TALES FROM NOWHERE ELEMENTARY

Little Mantis

Life Cycle & Sequencing



A story-connected science lesson for elementary learners

At a glance **Grades:** 2–4 • **Time:** 35–45 minutes • **Subjects:** Science, literacy, speaking and listening

In this lesson, students use the story *Little Mantis* as a friendly entry point for learning how praying mantises grow. They sequence a simplified life cycle and explain that nymphs grow through repeated molts before becoming adults.

Learning goals

Students will identify the stages in a praying mantis life cycle, place those stages in a logical order, and describe molting as the process of shedding an old outer layer as the animal grows.

Success looks like

Students can sequence the stages, use at least two vocabulary words correctly, and explain one way a nymph is different from an adult mantis.

Story connection Read the supplied *Little Mantis* story aloud, or revisit the moment when the young mantis describes being a nymph and later molts. Tell students: “The story gives us a character to think about. Today we will build a science model of how mantises grow.”

Teacher Guide

Vocabulary

- **egg case (ootheca):** A protective case that holds many mantis eggs.
- **nymph:** A young mantis that looks like a small adult but is not yet fully grown.
- **molt:** The process of shedding an old outer covering so the body can grow.
- **adult:** The fully grown stage of the life cycle.

Materials

- One copy of the supplied **Little Mantis** story for read-aloud use.
- One printed student page per student or pair.
- Scissors and glue or pencils, depending on the chosen sequencing format.
- Optional: four small cards labeled Egg case, Nymph, Molting nymph, and Adult.

Preparation

Before students arrive, decide whether they will cut and glue the sequence cards or number the stages directly on the worksheet. If using cards, print and cut one set for each pair. Place the story where students can see the mantis character's movement from nymph to adult. No live insects are needed for this lesson.

Procedure

1. **Connect to the story — 5 minutes.** Ask students what they remember about the young mantis. Invite them to listen for the words **nymph** and **molting** as you read the relevant passage.
2. **Build background — 7 minutes.** Explain that a mantis begins inside an egg case. When it hatches, it is a nymph. A nymph resembles a small adult, but it is smaller and may not yet have fully developed wings.
3. **Model growth — 5 minutes.** Demonstrate the idea of a molt by placing a smaller paper shape inside a larger outline. Explain that the old outer covering does not stretch forever, so the growing mantis sheds it and forms a new, larger covering.
4. **Sequence the stages — 10 minutes.** Students work alone or with a partner to put the four stage cards in order. Ask them to justify the first and last cards before they glue or number their answers.

5. **Explain the pattern — 8 minutes.** Students complete the worksheet prompts. Circulate and listen for the misconception that a mantis becomes a completely different kind of animal during metamorphosis. A mantis has incomplete metamorphosis: its nymph looks like a small adult.
6. **Share and reflect — 5 minutes.** Invite two or three students to explain their sequence. Close by returning to the story and asking how the fictional character helped them picture the science idea.

Teacher note The worksheet uses a simplified four-stage model appropriate for elementary learners. Real mantises may molt several times as nymphs, and the number of molts varies by species and individual.

Discussion prompts

- What evidence tells us that Nio was a nymph earlier in the story?
- Why does a mantis need to molt as it grows?
- How is a nymph similar to an adult mantis?
- What part of the story is imaginative rather than a scientific observation?

Student Science Page

Name: _____ **Date:** _____

Your challenge Put the praying mantis life-cycle stages in order. Then use the words **nymph** and **molt** to explain how a young mantis grows.

1. Sequence the life cycle

Cut out the cards below, arrange them from first to last, and glue them in your notebook. If your teacher has already cut them, write the numbers 1–4 on the cards.



EGG CASE

Many eggs are protected inside a case.



NYMPH

A small young mantis hatches and begins to grow.



MOLTING NYMPH

The mantis sheds its old outer covering as it grows.



ADULT

The mantis is fully grown and can reproduce.

2. Explain your thinking

The first stage is blank because …

A nymph is different from an adult because …

A molt helps a mantis by …

3. Quick check

The mantis in the story is a nymph at the beginning.

Molting means changing from an insect into a different animal.

A nymph can look like a smaller version of an adult mantis.

Teacher Check & Extension

Suggested answers

The sequence is **Egg case → Nymph → Molting nymph → Adult**. A nymph is a young mantis that resembles a small adult. Molting allows the mantis to shed an old outer covering and continue growing. The statement "Molting means changing from an insect into a different animal" is false; the statement that a nymph can look like a smaller adult mantis is true.

Formative assessment

Listen for three ideas: students place the stages in a sensible order, they use *nymph* and *molt* in context, and they understand that the mantis grows through repeated changes rather than becoming a different kind of animal. If a student places "adult" first, ask, "What would need to happen before this mantis could be fully grown?"

Optional extension: Build a life-cycle wheel

Students draw four wedges in a circle and label the stages. In each wedge, they add one sentence beginning with "At this stage …" Students may include an arrow showing that the cycle repeats when adults produce a new egg case.

Teacher language for a closing conversation "The story helped us imagine Nio's experience. Our science model helps us describe what happens to real praying mantises. Scientists use models to make a complicated process easier to study, but a model can leave out details."