

MASON BEE LESSON PLAN

Grade Level: K–12

Duration: 45–60 minutes

Subjects: Science, Ecology, Environmental Studies, Biology, Entomology

FREE TOOLS TO TEACH

Visit our **Educator Resources** tab to access all teaching materials:

- PowerPoint Presentation (with speaking notes, embedded videos, and photos)
 - Printable Stickers
 - “Pollinators at Work” Sign
 - Honeybee vs. Mason Bee Comparison Graphic
 - Student Workbooks
 - Worksheets
 - Mason Bee Journal
 - Life Cycle Photos
 - Kid-Friendly Videos
-

Lesson Objectives

By the end of this lesson, students will be able to:

Mason Bee Identification & Behavior

- Recognize mason bees and understand they are gentle, non-aggressive pollinators.
- Explain how mason bees differ from honeybees (social vs. solitary, nesting habits, pollination style).

Life Cycle Understanding

- Describe the life cycle of a mason bee from egg to adult.
- Compare the mason bee life cycle to that of a butterfly.
- Safely observe and hold a dormant mason bee cocoon.

Habitat & Nest-Building

- Explain the “Mud, Pollen, Baby, Mud” nesting pattern.
- Use multiplication to estimate the number of developing bees inside a nesting block.

Pollination & Food Systems

- Recognize the importance of pollinators in food production and ecosystems.
- Identify foods pollinated by bees and understand that 1 in 3 bites of food exists because of pollinators.

Conservation & Stewardship

- Demonstrate how to create a bee-friendly environment (mud hole, plant choices, nest care).
 - Identify simple actions students can take to help protect solitary bees.
-

Materials Needed

- Mason Bee Starter Kit
 - Mason bee cocoons (from kit)
 - PowerPoint Presentation (from Educator Resources)
 - Watering can, container for making mud hole, stick for stirring
 - Variety of foods pollinated by bees (strawberries, apples, cherries, blueberries, almonds)
-

Lesson Outline

1. PowerPoint Presentation (30–40 minutes)

Guides you step-by-step through teaching about mason bees—includes videos, diagrams, and photos.

2. Hold a Baby Bee (5–10 minutes)

Important:

Keep white tube of cocoons in the refrigerator or an ice-pack cooler until you're ready to begin. Warm temperatures may cause early emergence.

During the lesson:

- Give each student one cocoon to hold.
 - Play this short emergence video while they observe:
<https://youtu.be/AGzb5S1LarI?si=5biCa1Qjmhco1aBy>
-

3. Mason Bee Builders – Math Connection (5–10 minutes)

Show the nesting block and explain the pattern:

Mud → Pollen → Baby → Mud

- Count the mud plugs.
 - Multiply by ~8 to estimate how many baby bees are inside.
-

4. Make a Mud Hole (5 minutes)

Create a mud source for bees:

- Fill a container with soil.
 - Add water.
 - Stir together to keep it moist for nesting.
-

5. Pollination & Food Connection (5–10 minutes)

Show various foods and ask which depend on pollinators.

Fun fact: **Almonds are fruit!**

Discuss that **1 in 3 bites of food** relies on pollinators.

6. Life Cycle of a Mason Bee (5 minutes)

Play a short life cycle video.

Compare to a butterfly's metamorphosis.

7. Wrap-Up Discussion (5 minutes)

Ask:

- How can *you* help bees?
- What did you learn today?
- What surprised you most about mason bees?

Assessment

- Participation in discussions and hands-on activities
- Ability to name one difference between mason bees and honeybees
- Accurate counting and estimating of bee offspring using mud plugs

Extension Ideas

- Create bee artwork or write a **“Day in the Life of a Mason Bee”** story.
 - Start a pollinator observation journal for the school garden.
 - Plant early spring blooming flowers to feed mason bees
(plant list: <https://rentmasonbees.com/plants-for-pollination/>)
-