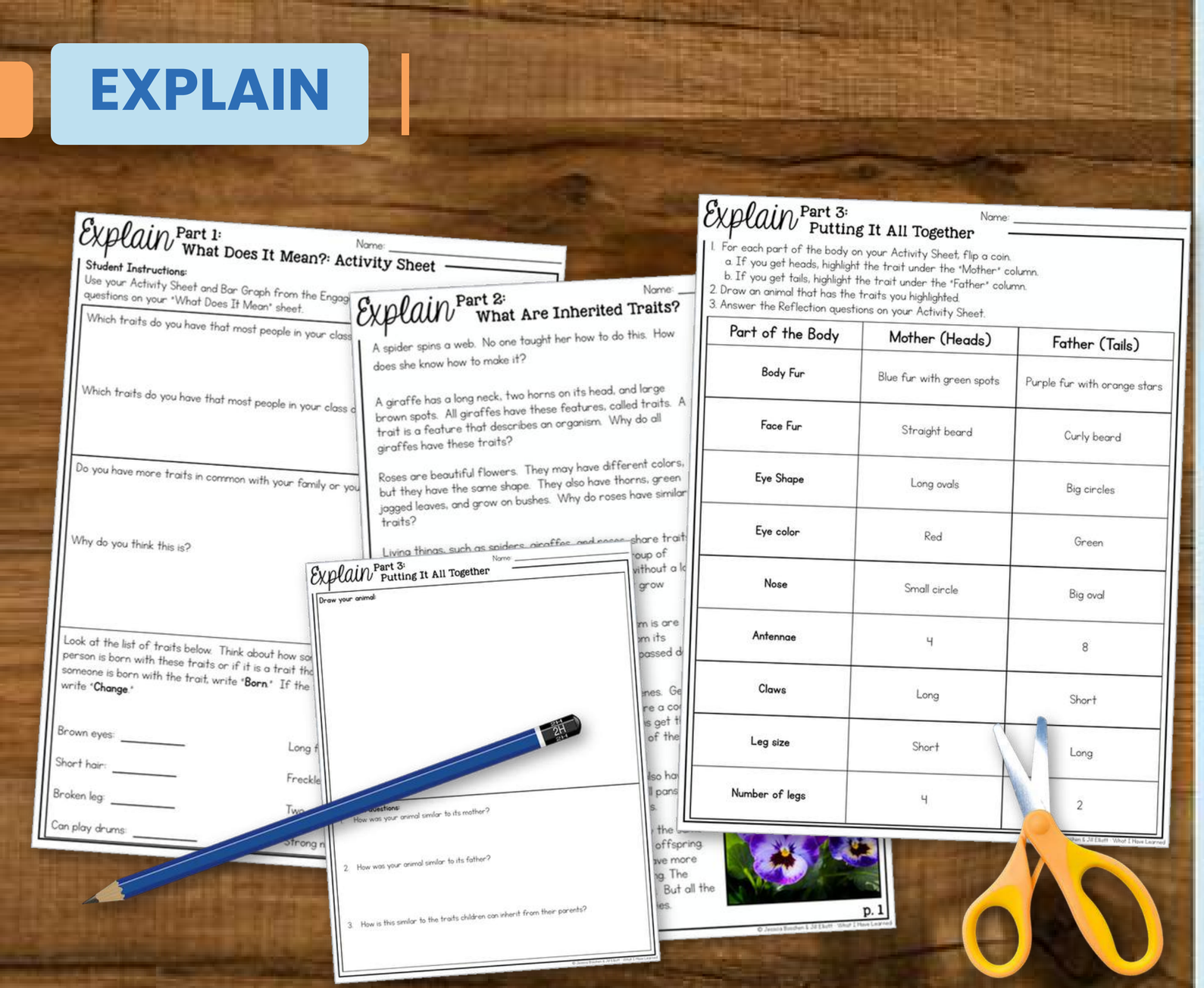
2 Watch and Read This

Students read about how a hummingbird builds a nest no one taught her to make.

3 You Try It

Students check their own traits, like widow's peak and earlobes, and graph the class results.

EXPLAIN



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

E E E E E

Build explanations from evidence

1 What Does It Mean?

Students compare their traits with classmates and family and think about why.

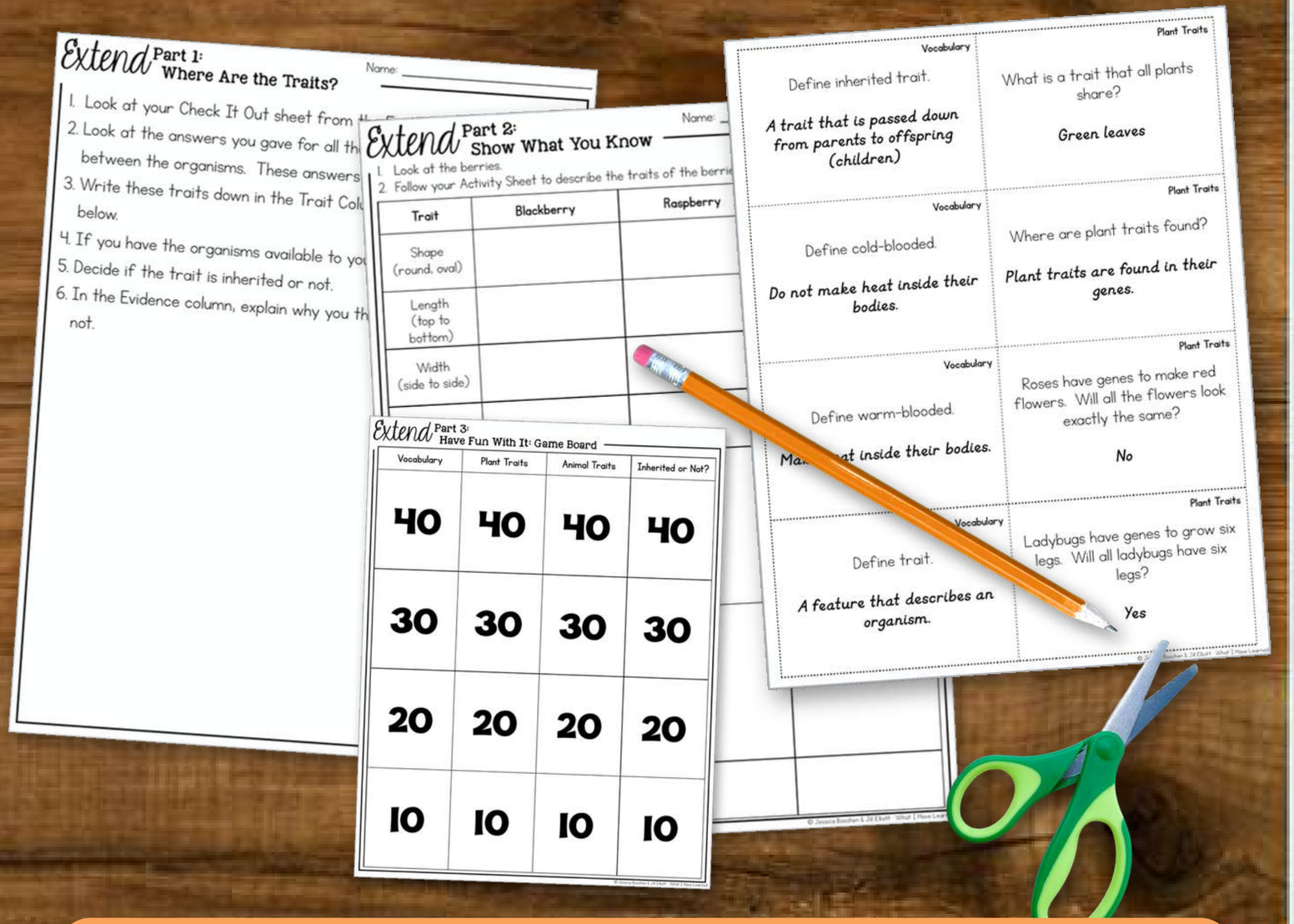
2 What Are Inherited Traits?

Students read about ladybugs, giraffes, roses, and pansies and sum up what they learned.

3 Putting It All Together

Students flip a coin to pick mother or father traits and draw the animal that results.

EXTEND



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

E E E E E

Apply inherited traits to new organisms

1 Where Are the Traits?

Students list the traits they found earlier and decide which ones are inherited.

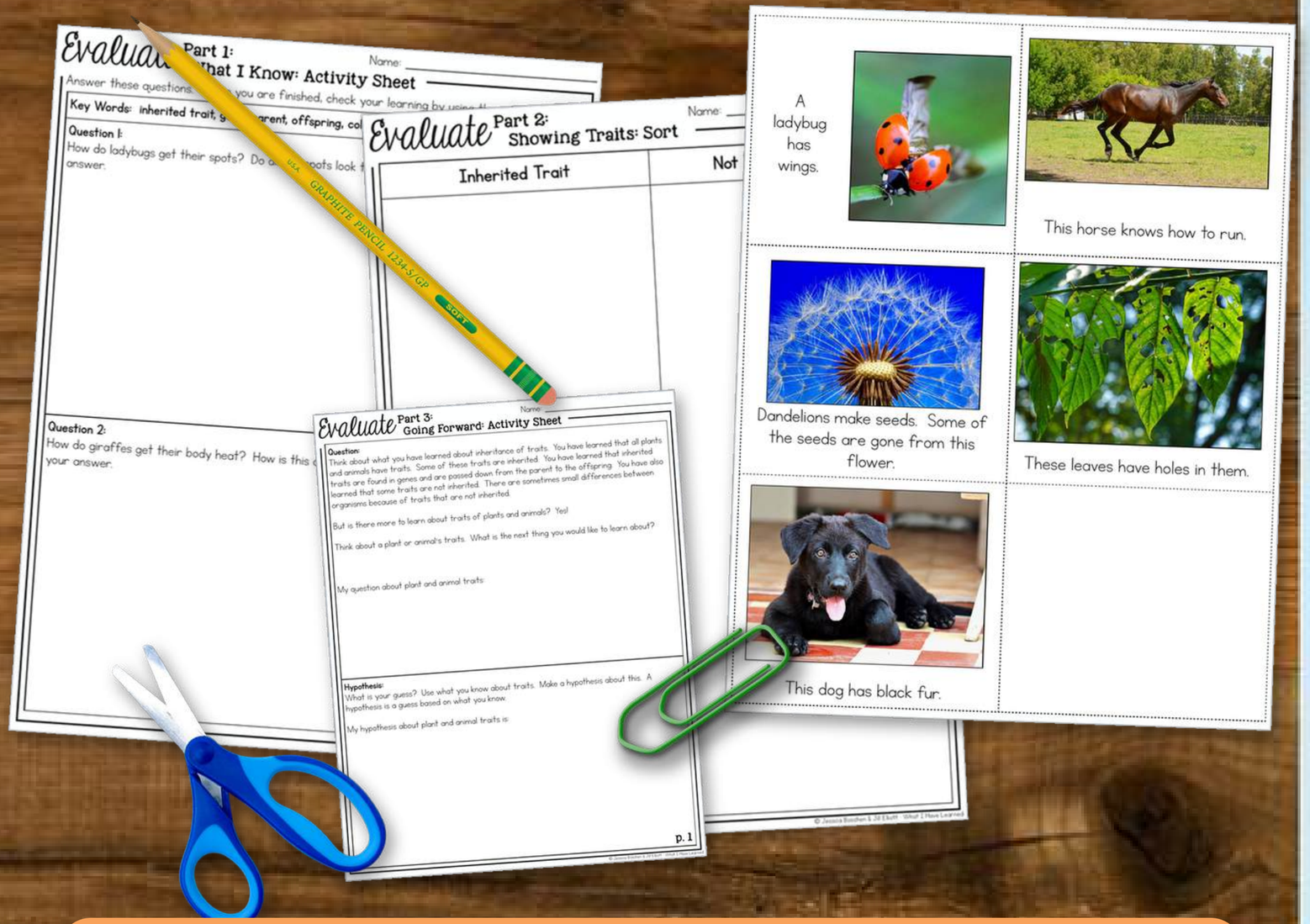
2 Show What You Know

Students compare the traits of blackberries, raspberries, and strawberries.

3 Have Fun With It

Students play a point-card game on vocabulary, plant traits, and animal traits.

EVALUATE



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

E E E E E

Check understanding with evidence

1 What I Know

Students explain how ladybugs get their spots and score themselves with a rubric.

2 Showing Traits

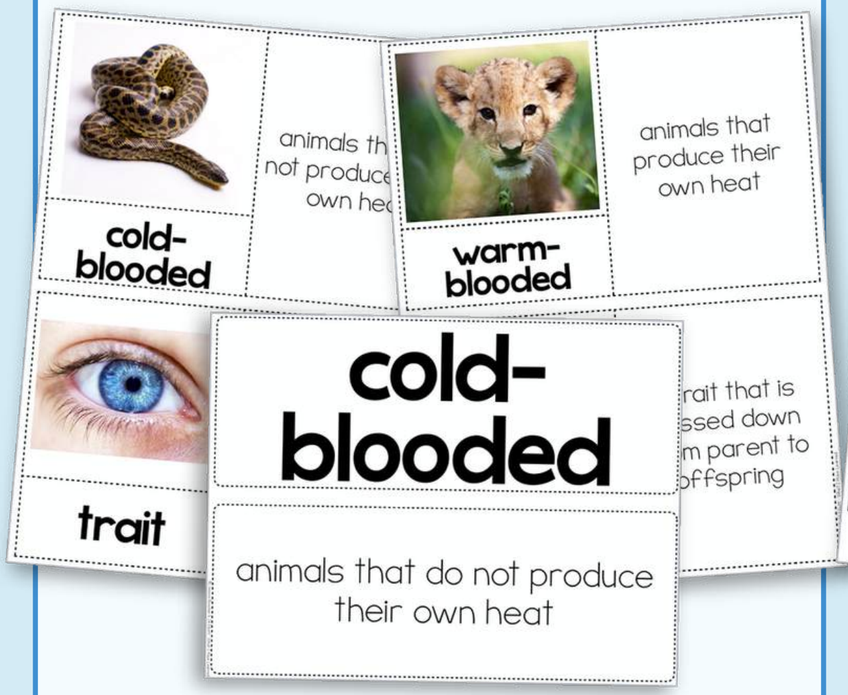
Students sort pictures into inherited and not inherited traits.

3 Going Forward

Students write a new question and hypothesis about plant and animal traits.

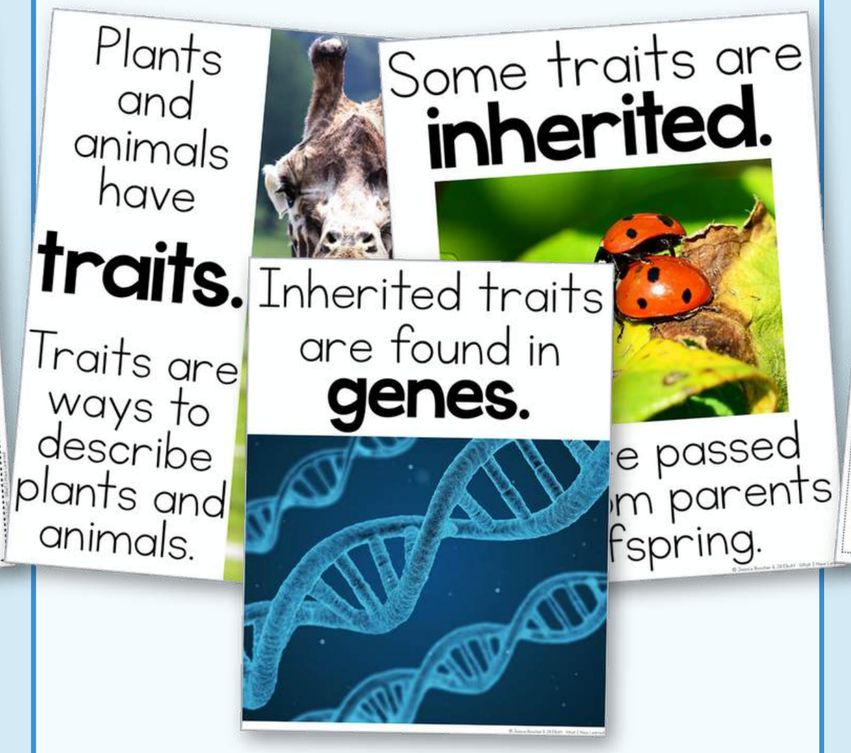
VOCABULARY, POSTERS & EXIT TICKETS

VOCABULARY CARDS



Picture cards and word cards for trait, inherited trait, cold-blooded, and warm-blooded.

BIG IDEA POSTERS



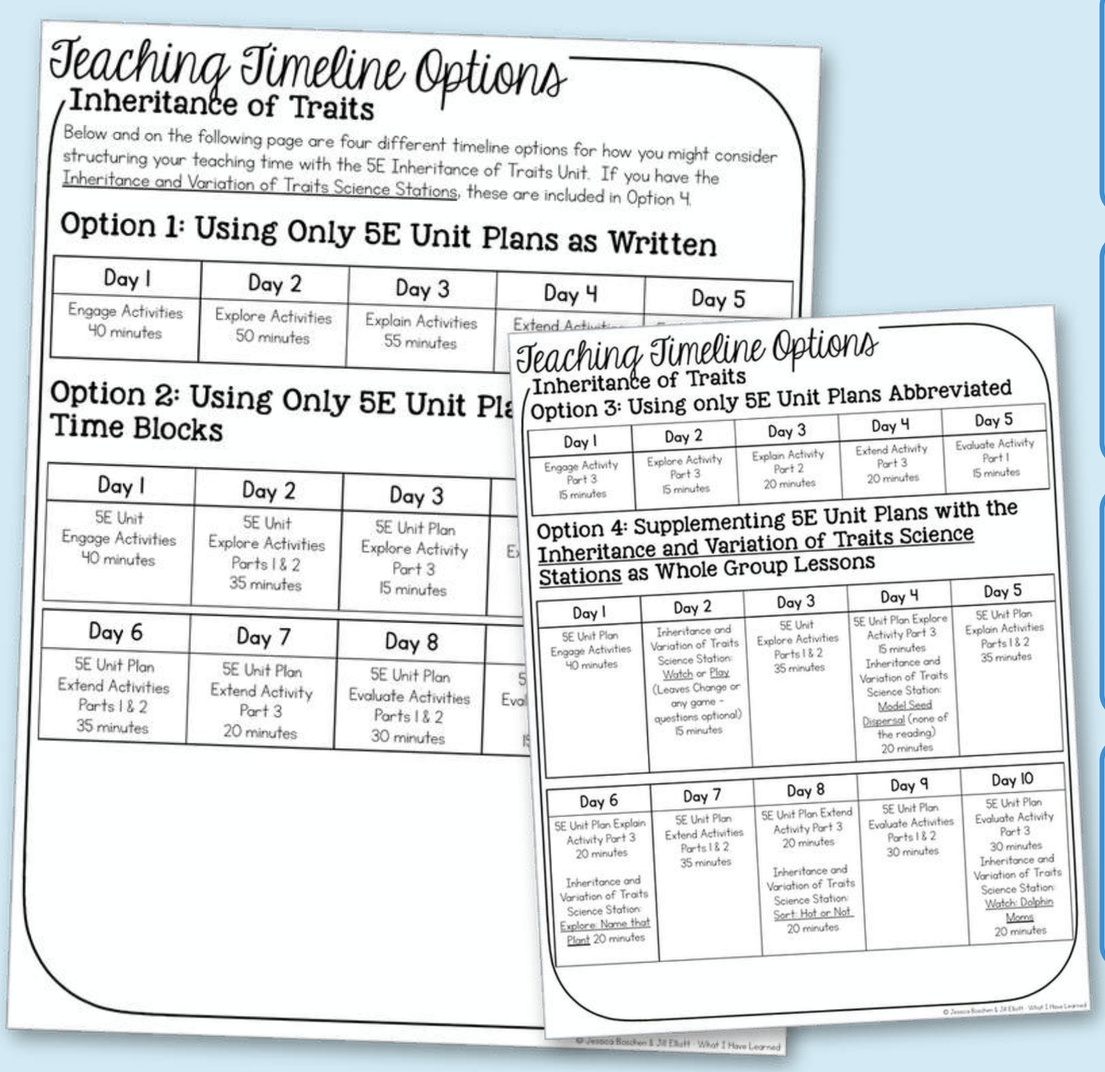
Four posters on traits, inherited traits, genes, and traits that are not inherited.

EXIT TICKETS



11 exit tickets, each in short answer, fill-in-the-blank, and multiple choice formats.

WAYS TO USE IN YOUR CLASSROOM



Teaching Timeline Options

Inheritance of Traits

Below and on the following page are four different timeline options for how you might consider structuring your teaching time with the 5E Inheritance of Traits Unit. If you have the Inheritance and Variation of Traits Science Stations, these are included in Option 4.

Option 1: Using Only 5E Unit Plans as Written

Day 1	Day 2	Day 3	Day 4	Day 5
Engage Activities 40 minutes	Explore Activities 50 minutes	Explain Activities 55 minutes	Extend Activi...	

Option 2: Using Only 5E Unit Pla... Time Blocks

Day 1	Day 2	Day 3	
5E Unit Engage Activities 40 minutes	5E Unit Explore Activities Parts 1 & 2 35 minutes	5E Unit Plan Explore Activity Part 3 15 minutes	E...

Day 6	Day 7	Day 8	
5E Unit Plan Extend Activities Parts 1 & 2 35 minutes	5E Unit Plan Extend Activity Part 3 20 minutes	5E Unit Plan Evaluate Activities Parts 1 & 2 30 minutes	Eva... 1...

Teaching Timeline Options

Inheritance of Traits

Option 3: Using only 5E Unit Plans Abbreviated

Day 1	Day 2	Day 3	Day 4	Day 5
Engage Activity Part 3 15 minutes	Explore Activity Part 3 15 minutes	Explain Activity Part 2 20 minutes	Extend Activity Part 3 20 minutes	Evaluate Activity Part 1 15 minutes

Option 4: Supplementing 5E Unit Plans with the Inheritance and Variation of Traits Science Stations as Whole Group Lessons

Day 1	Day 2	Day 3	Day 4	Day 5
5E Unit Plan Engage Activities 40 minutes	Inheritance and Variation of Traits Science Station: Watch or Play (Leaves Change or any game - questions optional) 15 minutes	5E Unit Explore Activities Parts 1 & 2 35 minutes	5E Unit Plan Explore Activity Part 3 15 minutes Inheritance and Variation of Traits Science Station: Model Seed Dispersal (none of the reading) 20 minutes	5E Unit Plan Explain Activities Parts 1 & 2 35 minutes

Day 6	Day 7	Day 8	Day 9	Day 10
5E Unit Plan Explain Activity Part 3 20 minutes Inheritance and Variation of Traits Science Station: Explore: Name that Plant 20 minutes	5E Unit Plan Extend Activities Parts 1 & 2 35 minutes	5E Unit Plan Extend Activity Part 3 20 minutes Inheritance and Variation of Traits Science Station: Sort: Hot or Not 20 minutes	5E Unit Plan Evaluate Activities Parts 1 & 2 30 minutes	5E Unit Plan Evaluate Activity Part 3 30 minutes Inheritance and Variation of Traits Science Station: Watch: Dolphin Moms 20 minutes

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1

Whole-Class 5E Unit

Teach one phase a day over 5 days as written, with 40 to 55 minutes per phase.

2

Shorter Science Blocks

Spread the unit across 9 days in shorter time blocks when science minutes are limited.

3

Alongside Science Stations

Add the Inheritance and Variation of Traits Science Stations for a 10-day plan.

4

Formative Checks

Use the exit tickets throughout the unit to see who needs reteaching before the performance activity.

TEACHING TIMELINE OPTIONS

Option 1 — 5 days
As Written

Day 1	Day 2	Day 3	Day 4	Day 5
Engage	**Explore**	**Explain**	**Extend**	**Evaluate**
40 min	50 min	55 min	55 min	45 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 1-2**	**Explore 3**	**Explain 1-2**	**Explain 3**	**Extend 1-2**	**Extend 3**	**Evaluate 1-2**	**Evaluate 3**
40 min	35 min	15 min	35 min	20 min	35 min	20 min	30 min	15 min

Option 3 — 5 days
Abbreviated

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

Option 4 — 10 days
With Science Stations

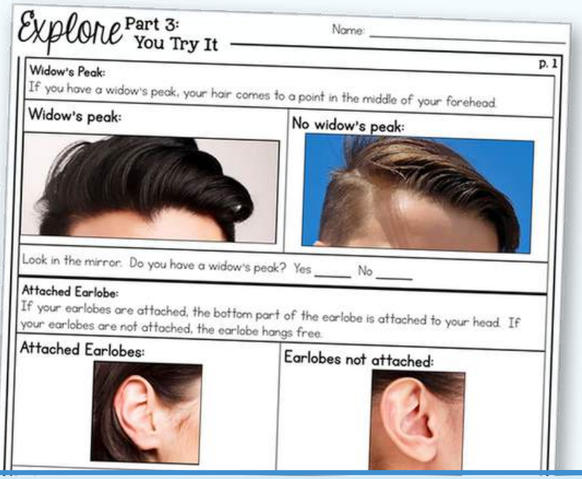
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Engage	**Watch**	**Explore 1-2**	**Explore 3**	**Explain 1-2**	**Explain 3**	**Extend 1-2**	**Extend 3**	**Evaluate 1-2**	**Evaluate 3**
40 min	15 min	35 min	15 min +20 station	35 min	20 min +20 station	35 min	20 min +20 station	30 min	15 min +20 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 match offspring to parents, check their own traits, and compare berries, so inheritance makes sense.


Explore Part 3: You Try It

Name: _____

p. 1

Widow's Peak:

If you have a widow's peak, your hair comes to a point in the middle of your forehead.

Widow's peak:

No widow's peak:

Look in the mirror. Do you have a widow's peak? Yes _____ No _____

Attached Earlobe:

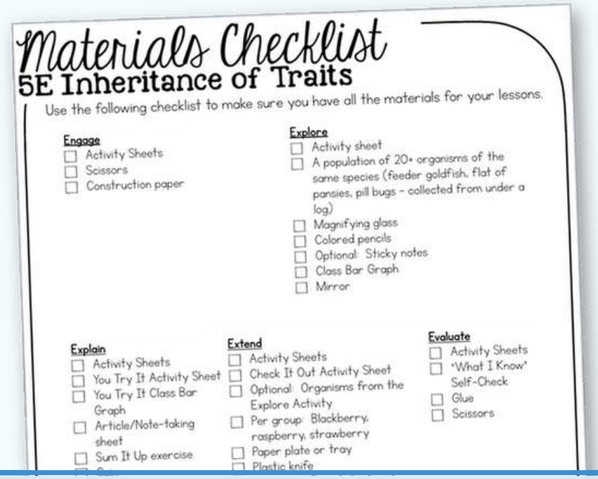
If your earlobes are attached, the bottom part of the earlobe is attached to your head. If your earlobes are not attached, the earlobe hangs free.

Attached Earlobes:

Earlobes not attached:

Planned and Ready to Teach

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


Materials Checklist

5E Inheritance of Traits

Use the following checklist to make sure you have all the materials for your lessons.

Engage
- ☐ Activity Sheets
- ☐ Scissors
- ☐ Construction paper

Explore
- ☐ Activity sheet
- ☐ A population of 20+ organisms of the same species (feeder goldfish, flat of pansies, pill bugs - collected from under a log)
- ☐ Magnifying glass
- ☐ Colored pencils
- ☐ Optional: Sticky notes
- ☐ Class Bar Graph
- ☐ Mirror

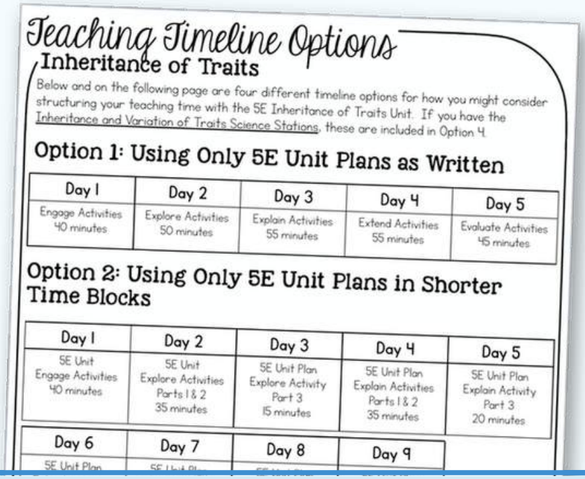
Explain
- ☐ Activity Sheets
- ☐ You Try It Activity Sheet
- ☐ You Try It Class Bar Graph
- ☐ Article/Note-taking sheet
- ☐ Sum It Up exercise

Extend
- ☐ Activity Sheets
- ☐ Check It Out Activity Sheet
- ☐ Optional: Organisms from the Explore Activity
- ☐ Per group: Blackberry, raspberry, strawberry
- ☐ Paper plate or tray
- ☐ Plastic knife

Evaluate
- ☐ Activity Sheets
- ☐ "What I Know" Self-Check
- ☐ Glue
- ☐ Scissors

Fits Your Schedule

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


Teaching Timeline Options

Inheritance of Traits

Below and on the following page are four different timeline options for how you might consider structuring your teaching time with the 5E Inheritance of Traits Unit. If you have the Inheritance and Variation of Traits Science Stations, these are included in Option 4.

Option 1: Using Only 5E Unit Plans as Written

Day 1	Day 2	Day 3	Day 4	Day 5
Engage Activities 40 minutes	Explore Activities 50 minutes	Explain Activities 55 minutes	Extend Activities 55 minutes	Evaluate Activities 45 minutes

Option 2: Using Only 5E Unit Plans in Shorter Time Blocks

Day 1	Day 2	Day 3	Day 4	Day 5
5E Unit Engage Activities 40 minutes	5E Unit Explore Activities Parts 1 & 2 35 minutes	5E Unit Plan Explore Activity Part 3 15 minutes	5E Unit Plan Explain Activities Parts 1 & 2 35 minutes	5E Unit Plan Explain Activity Part 3 20 minutes

Day 6	Day 7	Day 8	Day 9
5E Unit Plan			

TEACHERS LOVE IT!

★★★★★

This was perfectly aligned to NGSS and completely engaged my third graders.

Shannon Kerr

★★★★★

Thank you for making such a detailed and easy to read/use unit!

Amanda L.

★★★★★

Many activities to teach traits through a variety of ways

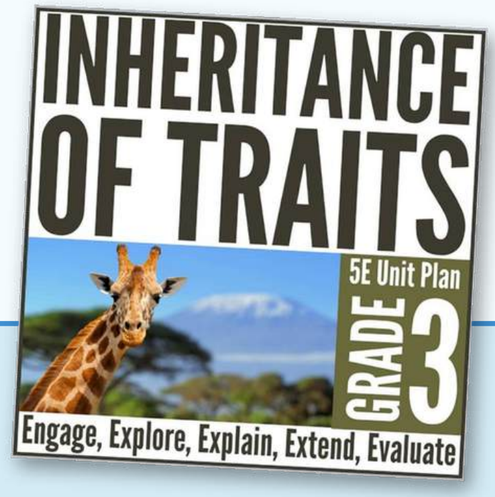
Brittany T.





READY FOR YOUR CLASSROOM

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

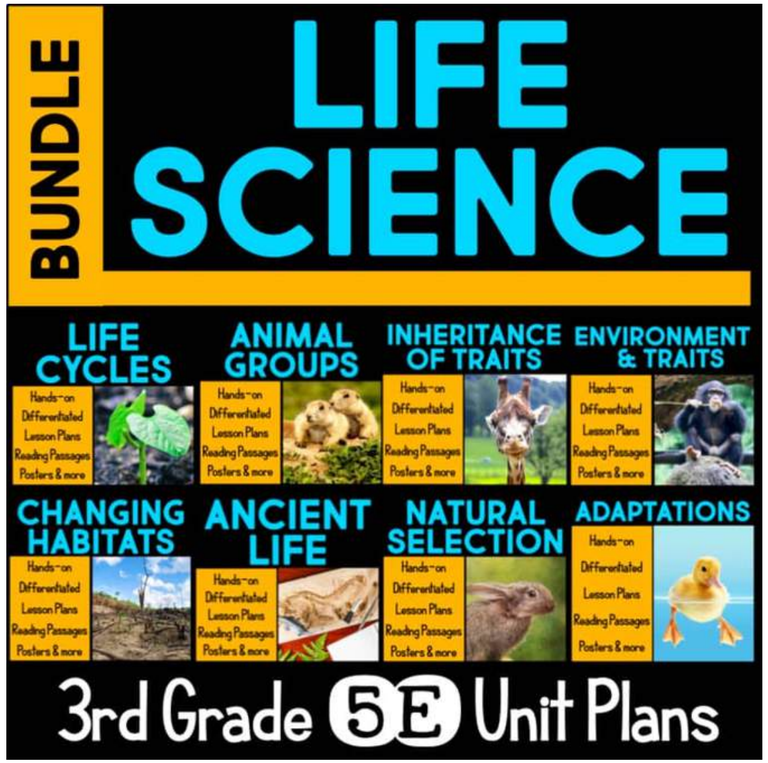


WANT MORE 3RD GRADE 5E UNITS?

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

TOPIC BUNDLE

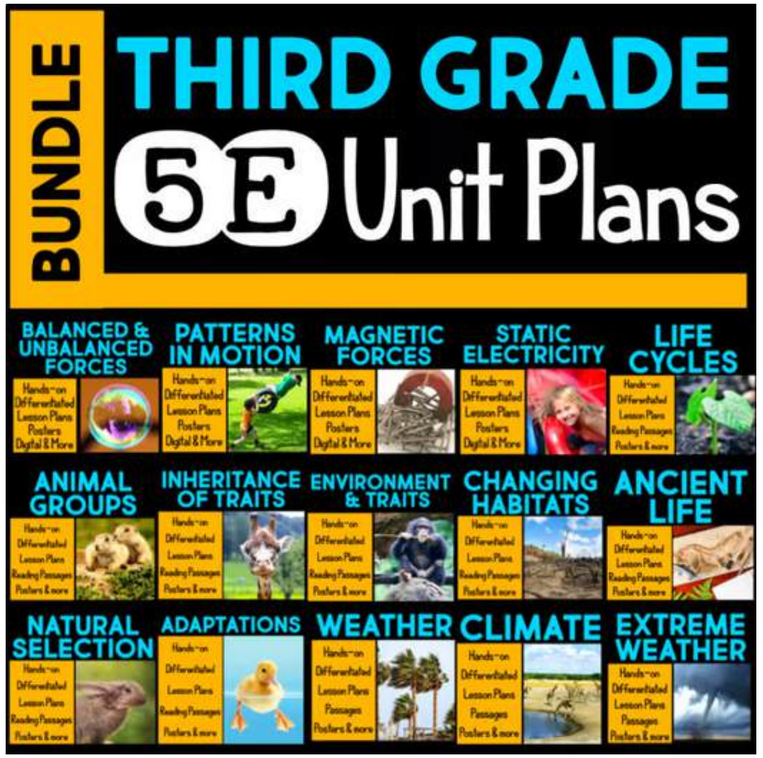
GOOD VALUE



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