LESSON PLAN

Life cycles and inherited traits

Science · Grade 3 · 45 min · Term 3, Week 1

CURRICULUM ALIGNMENT

Grade 3 Science. NGSS 3-LS1-1: Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. NGSS 3-LS3-1: Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of traits exists in a group of the same species.

Common Core State Standards ↗

LEARNING INTENTION

Describe life cycle stages and explain how traits are inherited from parents

SUCCESS CRITERIA

- I can name the four stages that all animal life cycles share: birth, growth, reproduction, and death.
- I can describe at least one complete life cycle using a model or diagram.
- I can explain what an inherited trait is and give two examples from plants or animals.
- I can tell the difference between a trait that is inherited and one that is not.

Lesson Structure

HOOK

- Two photos side by side: a puppy and its parent dog.
- What do you notice that looks the same? What looks different?
- Which of those similarities do you think the puppy was born with?

TEACHING

- All living things go through four stages: birth, growth, reproduction, death.
- Life cycle diagram on the board. Trace each stage aloud.
- I notice the butterfly stage looks nothing like the egg. I wonder how scientists know they are the same animal.
- An inherited trait is a feature passed from parent to offspring at birth.

PRACTICE

- Life cycle cards on the floor. Place each stage in the correct order.
- Hold up a trait card. Inherited or not inherited? Thumbs up or thumbs down.
- Which two examples of inherited traits can you name from today's diagram?

CLOSURE

- Name one stage every living thing goes through.
- Share one inherited trait you or a partner identified.
- Point to the success criteria. Which one feels solid?

Differentiated Groups

EMERGING

TASK

- Match picture cards to the four life cycle stages.
- Circle the inherited traits on a guided trait sort sheet.
- Tell a partner one inherited trait from the picture.

MATERIALS

Life cycle picture cards with stage labels (1 set per student), guided trait sort sheet with images and sentence stems (1 per student), pencils, colored pencils

TEACHER ROLE

- Sit with this group for the first 10 minutes.
- Read each card label aloud together.
- Prompt: "Which stage comes right after birth?"

DEVELOPING

TASK

- Sequence a blank life cycle diagram for one animal.
- Label each stage using science vocabulary.
- Write two inherited traits and explain why each is inherited.

MATERIALS

Blank life cycle diagram template (1 per student), science vocabulary word bank (1 per pair), trait example cards (1 set per pair), pencils

TEACHER ROLE

- Check in briefly at the 8-minute mark.
- Ask: "How do you know that trait is inherited?"
- Move on if the group is working independently.

EXTENDING

TASK

- Draw life cycle diagrams for two different animals.
- Compare: what is the same across both life cycles?
- Choose one inherited trait. Explain what would change if it was not inherited.

MATERIALS

Blank comparison diagram template (1 per student), reference cards with animal images (1 set per pair), pencils, colored pencils

TEACHER ROLE

- Give a brief launch prompt, then step back.
- Check in at the 15-minute mark for one question.
- Ask: "What evidence tells you that trait is inherited?"

ASSESSMENT NOTES

- Criterion 1: Student can name all four stages without a prompt.
- Criterion 2: Diagram shows correct sequence for one full life cycle.
- Criterion 3: Student gives two inherited trait examples with reasoning.
- Criterion 4: Student correctly sorts at least three inherited vs. not inherited trait cards.

RELIEF TEACHER NOTES

- All materials are labeled and grouped by color on the supply table.
- Emerging group needs the most support. Sit with them first.
- Vocabulary word bank is available for all groups if needed.
- Success criteria are posted on the board for student reference.