

HMH Teacher Central Lesson Plan for Whole- and Small-Group Instruction

Instructor:

Date:

Class:

Informational Text: **Inspired by Nature** (Day 1)

Workshop 2 Lesson 9

STANDARDS

CCSS.ELA–LITERACY: RI.1.10, RI.1.2, RI.1.4, RI.1.7, RI.2.10, RI.2.2, RI.2.4, RI.2.7, RI.3.10, RI.3.2, RI.3.4, RI.3.7, RI.4.10, RI.4.2, RI.4.4, RI.4.7, RI.5.10, RI.5.2, RI.5.4, RI.5.7, RF.1.3D, RF.1.4A, RF.1.4B, RF.1.4C, RF.2.3C, RF.2.4A, RF.2.4B, RF.2.4C, RF.3.3C, RF.3.4A, RF.3.4B, RF.3.4C, RF.4.3A, RF.4.4A, RF.4.4B, RF.4.4C, RF.5.4A, RF.5.4B, RF.5.4C, SL.1.1A, SL.1.1B, SL.1.1C, SL.2.1A, SL.2.1B, SL.2.1C, SL.3.1A, SL.3.1B, SL.3.1C, SL.3.1D, SL.4.1A, SL.4.1B, SL.4.1C, SL.4.1D, SL.5.1A, SL.5.1B, SL.5.1C, SL.5.1D, L.1.4A, L.1.4E, L.1.6, L.2.1D, L.2.4A, L.2.6, L.3.1D, L.3.4A, L.3.4B, L.3.6, L.4.1B, L.4.4A, L.4.4B, L.4.6, L.5.1C, L.5.1D, L.5.4A, L.5.4B, L.5.6

HEADS UP

Word Count: 353

Lexile Measure: 650L

Guided Reading Level: Q

Qualitative Measure: Moderate 1

It's a bird! It's a plane! It's a plane that looks like a bird! In today's text, "Inspired by Nature," students get a side-by-side look at the way humans have borrowed animal adaptations for our inventions and gadgets.

Background knowledge—Help students distinguish between scientists, inventors, and engineers, as referenced in paragraph 3 of the text. Explain that scientists study the natural and physical world. Students may have heard of specific types of scientists, such as biologists (who study plants and animals) and chemists (who study chemicals). Explain that inventors are people who invent, or create, new devices and other things. Tell students that engineers are people who design and build machines, structures, and systems, such as engines, bridges, planes, and applications for a tablet or cell phone. Point out that, often, inventors are also scientists or engineers. You may also want to explain that NASA stands for National Aeronautics and Space Administration, and that it is a government agency that oversees the US space exploration program.

Engage—Discuss any recent inventions in the news that have been inspired by nature.

MATERIALS

Real Book pp. 88–89

[Academic Interaction Card](#)

ACADEMIC VOCABULARY

identify (verb): to recognize something or discover exactly what it is

normal (adjective): usual or expected

MEETING INDIVIDUAL NEEDS

- **Beginning Readers:** Closed Syllables, Compound Words, Identify Syllables
- **English Learners:** Irregular Past-Tense Verbs, Modal Verbs, Time-Order Words
- **Standard Classroom English:** Habitual Actions or States (verb *to be*), Past-Tense Verb Formation, Sound Substitution: Vowels Before *m* and *n*

RESOURCES FOR DIFFERENTIATED INSTRUCTION

- **Support:** Read Content-Area Texts
- **Extend:** Read Text Features in Context

[Get Resources](#)

OBJECTIVES

Primary Goals

Literacy Goal: Interpret visual information and explain how it contributes to an understanding of the text.

Language Goal: Use complete sentences to explain how visual information contributes to an understanding of the text.

Additional Goals

Literacy Goal: Determine key ideas in an informational text using academic vocabulary.

Language Goal: Use high-utility academic vocabulary in verbal and written responses.

LT: I will learn and use reading comprehension strategies to improve my reading skills.
SC- use visual information to gain knowledge about a topic- main idea and details

DO NOW!

Show You Know

Use the Do Now routine.

1) Display the Do Now and assign the task.

 **(challenge) One challenge of participating in an after-school activity is that you might have less time for _____.** (e.g., homework; hanging out with friends; being on a team)

2) Prompt partners to share their responses and restate their partners' ideas using the frames.

 **So your idea is _____.**

 **Yes, that's correct.**

 **No, what I meant was _____.**


3) Ask two preselected students to share with the class and guide students to score their own responses.

SHARE TODAY'S GOALS

Primary Goals

Introduce the Literacy and Language Goals. *Today we will think about the way images in an informational text help us understand what we read.*

 **Literacy Goal: Look at visual information and explain how it helps you understand the text.**

 **Language Goal: Use complete sentences to explain how visual information helps you understand the text.**

BUILD VOCABULARY AND KNOWLEDGE

Teach Academic Vocabulary: *identify*

Teach the Academic Vocabulary word *identify* using the Vocabulary routine.

1) Pronounce the word and have students repeat it twice.

2) Clarify the part of speech. *Identify is a verb, an action word.*

3) Rate word knowledge if time permits by having students write a rating (1–4) next to the word.

4) Explain the meaning of the word.


- Provide a brief example to help students connect to the word. *If you have the same backpack as a friend, you might add a key chain to the zipper so you can identify that it's yours.*
- Display and read aloud the meaning of *identify*.
- Guide students in completing the blanks in their *Real Books*.


- Make connections with your prior example. *Adding a key chain to the zipper on your backpack can help you recognize, or identify, your backpack.*

5) Discuss the example.

- Read aloud the example question and model one or two responses while pointing out the grammar target. *After the word by, I need a verb that ends in -ing. I always have to look up song lyrics, so I'll write "looking them up on the Internet." Notice how my response is a verb + -ing phrase.*
- Give students time to think of a response. *What else can you do to identify the lyrics of your favorite song?*
- Have partners share ideas twice and select one to record. Direct students to read their sentence and then say it with expression. Have students restate their partner's idea using a frame from the [Academic Interaction Card](#).
- Facilitate whole-group reporting using varied techniques.

6) Deepen understanding by providing an additional example as time permits.

 **How can you *identify* a book that you might enjoy?**

 **(*identify*) I can **identify** a book that I might enjoy by _____.** (e.g., finding other books by a favorite author; reading the back cover to see if it sounds interesting; asking the librarian for recommendations)

Teach Academic Vocabulary: *normal*

Teach the Academic Vocabulary word *normal* using the [Vocabulary](#) routine.

- 1) Pronounce the word and have students repeat it twice.
- 2) Clarify the part of speech. *Normal is an adjective, a word that describes a noun.*
- 3) Rate word knowledge if time permits by having students write a rating (1–4) next to the word.
- 4) Explain the meaning of the word.
 - Provide a brief example to help students connect to the word. *Being hungry after exercising is normal.*
 - Display and read aloud the meaning of *normal*.
 - Guide students in completing the blanks in their *Real Books*.
 - Make connections with your prior example. *Exercising burns up our bodies' fuel, so it's expected, or normal, to want to eat something after exercising.*


5) Discuss the example.

- Read aloud the example question and model one or two responses while pointing out the grammar target. *Most kids do their homework after school, so I'll complete the sentence by writing "do homework." My response is a phrase that begins with a present-tense verb.*
- Give students time to think of a response. *Think about something else that you do after school on a normal day.*
- Have partners share ideas twice and select one to record. Direct students to read their sentence and then say it with expression. Have students restate their partner's idea using a frame from the [Academic Interaction Card](#).

- Facilitate whole-group reporting using varied techniques.

6) Deepen understanding by providing an additional example as time permits.

 **What is a *normal* lunch for you?**

 **(normal) A normal lunch for me is _____.** (e.g., a peanut-butter-and-jelly sandwich; tomato soup; a burrito)

Activate Knowledge

Preview the text features in “Inspired by Nature.” Have students look at the text features on pages 88–89 and 90–91. *This text includes text features like images with captions and diagrams. These text features will help us visualize and understand how certain inventions were inspired by animal adaptations.*

- Use **Think (Write)-Pair-Share** to have students brainstorm and share ideas about how birds might have inspired the invention of planes.

 **What features do birds and planes have in common?**

 **(One/Another) feature that birds and planes have in common is _____.** (e.g., wings; a tail; a long, pointy “nose”)

CLOSE READING

First Read | Key Idea

Introduce the Key Idea question and read aloud the text.

- Read aloud the Key Idea question, and remind students to be prepared to answer the question after reading. *Listen for animals that have inspired inventions. If you hear an example, circle it.*
- Read aloud the text using **Oral Cloze 1**, leaving out the words in blue boxes for students to chime in chorally. *Follow along as I read the text aloud. Occasionally, I will leave out a word. When this happens, read the missing word aloud.*
- During reading, clarify the meanings of the word *burrs*.
- Continue using **Oral Cloze 1** to read the captions for the images in the text feature “From Animal to Invention.”
- After reading, use **Think (Write)-Pair-Share** to have students write and share responses to the Key Idea question.

Make Connections Connect this text to the related Student App Segment. *If you selected the Segment Gecko Power! in the Student App, you already learned how animal adaptations can inspire new inventions.*

Make Connections Help students recognize that the word *mimic* is the base word in *biomimicry*. Have students underline the word *mimic* in the second sentence of paragraph 3. Point out the embedded definition of *copy* for the word *mimic* in the same sentence. *Now look at the last sentence in the paragraph. Which word in that sentence has mimic as a base word? Yes! Mimic is the base word for biomimicry. Underline mimic in biomimicry.* Then reread the last sentence of the paragraph to reinforce the meaning of the word *biomimicry*. If needed, point out that the prefix *bio-* in *biomimicry* means “life.”

BUILD FLUENCY AND COMPREHENSION

Second Read | Review Key Idea

Review student responses to the Key Idea question. Provide additional support during the second read for students who have incomplete or inaccurate responses. For students who accurately completed the Key Idea question, encourage them to elaborate on their response by adding another example of an animal that has inspired an invention. *We are looking for animals that have inspired inventions. Listen carefully as we reread the text, including the captions for the images. Put your thumb up when you hear an example of an animal inspiring an invention.*

- Read aloud the text again using [Oral Cloze 2](#), increasing the pace slightly and omitting different words.
- Support students in revising or adding to their responses.
- Have students share revised or new responses with the group.

 I revised my response to _____.

 I added _____ to my response.

Make It Relevant Help students recognize how the science of biomimicry affects people’s everyday lives. *How would life today be different if no one had been inspired by birds to build a plane? How would travel be more difficult? Would people be able to send packages and letters as easily? Consider demonstrating how Velcro works by fastening a backpack flap or jacket front that uses Velcro. Velcro was inspired by the way burrs stick to clothing, fur, and other things. How does Velcro make our lives easier? What can we do more quickly because of Velcro?*

Review Foundational Skills: VCe Words Point out examples of words with a vowel-consonant-e (VCe) pattern as you reread the text. Have students say each word and underline the vowel-consonant-e pattern in each word. (Paragraph 1: *like*; Paragraph 2: *time, survive, inspire*; Paragraph 4: *airplane*)


Analyze Visual Information

Read the task aloud and review reading critically to analyze visual information. Tell students that strong readers read critically by thinking about all of the information presented in a text, including visuals. *Authors may include visuals to convey important information. That same information may not be included in the words the author writes. To complete this task, I need to think about what I learn from the images and how they help me better understand the topic.*

- Reread the *Speed* caption using [Modeled Fluent Reading](#) and review the first pair of images. *The caption tells us that the front of the train is designed like a bird’s beak. Does the caption describe the shape of the design? By looking at the images, though, I can see that the front of the train is designed to be long and narrow, like the bird’s beak. The blue circles visually connect the beak and the front of the train.*
- Support students as they read and view the remaining text and images to identify the information they get from both. *What is the purpose of each set of images and the text captions below them?*


- Have pairs work together to complete the task. Provide support as needed. *What do the yellow circles visually connect in the Grip section? What do you learn from the visuals that you don't learn from the caption? What do the green circles visually connect in the Structure section? What do you learn from the visuals that you don't learn from the caption?*
- Use the [Academic Discussion](#) routine to structure student interaction as they report and compare responses with the group.

 **Similar to (Name), we thought that the images helped us understand _____.** (e.g., how each animal and invention are connected)

 **We had a different idea from (Name). We thought that the images helped us understand _____.** (e.g., which part of the animal was mimicked to create the invention)

Share the Strategy Toolkit item to promote strategy transfer. Point out that students will encounter many texts that include visuals. *Remember, an author may use visuals to share important information, and the author may not tell that same information in the text. So how can reading critically help you better understand a text?*




- Use [Think \(Write\)-Pair-Share](#) to have students share how reading critically can help them better understand a text.

 **Reading critically by looking at _____ can help me better understand _____.** (e.g., images/the topic of the text; captions/what the author wants me to know; pictures/what the author is writing about)

FORMATIVE ASSESSMENT

LITERACY GOAL: Interpret visual information and explain how it contributes to an understanding of the text.



Observe Review students' written responses to the Analyze Visual Information task, and listen as students discuss their ideas with their partners and the group.

Monitor Progress	Adapt Instruction/Strategies
<p>Nearly There Students seem to understand the purpose of the visuals in the text but may provide vague or unclear responses to the task.</p>	<p>For each set of images, provide response frames to help students clarify their ideas:</p> <p> The image on the left shows _____</p> <p>(e.g., the animal and its special feature that inspired an invention)</p> <p> The image on the right shows _____</p> <p>(e.g., the invention that copies the special feature of the animal)</p> <p>Help students conclude how the three sets of images work together to support an understanding of the topic. Provide a response frame to again help students clarify their ideas:</p> <p> Seen together, the images show that there is a _____ between animals and the inventions they inspired.</p> <p>(e.g., connection; relationship)</p>
<p>Not Yet Students may not recognize the relationship between the images in each section or how the three sets of images work together to support an understanding of the topic.</p>	<p>Revisit the captions and images and ask questions to scaffold thinking:</p> <ul style="list-style-type: none"> • <i>What do you see in this image?</i> • <i>What do you see in the image next to it?</i> • <i>What is the same between them?</i> • <i>Do these two images show a connection between an animal and the invention it inspired?</i> <p>Guide students as they revise their responses in their <i>Real Books</i>.</p>
<p>On Track Students understand the relationship between the images and clearly explain how the images help them understand the text.</p>	

FORMATIVE ASSESSMENT

LANGUAGE GOAL: Use complete sentences to explain how visual information contributes to an understanding of the text.

Observe Listen as students discuss the images with the group.


Monitor Progress	Adapt Instruction/Strategies
<p>Nearly There Students speak in complete sentences but could provide additional details to support their responses.</p>	<p>Affirm that students have expressed a clear idea, but challenge them to elaborate. For example: <i>I heard you say that the images help because they show the inventions. Can you say more about this in your response?</i></p> <p>If needed, ask questions to prompt students to provide detailed responses: <i>Do the images show a connection between the animals and the inventions they inspired? How do the images show this connection? Please restate your answer and include this new information.</i></p>
<p>Not Yet Students speak in sentence fragments and may be hesitant to explain their thinking.</p>	<p>Model analyzing the <i>Grip</i> images, using complete sentences. <i>The caption tells me that scientists made football gloves that have a strong grip, like a gecko's. By looking at the images, I can see that the football gloves let football players catch and grip a football, the same way that a gecko's feet allow it to grip a wall. Can you follow my model to analyze the Structure images?</i></p> <p>If needed, provide sentence frames:</p> <p> The caption tells me that _____.</p> <p>(e.g., engineers designed the car to fold up like an armadillo)</p> <p> By looking at the images, I can see _____.</p> <p>(e.g., how the car folds up like the animal; that the car and animal have similar body structures)</p>
<p>On Track Students use complete sentences when explaining how the images help them understand the text.</p>	

WRAP UP

Build Community

Guide students to share their responses to the Wrap Up question with a partner.

 **How were you supportive to a classmate today?**

 **One supportive thing I did today was _____.**