

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

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LESSON 1.42

Lucky Ladybug

Unit: ENVIRONMENTAL SCIENCE

PRECEPTS

- B. Relationships
 - B2. Interact and work with others



NATIONAL STANDARDS

- CS.08.02.01.a. Use the appropriate procedures for the use and operation of specific tools and equipment.
- NL-ENG.K-12 – Applying Language Skills
- NRS.04.03.01.a. Identify harmful and beneficial insects and signs of insect damage to natural resources.
- NS.K-4.3 – Life Science

Lesson Type:
One-on-One

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

- Identify why a *ladybug* is so important in *nature*.
- Create a *ladybug*.
- Identify what harmful insects do, such as aphids, if *ladybugs* are unable to control them.





TIME

Instruction time for this lesson: **30-45 minutes for two consecutive days** (*Needs overnight drying time*).



RESOURCES

National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success.



TOOLS, EQUIPMENT AND SUPPLIES

✓ Books from the Library

Here are some suggestions:

The Grouchy Ladybug by Eric Carle

Ten Little Ladybugs by Melanie Gerth

Very Lazy Ladybug by Isobel Finn

Ladybug at Orchard Avenue by Kathleen Weidner Zoehfeld

- ✓ Balloon
- ✓ Newspaper strips cut to 1- inch thick
- ✓ Water and glue mixture or water and flour mixture in container
- ✓ Red food coloring
- ✓ Paintbrush
- ✓ Two black pipe cleaners
- ✓ Newspaper (*to lay under balloon project*)
- ✓ Knife
- ✓ Black paint
- ✓ Glue

KEY TERMS



The following terms are presented in this lesson and appear in ***bold italics***:

Nature

Ladybug



CONTENT OUTLINE

Objective 1. | Identify why a *ladybug* is so important in *nature*.

- I. Discuss how ***ladybugs*** live
 1. What do they look like?
 2. What do they eat?
 3. Where do they live?
 4. How do they help plants/***nature***?

Objective 2. | Create a *Ladybug*

I. Tips for making a *ladybug*

1. Blow balloon about the size of your fist. (Larger will take more paper and glue and/or flour mixture as well as take longer to dry.)
2. Lay balloon on a piece of newspaper
3. Take pre-cut strips of newspaper and lay them in glue or flour mixture
4. Add red food coloring to mixture, enough to look bright red.
5. Use paintbrush to smooth newspaper onto balloon (will need many layers)
6. Let dry overnight
7. Cut in half lengthwise
8. Paint head, thorax and wings with black paint
9. Cut pipe cleaners in half so you have four pieces and glue on as legs. Bend $\frac{1}{2}$ inch from end to create a flat surface that can be glued to paper

Objective 2. | Identify what harmful insects do, such as aphids, if *ladybugs* are unable to control them.

INTEREST APPROACH

Read a story about a *ladybug*. Suggestions are in the resources section of this lesson.



What a great story. Today we will make our own *ladybug* to celebrate the good that *ladybugs* do for our world!

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Identify why a *ladybug* is so important in nature.



What do the *ladybugs* look like in the story?

Look for: small, red, black spots, wings, head, feet.



Share with me what the *ladybug* ate in the story?

Look for: insects, aphids, etc.



Where did the *ladybug* live?

Look for: trees, shrubs, fields, beaches



How did the ***ladybug*** help the world around it?

Look for: eats harmful insects that could hurt other living things

OBJECTIVE 2. | Create a *Ladybug*.



*Discuss with student and engage in dialog as you build/create your ***ladybug***!*



This is exciting! To begin creating our ***ladybug*** lets decide on the correct size to make her. What do we already know about the size of a ***ladybug***?

Look for: small



You know, that's right. So let's make this balloon smaller than its full size to represent a small ***ladybug***.

Why don't we blow up the balloon about the size of my fist.

Make a fist and hold it out for your buddy to compare their balloon with. You may have to help tie the balloon.



Great! I think that is a perfect size for this ***ladybug***. Now, to make a hard shell we will take these strips of newspaper and lay it in this glue solution.

Demonstrate.



Then we will lay the paper on the balloon just like this.

Lay strip on balloon.



I see some lumps – are ***ladybugs*** lumpy?

No.



You're right. Let's use this paint brush to smooth out the strips just ever so gently so that our ***ladybug*** will be smooth. What questions do you have so far?

Your turn! Take a piece of the paper and follow the steps we just completed.



This is looking great. We will have to let our ladybug dry overnight. I'll be back tomorrow, and we will put the finishing touches on this bug! You did great today. I can't wait to see you tomorrow!

Dry overnight. The next day check to make sure paper has completely dried.



This ***ladybug*** looks great!

If it's dry then you can begin to cut it in half.



It's time to cut this balloon in half.

You may want to use the knife to cut the project in half.



Now that it is cut in half we can paint where her head, thorax and wings should be. From what we learned about ***ladybugs*** where does the head belong?

Let student show with their fingers where the head should go before painting.



What do we mean when we say thorax?

Look for: the middle of the bug.



True. So where would that leave the wings?

Look for: on the outer edge of the body.



Exactly. This ***ladybug*** is going to look so real!

Now it's time to add its legs. Let's cut these pipe cleaners in two pieces so we have four legs.

You may need to cut these for your student. Bend pipe cleaner to make a flat side where you can glue onto paper. Have student put glue onto end of pipe cleaner and press firmly onto paper to ensure the pipe cleaner holds.



Gently squeeze some glue onto the end of this pipe cleaner and press it against the ***ladybug*** where you believe the legs belong. Let's repeat this and fix all four legs onto the ***ladybug***.



What do you think about your *ladybug*?

*Celebrate the **ladybug** and have your student name the bug.*

OBJECTIVE 3. | Identify what harmful insects do, such as aphids, if *ladybugs* are unable to control them.



Why is it important to have *ladybugs* in the world?

Look for: they eat harmful insects



What might happen if *ladybugs* did not control other harmful insects?

Look for: eat plants that we need for food



REVIEW / SUMMARY

Use *Show What You Know Moment®*.



Ok, let's review:

1. Where are the legs of the *ladybug*?
2. Where is the thorax?
3. Where are the wings?

Allow PALS to point them out.

*Have student draw the parts of a **ladybug** and compare to your drawing. Identify parts together and label.*



APPLICATION

Large Group Suggestion

*Have each student create their own **ladybug**. Or, work in partners and once the bug is cut in half they may each finish their own **ladybug**.*

Continued Discussion/Activity

*Write a story about your **ladybug** and include details like what she looked like, what she ate, where she lived and why she is so special. You may want to write one sentence per concept for the younger students and allow the older students to write as much as they are able. Be sure to make a cover page with their name as the author.*



PALS1.42.ONE.ASSESS.A | EVALUATION ANSWER KEY

*Have students turn in their drawings of the ***ladybugs*** that they did in review and place their names on the papers and turn into the teacher.*

ANSWERS TO EVALUATION:

Student drawing should include the legs, thorax, head and wings.