

The World of Insects

A Closer Look at Insect Life

Insects are all around us. They provide food for birds and animals, and they pollinate the plants that provide food for millions of people. *The World of Insects* series satisfies students' curiosity about these important arthropods. *The World of Insects* Teacher Guide serves to fuel further exploration of insect life. By using this guide, you have an opportunity to tap into high student interest while exposing students to broader scientific concepts.

By participating in these lessons, students will become aware of some of the insect species that surround them. These lessons will lead students to understand higher-level concepts, such as life cycles, preservation, and defense mechanisms.

The lesson plans in this guide are tailored for grades 1–3 and address various subjects, such as science, language arts, mathematics, and social studies. Each lesson plan is designed to stand alone. As such, they do not need to be presented in sequential order. Helpful reproducible worksheets and rubrics appear at the end of the guide. The titles in the series include:

Everyday Insects

Helpful and Harmful Insects

Insect Bodies

Insect Defenses

Insect Homes

Insect Life Cycles

Insects in Danger

Insects that Work Together

All lesson plans included in this guide may be used in combination with one or more of *The World of Insects* books.

As students investigate the topics addressed in the guide and become more aware of insects, they will sharpen their critical thinking skills and work towards understanding the lives of insects. We invite you to jump in and ask questions with your class as you have fun learning more about insects.



National Standards Correlation

Lesson Plan Title	Correlation to National Standards
Watch Your Step!	<p>Science Students should develop an understanding of organisms and environments. Students should develop an understanding of changes in environments.</p> <p>Social Studies The learner can identify and describe examples in which science and technology have led to changes in the physical environment. The learner can suggest ways to monitor science and technology in order to protect the physical environment.</p>
Nature in Action	<p>Mathematics Students should represent data using tables and graphs such as line plots, bar graphs, and line graphs.</p> <p>Science Students should develop an understanding of organisms and environments. Students should develop an understanding about scientific inquiry.</p>
The Thorax Is Connected to the Abdomen	<p>Language Arts Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).</p> <p>Science Students should develop an understanding of organisms and environments.</p>
An Ant's Life	<p>Science Students should develop an understanding of organisms and environments. Students should employ simple equipment and tools to gather data and extend the senses. Students should develop an understanding about scientific inquiry.</p>

Lesson Plan Title	Correlation to National Standards
Metamorphosis: A Life Cycle Skit	<p>Language Arts Students adjust their use of spoken and visual language (e.g., conventions, style, and vocabulary) to communicate effectively with a variety of audiences and for different purposes.</p> <p>Science Students should develop an understanding of life cycles of organisms. Students should develop an understanding of organisms and environments.</p>
Create Your Own Insect	<p>Science Students should develop an understanding of organisms and environments. Students should develop the abilities necessary to do scientific research.</p>
Insect Defenses	<p>Language Arts Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).</p> <p>Science Students should develop an understanding of organisms and environments.</p>
Arthropod Acrostic	<p>Language Arts Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).</p> <p>Science Students should develop an understanding of organisms and environments.</p>

For state specific educational standards, please visit <http://www.crabtreebooks.com/>.

Overview and Scope of Lesson Plan Activities

Lesson Plan Title	Subject Areas	Major Concepts
Watch Your Step!	Art Science Social Studies	<ul style="list-style-type: none"> • insect habitats • preservation
Nature in Action	Math Science	<ul style="list-style-type: none"> • observing insects • collecting and analyzing data • insect habitats
The Thorax Is Connected to the Abdomen	Art Science	<ul style="list-style-type: none"> • insect anatomy
An Ant's Life	Science	<ul style="list-style-type: none"> • observing insects • collecting and analyzing data • insects working together • insect habitats
Metamorphosis: A Life Cycle Skit	Language Arts Science	<ul style="list-style-type: none"> • insect life cycles • the writing process
Create Your Own Insect	Art Science	<ul style="list-style-type: none"> • insect anatomy
Insect Defenses	Language Arts Performing Arts Science	<ul style="list-style-type: none"> • defense mechanisms • the writing process
Arthropod Acrostic	Language Arts Science	<ul style="list-style-type: none"> • acrostic poetry • insects • the writing process

Pacing Chart and Vocabulary

One class period is approximately 40 minutes.

Lesson Plan Title	Pacing	Vocabulary	Assessment
Watch Your Step!	1–2 class period(s)	endangered extinct habitat	Have students use the reproducible to evaluate each other's work.
Nature in Action	1 class period	habitat hive	Check reproducibles for accuracy.
The Thorax Is Connected to the Abdomen	1 class period	abdomen arthropod exoskeleton invertebrate proboscis thorax	Review students' drawings for accuracy and neatness.
An Ant's Life	2 partial class periods	colony queen worker	Check reproducibles for accuracy.
Metamorphosis: A Life Cycle Skit	1–2 class period(s)	cocoon larva metamorphosis nymph pupa	Evaluate students' performances for accuracy of information and creativity.
Create Your Own Insect	1 class period	abdomen antennae arachnid exoskeleton mouthparts thorax	Evaluate students' presentations for creativity and understanding.
Insect Defenses	1–2 class period(s)	mimic predator prey stinger	Have students use the reproducible to evaluate each other's work.
Arthropod Acrostic	1 class period	acrostic poem arthropod nest	Assess students' poems for accuracy and creativity.

Watch Your Step!

A Lesson on the Importance of Insect Preservation

Content

Students will gain a better understanding of insects and their habitats while learning ways to protect them. Students will then apply this knowledge to create posters to display in appropriate areas of the school.

National Standards

The following standards will be addressed in the lesson:

Science

Students should develop an understanding of organisms and environments.

Students should develop an understanding of changes in environments.

Social Studies

The learner can identify and describe examples in which science and technology have led to changes in the physical environment.

The learner can suggest ways to monitor science and technology in order to protect the physical environment.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Interpersonal



Logical-Mathematical



Naturalist



Verbal-Linguistic



Visual-Spatial

Prerequisites

Have students read the book *Insects in Danger* before proceeding with the lesson. Review with students the meanings of the terms *endangered* and *extinct*. Students should also read other books in *The World of Insects* series to familiarize themselves with different species of insects and their habitats.

Materials

- chalkboard and chalk or whiteboard and markers
- *Insects in Danger* books
- poster board
- markers
- *Watch Your Step!* reproducible

Instructional Procedure

Anticipatory Set

Ask students to name some of the insects described in *The World of Insects* series, such as butterflies, bees, and mosquitoes. List student responses on the board. Then have students think about why these insects are important. (provide food for other animals, pollinate plants) If they cannot determine why an insect, such as a mosquito, is important, remind students that insects also provide food for birds and some animals.

Class Discussion

Review the different habitats in which insects live, including wetlands, deserts, and grasslands. Have students discuss how human activities (clearing forests, farming, building new roads and cities) can change these habitats and endanger the lives of insects. Write student ideas on the board. Then have students brainstorm a list of possible ways they can help protect insects. (build insect preserves, use less land).

Objectives

The student will be able to...

- define *endangered* and *extinct*
- identify insects and their habitats
- identify human activities that harm insects and suggest ways to protect them
- work in small groups to create posters to display in the school building

Activity

Divide students into small groups and distribute art supplies. Have students work together to design a poster that informs other students how they can protect insect life. The poster should name the insect and its habitat, explain why it is important to protect it, and offer suggestions for ways students can help. Posters should be visually appealing and use a slogan to attract attention. Be sure to go over expectations for the project by presenting the information on the *Watch Your Step!* reproducible.

Accommodations and Extensions

As an accommodation, have students use one of the poster examples from *Insects in Danger* to create their own poster.

As an extension, monitor students as they use a student-friendly search engine to research endangered insects native to their region.

Closure

Ask students to discuss what they could do in their own homes to help protect the insects that live around them. Briefly review ideas students suggested during class discussion.

Assessment

Have students use the *Watch Your Step!* reproducible to evaluate each other's work. Display completed posters in an appropriate area of the school.

Nature in Action

A Lesson on Observing Insects in Nature

Content

Students will reinforce their understanding of insects by observing them in their natural habitat. Students will also practice their graphing skills by creating a bar graph using information they collect.

National Standards

The following standards will be addressed in the lesson:

Mathematics

Students should represent data using tables and graphs such as line plots, bar graphs, and line graphs.

Science

Students should develop an understanding of organisms and environments.

Students should develop an understanding about scientific inquiry.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Bodily-Kinesthetic



Interpersonal



Naturalist



Verbal-Linguistic



Visual-Spatial

Prerequisites

Have students read books in *The World of Insects* series to familiarize themselves with different species of insects and their habitats. They should be aware of the traits that are characteristic of insects, such as having six legs. Students should also review how to create a bar graph.

Materials

- chalkboard and chalk or whiteboard and markers
- *Nature in Action* reproducible
- markers or colored pencils

Instructional Procedure

Anticipatory Set

Challenge students to name as many insect homes as they can, such as *anthill*, *hive*, *mound*, and *nest*. List student responses on the board. Then have students describe what materials insects use to build their homes. (dirt, secretions/saliva, trees, wax, etc.)

Class Discussion

Pre-Activity

Prepare students for their nature walk by discussing the following questions:

Where do insects live? (Most insects live in warm, moist places.)

Where do ants make their home? (Ants make their home under the ground.)

Where might you find bees or butterflies? (flying from flower to flower)

Continue reviewing where students might find other insects native to their region.

Post-Activity

Have students share their results with the class. Discuss why students observed more insects of certain species than of others. (some insects are not native to your region, some insects stay in the hive/home while others do the work, etc.) Remind students that some species of insects live and work together, so they are more likely to see larger groups of these types of insects in one location.

Objectives

The student will be able to...

- recognize traits that are characteristic of insects
- identify and name insect homes
- identify and count insects in their natural habitat
- create a bar graph

Activity

Take a nature walk with students on the playground. Remind students that they should observe the insects but not touch them, as some insects may bite or sting. Also remind students that all insects have six legs. Then have students count and record the number of insects they see. After returning to the classroom, have students complete the *Nature in Action* reproducible. They should create a bar graph using the information they collected.

Accommodations and Extensions

As an accommodation, have students work in pairs to complete the *Nature in Action* reproducible.

As an extension, have students write a short paragraph describing what they observed on their nature walk. Their paragraph should include a description of where they spotted each insect and what they observed the insect doing.

Closure

Have students discuss their experiences observing insects. Ask, *Was it difficult to locate insects, or was it easy? Which insects did you enjoy watching the most?*

Assessment

Check reproducibles for accuracy. Make sure each organism listed is an insect.

The Thorax Is Connected to the Abdomen

A Lesson on the Parts of an Insect

Content

Students will practice language skills by identifying and labeling the parts of an insect.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Science

Students should develop an understanding of organisms and environments.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Naturalist



Verbal-Linguistic



Visual-Spatial

Prerequisites

Have students read books from *The World of Insects* series before proceeding with the lesson. Particular attention should be paid to the introductory pages that discuss an insect's anatomy.

Materials

- chalkboard and chalk or whiteboard and markers
- drawing paper
- markers or colored pencils
- *The Thorax Is Connected to the Abdomen* reproducible

Instructional Procedure

Anticipatory Set

Ask students to think about the insects they discussed in *The World of Insects* series. Remind students that insects' bodies are very different from our bodies. Review the meanings of the terms *invertebrate*, *arthropod*, and *exoskeleton* with students.

Class Discussion

Write *thorax*, *abdomen*, and *proboscis* on the board. Ask the following questions:

Where is the thorax? (in the middle of an insect's body)

What is attached to the thorax? (an insect's wings and legs)

Where is the abdomen? (at the rear of an insect's body)

What is inside the abdomen? (the insect's organs)

What is a proboscis? (a long, thin, straw-like mouthpart)

What does an insect use its proboscis to do? (suck up liquid)

Objectives

The student will be able to...

- define *invertebrate*, *arthropod*, and *exoskeleton*
- create a realistic insect model
- identify and label the parts of an insect

Activity

Distribute art supplies. Assign each student an insect, such as an ant, a bee, or a butterfly. Have students draw a realistic model of the insect. Tell students that they should label the following parts of their insect's anatomy: *head, thorax, abdomen, wings* (if applicable), *antennae, eyes, mouthparts/proboscis*, and *legs*. Write the parts on the board so that students can copy the spelling correctly on their models.

Distribute the reproducible and have students complete the reproducible to help them prepare their models. Display completed models in the classroom.

Accommodations and Extensions

As an accommodation, provide students with an outline of an insect to use when creating their models. Allow students to use one of the books from *The World of Insects* series as a reference.

As an extension, students can draw and label the insect in its natural habitat. For example, students might draw a monarch butterfly sitting on a milkweed leaf.

Closure

Discuss student models with the class. Stress the similarities and differences between the types of insects. Remind students that they can use their knowledge of insect bodies to determine whether an animal is an insect.

Assessment

Review each student's drawing for accuracy and neatness. All terms should be spelled correctly.

An Ant's Life

A Lesson on How Ants Work Together

Content

Students will reinforce their understanding of how insects work together by observing ants in an ant farm.

National Standards

The following standards will be addressed in the lesson:

Science

Students should develop an understanding of organisms and environments.

Students should employ simple equipment and tools to gather data and extend the senses.

Students should develop an understanding about scientific inquiry.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Bodily-Kinesthetic



Naturalist



Verbal-Linguistic



Visual-Spatial

Prerequisites

Have students read the book *Insects that Work Together* before proceeding with the lesson. Also, review with students how to measure distances with a ruler.

Materials

- ant farm
- *Insects that Work Together* books
- *An Ant's Life* reproducible
- rulers
- magnifying glasses (optional)

Instructional Procedure

Anticipatory Set

Before class begins, prepare an ant farm following the instructions provided with a kit or create your own using two glass jars of varying sizes. Make sure all ants are contained in the ant farm before allowing students to view it.

Begin the lesson by showing students the ant farm. Ask students to name what you are holding. Then read pages 22–25 of *Insects that Work Together*. Have students think about how the ants are working together to make tunnels in the ant farm.

Class Discussion

Write the terms *worker* and *queen* on the board. Ask the following questions:

What does a worker ant do? (It builds and cleans the nest, gathers food, and cares for larvae.) *How many of the ants in a colony are worker ants?* (Most ants in a colony are worker ants.) *How long do worker ants live?* (They live for two to six months.) *What does a queen do?* (She lays the eggs.) *How many queens does a colony have?* (Most colonies only have one queen.) *How long does a queen live?* (She lives for ten to twenty years.)

Objectives

The student will be able to...

- define *worker* and *queen*
- work in a small group to observe ants
- measure distances using a ruler

Activity

Part I: Working Together

In small groups, have students view the ant farm. You may wish to have students use magnifying glasses to view the ants more closely. Students should use a ruler to measure the distance the ants have tunneled after one day. After returning to their seats, have students complete the first section of *An Ant's Life* reproducible.

Part II: After Days of Work

After five to seven days, have students observe the ant farm again. They should complete the second portion of the reproducible and write a short paragraph explaining how the ants have worked together to make their home.

Accommodations and Extensions

Rather than measuring the ants' progress, students can draw a picture showing how the ant farm looks on the first day and a picture of how it looks a few days later.

As an extension, have students explain why they believe it is important for scientists to observe nature over long periods of time. Ask: *What might happen if scientists only observed the ants on the first day?*

Closure

Have students discuss their experiences observing the ant farm. Ask, *Did you observe anything unexpected? How is an ant farm different from an ant's natural habitat?*

Assessment

Check reproducibles for accuracy. Make sure students accurately measured an ant tunnel and described one or more activities in which ants took part.

Metamorphosis: A Life Cycle Skit

A Lesson on the Life Cycle of Insects

Content

Students will strengthen their understanding of insects by studying insect life cycles. Students will then apply this knowledge to create a skit that is performed in front of the class.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students adjust their use of spoken and visual language (e.g., conventions, style, and vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Science

Students should develop an understanding of life cycles of organisms.

Students should develop an understanding of organisms and environments.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Bodily-Kinesthetic



Interpersonal



Verbal-Linguistic



Visual-Spatial

Prerequisites

Have students read the book *Insect Life Cycles* before proceeding with the lesson. Review the major components of a play with students, such as characters, setting, and plot.

Materials

- chalkboard and chalk or whiteboard and markers
- *Insect Life Cycles* books
- chart paper
- *Metamorphosis: A Life Cycle Skit* reproducible

Instructional Procedure

Anticipatory Set

Write the word *metamorphosis* on the board. Explain its definition. Challenge students to provide an example of metamorphosis from the book *Insect Life Cycles*.

Class Discussion

On chart paper, recreate the diagram below showing the four stages of complete metamorphosis and the three stages of incomplete metamorphosis, or display pages 8–9 of *Insect Life Cycles*. Have students discuss the changes that take place during each stage.

Complete Metamorphosis

Insect starts life cycle inside an egg.



Insect hatches and is called a larva.



Larva molts and changes into a pupa.



Insect emerges from cocoon or case as an adult.

Incomplete Metamorphosis

Insect starts life inside an egg.



Insect hatches and becomes a nymph.



Nymph grows and changes until it becomes an adult.

Objectives

The student will be able to...

- define *metamorphosis*
- identify stages in an insect's life cycle
- work in small groups to write and perform a skit

Activity

Divide students into groups of three or four. Assign each group an insect that undergoes either complete metamorphosis or incomplete metamorphosis. Tell students that each member of their group should represent one part of the insect's life cycle, such as egg, larva, pupa, or adult. Students should describe what the insect looks like at each stage and how the insect has changed from the previous stage. Students may also want to describe what the insect eats. Have students work together to plan, write, practice, and perform their skits. Students will use the *Metamorphosis: A Life Cycle Skit* reproducible to record and organize their ideas. When completed, have students perform their skits in front of the class. Encourage students to be creative and use vocabulary that is appropriate for their audience.

Accommodations and Extensions

As an accommodation, assign each student a specific part of the life cycle, such as egg, larva, pupa, or adult. Have students write a simple paragraph (two to three sentences) describing their assigned stage. Have students read their paragraphs to the class.

As an extension, supervise students as they use the Internet to research insects that undergo complete and incomplete metamorphosis. They should then use a word processing program to draft a list of insects that undergo complete metamorphosis and a list of insects that undergo incomplete metamorphosis. Display lists in the classroom for all students to see.

Closure

After each group has performed its skit, ask students to discuss what they have learned about insects from the skits. Then ask: *Which stage was most difficult to act out? Which was the easiest?* Review the importance of each life cycle stage with the students.

Assessment

Evaluate student performances for accuracy of information and creativity.

Create Your Own Insect

A Lesson on Insect Characteristics

Content

Students will reinforce their understanding of insects by reviewing the traits that are characteristic of many species. Students will then use this knowledge to create a new species.

National Standards

The following standards will be addressed in the lesson:

Science

Students should develop an understanding of organisms and environments.

Students should develop the abilities necessary to do scientific inquiry.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Interpersonal



Naturalist



Verbal-Linguistic



Visual-Spatial

Prerequisites

Students should read books from *The World of Insects* series before proceeding with the lesson. Particular attention should be paid to the introductory pages that discuss an insect's anatomy.

Materials

- *Insect Bodies* books
- chart paper
- drawing paper
- markers or colored pencils
- *Create Your Own Insect* reproducible

Instructional Procedure

Anticipatory Set

Ask students to name the various traits of insects, such as having six legs, antennae, wings, and three body sections. Write student responses on chart paper.

Class Discussion

To prepare them for the following activity, read pages 28–29 of *Insect Bodies* with students. Then ask the following questions: *How many legs does an insect have?* (six) *What kind of animal has eight legs?* (arachnid) *Can an insect have no legs?* (no) Discuss with students how they know the answers to these questions, and what creatures they can think of that fit those three descriptions. (bumble bee, spider, worm)

Objectives

The student will be able to...

- identify traits that characterize insects
- work in small groups to create models of new insect species
- present ideas to the class and ask questions about others' work

Activity

Working in small groups, have students use art supplies to draw a new insect species. All insects should have six legs and three body segments. Insects may also have wings, antennae, mouthparts, or segmented legs. Encourage students to be creative by designing insects that are unique in color, size, and shape. Students should also invent original names for their insects.

Distribute copies of the *Create Your Own Insect* reproducible. Have students complete the worksheet to organize the information about their insect. When finished, have them present their creations to the class. Audience members should ask questions about the new insect and its habitat.

Accommodations and Extensions

As an accommodation, provide students with a list of body parts their insects should have. If necessary, review the list with students and provide ideas for creating a new insect species.

As an extension, have students write a paragraph describing their insect's habitat. Their paragraphs should also include a description of what the insect eats and how it defends itself from predators.

Closure

Ask students to briefly discuss how their new insect species are similar to the insects they have read about. Remind students that all insects have six legs and three body parts.

Assessment

Evaluate student presentations for creativity and understanding. Each should include information provided on the *Create Your Own Insect* reproducible.

Insect Defenses

A Lesson on Insect Defense Mechanisms

Content

Students will learn about insect defense mechanisms and write creatively to express ideas.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Science

Students should develop an understanding of organisms and environments.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Interpersonal



Verbal-Linguistic



Visual-Spatial

Prerequisites

Students should read the book *Insect Defenses* to familiarize themselves with insect defense mechanisms before proceeding with the lesson. Review the major components of a short story with students, including characters, setting, and plot.

Materials

- chalkboard and chalk or whiteboard and markers
- writing paper and pencils
- *Insect Defenses* reproducible

Instructional Procedure

Anticipatory Set

Write the terms *predator* and *prey* on the board. Explain the definition of each term. Then have students name examples of predators and their prey. List student responses on the board.

Class Discussion

Ask students to think about some of the insects described in *Insect Defenses*. Have students name different ways insects can protect themselves from predators, such as sensing nearby predators, camouflage, moving quickly, injecting venom into predators, or mimicking harmful insects. List student responses on the board. Provide explanations of how each defense mechanism helps protect insects from predators.

Objectives

The student will be able to...

- define *predator* and *prey*
- identify various insect species and their defense mechanisms
- work in small groups to create short stories

Activity

Place students in pairs and distribute writing paper. Tell students to imagine they are one of the insects from the book *Insect Defenses*. Have students work together to write a short story describing a day in the life of an insect. Stories should describe where the insect lives, what the insect eats, and how the insect protects itself from predators. Be sure to go over expectations for the story by presenting the information on the *Insect Defenses* reproducible. Encourage students to be creative.

Accommodations and Extensions

As an accommodation, have students use books from *The World of Insects* series as references for writing their stories. Review any necessary vocabulary terms.

You may also have students work in pairs and assign a scribe to help student write story.

As an extension, have students illustrate their stories. Insects and their habitats should be as realistic and accurate as possible.

Closure

Have volunteers read their stories to the class. Have students listen carefully to identify the defense mechanism described in the story.

Assessment

Have students use the *Insect Defenses* rubric to check each other's work.

Arthropod Acrostic

A Lesson on Insect Vocabulary

Content

Students will write creatively and practice their vocabulary skills through acrostic poetry.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Science

Students should develop an understanding of organisms and environments.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:



Bodily-Kinesthetic



Naturalist



Verbal-Linguistic

Prerequisites

Students should read books from *The World of Insects* series to familiarize themselves with various vocabulary terms before proceeding with the lesson. Review with students how to write an acrostic poem.

Materials

- chalkboard and chalk or whiteboard and markers
- *Arthropod Acrostic* reproducible
- drawing paper
- markers

Instructional Procedure

Anticipatory Set

Ask, *What are the names of some of the insects described in the books we read?* Have volunteers write their answers on the board. (Answers may include firefly, ladybug, butterfly, and grasshopper.)

Classroom Discussion

Review the list of insect names on the board. Have students brainstorm words that describe one or more of the insects. Write student responses on the board beneath the corresponding insect name. Then complete a sample acrostic poem on the board with students, such as the following.

ANTS

Are arthropods who live in
Nests, where they do
Teamwork together on
Six legs each.

Objectives

The student will be able to...

- identify and describe insects
- write a creative poem

Activity

Distribute art supplies and the *Arthropod Acrostic* reproducible. Have students select an insect name and write an acrostic poem using vocabulary from *The World of Insects* series. All lines of the poem should relate to or describe the insect. Students should complete questions 1–2 of the reproducible to help them write their poems. When completed, have students exchange poems to complete questions 3–5 of the reproducible. Then have volunteers read their poems in front of the class.

Accommodations and Extensions

As an accommodation, allow students to use one of the examples from the class discussion to write their poems.

As an extension, have students choose insects with more complex names to use when writing their poems. Also, have students try to use vocabulary terms that describe the insect's habitat, appearance, and defense mechanism, or have them try to make their poems rhyme.

Closure

Review vocabulary terms used in the poems with students. Discuss how each term helps describe the insect.

Assessment

Assess each student's poem for accuracy and creativity.

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Watch Your Step! Rubric

Directions: Review your classmate's poster. Then read each question. Put an X in the box for your answer. Write comments about your classmate's poster at the bottom of the page (things you liked about it, how they can improve their poster, etc.)

Classmate's name _____

	Yes	No
Does the poster tell about an insect and its home?		
Does the poster tell you why the insect is important?		
Does the poster tell you how you can help protect the insect?		
Is the poster neat and clear?		
Are the words all spelled correctly?		

Nature in Action

Directions: Look for insects on the playground. Write the number of insects you find in the chart. Create a bar graph in the space below.

Insect Name	How many?
1.	
2.	
3.	
4.	
5.	

Bar Graph



The Thorax Is Connected to the Abdomen

Directions: Answer the questions to help you create your insect model.

1. What is the name of your insect? _____

2. How many body parts does your insect have? _____

3. How many legs does your insect have? _____
(Hint: All insects have this many legs!)

4. Does your insect have wings? _____

5. What color or colors is your insect? _____

An Ant's Life

Part I

Directions: View the ant farm. Answer the questions.

1. How many ant tunnels do you see? _____

2. Use a ruler to measure the length of the longest ant tunnel.
How long is the longest ant tunnel? _____

Part II

Directions: View the ant farm again. Answer the questions.

1. How many ant tunnels do you see? _____

2. Use a ruler to measure the length of the longest ant tunnel now.
How long is the longest ant tunnel? _____

3. Write a few sentences telling how the ants work together to make their home.

Metamorphosis: A Life Cycle Skit

Directions: Answer the questions to help you write your play.

1. What is the name of your insect? _____

2. Which stage in the life cycle will you act out? _____

3. What does the insect look like at that stage? _____

4. What does the insect eat at that stage? _____

5. How has the insect changed from an earlier stage? _____

Create Your Own Insect

Directions: Answer the questions to help you design your insect.

1. How many legs does your insect have? _____
(Hint: All insects have this many legs.)

2. How many body parts does your insect have? _____

3. What color is your insect? _____

4. What is your insect's name? _____

5. How does your insect move from place to place? _____

6. Where does your insect live? _____

Insect Defenses Rubric

Directions: Read your classmate's insect story. Then read each question below. Write an X in the box for your answer. Write comments about your classmate's story at the bottom of the page (things you liked about it, how they can improve their story, etc.)

Classmate's name _____

	Yes	No
Does the story tell about a day in the life of an insect?		
Does the story tell you where the insect lives?		
Does the story tell you what the insect eats?		
Does the story tell you how the insect protects itself?		
Is the story fun to read?		
Are all the words spelled correctly?		

Arthropod Acrostic

Directions: Answer questions 1–2 to help you write your poem. Then exchange poems with a classmate and answer questions 3–5.

1. What is the name of the insect you will write about? _____

2. List words that tell about your insect. _____

3. What is the name of the insect your classmate wrote about? _____

4. What words did your classmate use to tell about the insect? _____

5. What did you learn from reading this poem? _____
