Infer the Topic Protocol Student Directions

**Purpose:** This protocol helps build anticipation and pique your curiosity about the topic we are about to begin studying in-depth.

1. Your team will receive one “artifact”: a photograph, a book cover, a sketch, a diagram, a quote, a newspaper headline, or an article.

2. With your partner, take a moment to study your artifact. If it’s an article, don’t read the whole thing. Look at the headline(s), headings, and/or captions.

   **(Note: It’s okay if you and your partner do not agree and have different ideas captured on your note-catchers.)**

3. Use your Infer the Topic note-catcher to capture your thoughts (1–2 minutes).

   - What is this artifact?
   - What does it remind you of?
   - What questions do you have about it?
   - What can you infer the new topic of study will be?

4. When your teacher prompts you, quickly find another team. Take turns showing your artifacts and sharing what you recorded on your note-catchers. Discuss the questions below and capture your thoughts in the next section of your note-catcher (2–3 minutes).

   - What is the other team’s artifact?
   - What does it remind you of?
   - What questions do you have about it?
   - Now what do you infer the upcoming topic of study will be?

5. Join in the whole group discussion. Your teacher will ask for a few volunteers to share their artifacts and their prediction about the upcoming unit of study. Your teacher will reveal the topic by the end of this discussion (3 minutes).
Infer the Topic Note-catcher

<table>
<thead>
<tr>
<th>I think my artifact is ...</th>
<th>My artifact reminds me of ...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions I have ...</th>
<th>I think we’re going to be studying ...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I think the other team’s artifact is ...</th>
<th>Their artifact reminds me of ...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions I have ...</th>
<th>I think we’re going to be studying ...</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After the class discussion, I know we will be studying ...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
Criteria for Selecting Texts Anchor Chart

- The book interests me.
- I can make connections between this book and other texts read, topics explored, or experiences I have had.
- I know many, but not all of the words in the book.
- The book contains some text or images I don’t understand, but I am able to get a sense of what the book is mostly about.
Title of Independent Reading Book/Author’s Name:

After reading independently (silently and/or aloud) for at least 30 minutes, write a response to any ONE question from the board except the center square. Complete the center square once you have answered each of the other eight questions.

<table>
<thead>
<tr>
<th>VISUAL ELEMENTS</th>
<th>CONNECTIONS</th>
<th>STRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What visual elements (pictures, text) do you notice in this book?</td>
<td>What connections were you able to make between your independent reading book and other texts, topics explored, or experiences you have had?</td>
<td>How is this book structured?</td>
</tr>
<tr>
<td>How do the visual elements support your understanding of the text?</td>
<td></td>
<td>How does the structure support your understanding of the text?</td>
</tr>
<tr>
<td>GENRE</td>
<td>RECOMMENDATION</td>
<td></td>
</tr>
<tr>
<td>What genre is this book? Do you enjoy this genre? Explain.</td>
<td>What qualities will you look for in the next book you read? (e.g., same author, similar visual features, same or different genre, etc.)</td>
<td>Would you recommend this book and/or this author to someone else? Explain.</td>
</tr>
<tr>
<td>WORDS</td>
<td>READABILITY</td>
<td>INTEREST</td>
</tr>
<tr>
<td>Why do you think the author chose to repeat these words; why are they important?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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How do authors structure text and use visual elements to engage and support readers’ understanding of complex ideas?

SECTION 1: “A WORLD OF QUESTIONS”

Step 1: Ask Questions

Details that explain how to ask scientific questions:

How does an information box support your understanding of the first step Max Axiom takes to solve a problem?

Key Terms (scientific)

Step 2: Gather Information

Details that explain how to gather information:

How do gutters support your understanding of the next step Max Axiom takes to solve a problem?

Key Terms (academic)
How do authors structure text and use visual elements to engage and support readers’ understanding of complex ideas?

SECTION 2: “SEARCHING FOR ANSWERS”

Step 3: Form a Hypothesis

Details that explain how to form a hypothesis

__________________________________

__________________________________

Visual Element Focus: “Speech Bubbles/Thought Bubbles”

How do speech bubbles or thought bubbles support your understanding of the third step Max Axiom takes to solve a problem?

Key Terms (scientific)

Step 4: Design an Experiment

Details that explain how to design an experiment

__________________________________

__________________________________

Visual Element Focus: “Images/Photos”

How do images and photos support your understanding of the fourth step Max Axiom takes to solve a problem?

Key Terms (academic)
How do authors structure text and use visual elements to engage and support readers’ understanding of complex ideas?

SECTION 3: “CONDUCTING THE EXPERIMENT”

Step 5: Conduct the Experiment

Details that explain how to conduct an experiment

• ______________________________________________________
• ______________________________________________________
• ______________________________________________________
• ______________________________________________________

Visual Element Focus: “Colors”

How do colors support your understanding of the fifth step Max Axiom takes to solve a problem?
Step 6: Analyzing Data and Drawing a Conclusion
Details that explain how to analyze data and draw a conclusion

• ______________________________________
• ______________________________________
• ______________________________________

Visual Element Focus: “Diagrams/Information Boxes”
How do diagrams and information boxes support your understanding of the sixth step Max Axiom uses to solve a problem?
Learning Target: I can consult reference materials, both print and digital, to find the pronunciation and determine or clarify the meaning of key words and phrases

INTERNET SEARCH TERMS

<table>
<thead>
<tr>
<th>Search:</th>
<th>Draw</th>
</tr>
</thead>
</table>

Search Results

draw

/dru:/

VERB
(past tense drew; past participle drawn)

1. To create a picture or diagram by making lines and marks on paper
   Examples: She decided to draw a map to show him where to go.
   The boy drew a picture of a dog.

2. To pull or move something
   Examples: I drew back the curtains to let in the sunlight.
   He drew his sword.

3. To move somewhere in a slow and steady way
   Example: The train drew into the station.

4. To fill a bath
   Example: The mother drew a bath for the baby.

5. To take in (a breath):
   Example: The teacher drew a long breath.

6. To direct or attract
   Examples: The girl drew her mother’s attention to the problem.
   The museum draws many visitors each day.

7. To reach (an idea or conclusion) by using information to make an inference
   Example: He had looked at several resources and was ready to draw his conclusion.

8. (draw on) to use ones experience or skills as a resource
   Example: He was able to draw on past experiences to help make the decision.
<table>
<thead>
<tr>
<th><strong>NOUN</strong></th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The act of selecting names randomly for a lottery or sporting event.</td>
<td>They made the draw for this year's tournament.</td>
</tr>
<tr>
<td>2.</td>
<td>A competition that ends in a tie</td>
<td>He scored twice to force a draw.</td>
</tr>
<tr>
<td>3.</td>
<td>A person or thing that is very attractive or interesting</td>
<td>The circus was a major draw for the community.</td>
</tr>
</tbody>
</table>
Directions:
1. Select one of the main characters from your independent reading text.
2. Use the frames/panels below to create a graphic novel page that introduces the character you selected. Consider including: identifying features of physical appearance and dress, as well as a representation of at least two defining character traits.
3. Incorporate both text and visual elements into your graphic novel page.
4. Bring your completed template to class to share at the start of our next lesson.
Directions:
1. Select one of the main characters from your independent reading text.
2. Use the frames/panels below to create a graphic novel page that introduces the character you selected. Consider including: identifying features of physical appearance and dress, as well as a representation of at least two defining character traits.
3. Incorporate both text and visual elements into your graphic novel page.
4. Bring your completed template to class to share at the start of our next lesson.
Directions:
1. Select one of the main characters from your independent reading text.
2. Use the frames/panels below to create a graphic novel page that introduces the character you selected. Consider including: identifying features of physical appearance and dress, as well as a representation of at least two defining character traits.
3. Incorporate both text and visual elements into your graphic novel page.
4. Bring your completed template to class to share at the start of our next lesson.
How do authors structure text and use visual elements to engage and support readers’ understanding of complex ideas?

Key Terms: communicate, results, account, display, common, traits, abstract, unraveling

SECTION 4: “SHARING THE FINDINGS”

Step 7: Communicate Results

Details that explain how to communicate results

• ______________________________________________________________________

• ______________________________________________________________________

Visual Elements Focus: “Ambient Sounds” and “Text Type”

How do ambient sounds and text type support your understanding of the final step Max Axiom takes to solve a problem?
Mid-Unit 1 Assessment: Analyzing Visual Elements in a Graphic Novel

Name:
Date:

Learning Targets Assessed:

- I can analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text. (RL.5.7)
- I can draw evidence from literary texts to support analysis, reflection, and research. (W.5.9)
- I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on fifth-grade reading and content, choosing flexibly from a range of strategies. (L.5.4)

Directions:
- Read pages 24–27 of *Investigating the Scientific Method with Max Axiom Super Scientist: “Sharing the Findings”* to determine what this section is mainly about.
- Review the questions below.
- Refer to pages 24–27, other sections of the graphic novel, and your notes from Lessons 2–5 to help you answer each question.

1. On page 24, Mrs. Mayor praises Max, “Well done. With these *findings* the safety of the city can be restored.” What does the word *findings* mean in this sentence?

   - [ ] a conclusion reached at the end of a court trial
   - [ ] a research result that comes from a scientific investigation
   - [ ] small tools used in making crafts
   - [ ] locating an item after it has been lost
Mid-Unit 1 Assessment: Analyzing Visual Elements in a Graphic Novel

2. On page 25, Max Axiom says, “They test and retest results before accepting the conclusion.”

a. What does the word retest mean in this sentence?

☐ do something over and over
☐ remake
☐ adjust
☐ test again

b. What part of the word retest helped you to determine the meaning in 2a, and why?

________________________________________________________________________________________

c. Read the two dictionary definitions for the word approach below, and determine which is the correct definition based on how the word is used on page 26, “Each experiment is different, and each experiment requires a slightly different approach.”

☐ Approach (verb): move closer
☐ Approach (noun): method
3. Look closely at pages 24–27.

a. Locate and name one example of each of the following visual elements:

<table>
<thead>
<tr>
<th>Visual Element</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient sounds</td>
<td></td>
</tr>
<tr>
<td>Speech bubbles</td>
<td></td>
</tr>
<tr>
<td>Font size, color, style</td>
<td></td>
</tr>
<tr>
<td>Images</td>
<td></td>
</tr>
<tr>
<td>Colors</td>
<td></td>
</tr>
<tr>
<td>Information boxes</td>
<td></td>
</tr>
</tbody>
</table>

b. Write a 2–3 sentence statement to analyze how at least two of the above visual elements help you understand that Max Axiom has a new problem to solve. Be sure to support your thinking with examples and evidence from the text.

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
**Learning Target:** I can explain how visual elements add meaning to the description of the scientific problem Max Axiom will encounter next.

1. The target in my own words is:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. How am I doing? Circle one.

   I need more help to learn this

   I understand some of this

   I am on my way!

3. The evidence to support my self-assessment is:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Learning Target: I can determine the meaning of unfamiliar words and phrases using a variety of strategies.

1. The target in my own words is:

2. How am I doing? Circle one.

   I need more help to learn this
   I understand some of this
   I am on my way!

3. The evidence to support my self-assessment is:
You may not know it, but electric motors are everywhere! They are found in hundreds of devices that are used by people every day. Some alarm clocks use an electric motor. Refrigerators also run on an electric motor. Parts of the windshield wipers on cars, power tools, and computers all contain electric motors. Given how much we depend on the electric motor today, it’s hard to even imagine what life was like before it was invented.

In the early 1800s, the main source for electricity was batteries. However, batteries cost a lot of money, so many people could not afford to have electricity in their homes. This led scientists to begin experimenting with other ways to create electricity.

It was 1821 when an English chemist named Michael Faraday designed an experiment in which he attached a magnet to the bottom of a wire. He hung the wire with the magnet from a hook and placed it directly over a bowl of liquid. He then connected a battery partway up the wire, between the magnet and where the wire met the hook. When Faraday turned the battery on, the wire began to spin. This experiment became the first example of a machine capable of generating electricity better than a battery. Faraday called it the electric motor.

Faraday’s electric motor eventually led to Thomas Edison’s construction of an electric power plant in New York City in 1882. Edison used the idea of the electric motor to figure out a way to generate electricity that people could buy. Edison’s massive plant provided enough electricity to power 1,200 light bulbs, essentially allowing everyone to have access to reasonably priced electricity.

Many scientists continued to improve on these earlier versions of the electric motor, and the ongoing advancements have undoubtedly made our lives much simpler. So the next time you turn on the lights, dry your hair, or use a CD player, think about how lucky you are that the electric motor was invented!
<table>
<thead>
<tr>
<th>Structure</th>
<th>Description</th>
<th>Graphic Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive</td>
<td>The author describes a topic by providing features, characteristics, and/or examples.</td>
<td><img src="image" alt="Descriptive Graphic Organization" /></td>
</tr>
</tbody>
</table>
| Sequential                 | The author describes an event chronologically or in numerical sequence. The order of events can be obvious or implied. | 1. _____ First, __________
2. _____ Second, __________
3. _____ Third, __________
4. _____ Next, __________
5. _____ Finally, __________ |
| Compare/Contrast           | The author describes the similarities and differences between two or more topics, people, or concepts | ![Compare/Contrast Graphic Organization](image) |
| Cause and Effect           | An author tells about an idea, event, or series of events as effects that happen as a result of, or are caused by another event. | ![Cause and Effect Graphic Organization](image) |
| Problem and Solution       | The author presents a problem and at least one solution to the problem. | ![Problem and Solution Graphic Organization](image) |
Cause and Effect Note-catcher: “The Electric Motor”

*How does the way a text is structured support our understanding of complex ideas?

Cause

Effect 1

Effect 2

Effect 3

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Enduring Understanding: How did scientists develop new or improved technologies to meet people’s needs?

Fill in the chart using *three* quotes from the text to show how scientists developed new or improved technologies to meet people’s needs.

<table>
<thead>
<tr>
<th>Scientists develop new or improved technologies to meet people’s needs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVIDENCE (quote from text)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Text-Dependent Questions: “The Electric Motor”

Refer to the text and your notes to help you answer the following questions.

*Some questions have more than one correct response. Mark all that apply.

1. Why did scientists begin developing other ways to generate electricity?
   a. Batteries were the only source for electricity in the early 1800s.
   b. People didn’t like batteries.
   c. Many people could not afford batteries.
   d. Batteries took too long to make.

2. How did the invention of the electric motor influence the development of the first power plant?
   a. The electric motor generated electricity better than batteries.
   b. Thomas Edison created the first power plant based on Michael Faraday’s invention of the electric motor.
   c. The first power plant was able to supply enough electricity for 1,200 light bulbs.
   d. Many people had access to affordable electricity after the first power plant was built.

3. How are electric motors used to meet people’s needs?
   a. They are found in devices that people depend on.
   b. They generate electricity better than batteries.
   c. They are in light bulbs.
   d. They are built using a magnet and a battery.

Written by Expeditionary Learning for instructional purposes

Mary Anderson and Margaret E. Knight are two inventors you have probably never heard of. However, their ingenious ideas have made our lives both safer and simpler. Read on to learn more about how and why each of these brilliant women developed devices that we still rely on so much today.

Mary Anderson
Where does the idea for a great invention come from? Well, in the case of Mary Anderson it was developed purely from the desire to make people’s lives safer.

It was the year 1902 when Mary Anderson traveled far from her home in Alabama and boarded a New York City streetcar. The snow and sleet pelted the car mercilessly. The driver struggled to see the road in front of him through the frost-caked glass. It was because Mary felt sorry for the driver and realized the potential danger to her fellow passengers that she was inspired to create a device that would make people’s lives better. That invention was the windshield wiper.

At the time, the best option available was a split windshield. During bad weather, drivers would swing open their front window in the hopes that debris would slide off to clear their view. However, this design did not work very well. So Mary thought, “Why not create a device to remove the snow and ice completely?” Immediately, she began to draw up plans in her notebook.

Mary’s final sketch became what we refer to today as “windshield wipers.” Or, as she described in her patent application, “... an improvement in window-cleaning devices in which a radially-swinging arm is actuated by a handle from inside of a car-vestibule,” which is just another way of saying there would be a lever inside the car that made an arm move across the glass of the windshield.

Unfortunately, manufacturers did not see the value of her idea and she allowed the patent to expire. Several years later, someone else saw Mary’s idea. That person patented and sold the invention of windshield wipers to car companies far and wide. Today, we can all be grateful to Mary Anderson for this ingenious invention because it helps us see where we’re going, even in the most inclement weather.
Margaret E. Knight

Whereas Mary Anderson’s goal was to make people’s lives safer, another inventor, Margaret E. Knight, set out to make people’s lives easier. In the mid-1800s, Margaret Knight worked at the Columbia Paper Bag Company. Her job was to tie together stacks of handmade, flat-bottomed bags. Flat-bottomed bags took a long time to make, so they cost more than most people could afford. At the time, most people could only afford large wooden crates or poorly crafted envelope-shaped bags to transport their goods from the grocery store to their homes. So when Margaret had been on the job only a week she wondered, “Why can’t flat-bottomed bags be made with a machine so they would take less time to put together and cost less money? Then everyone could afford them.” Similar to Mary, Margaret’s question led her to create a device that would improve people’s lives.

Margaret was neither a scientist nor an engineer. However, because she had worked with machines most of her life, she understood how they worked and how to build them. She began sketching ideas for a new paper bag machine that would fold square-bottomed bags. Her next step was constructing and testing the various parts of her machine. Within a year, Margaret had built a complete and working model of her invention. Once her wooden model was complete, she hired a machinist to build one out of iron. She submitted an application for a patent along with the newest version of her “Paper Feeding Machine” in 1868.

Unlike Mary’s idea, the value of Margaret’s machine was recognized almost immediately. When a man named Charles Annan saw Mary’s paper bag machine being cast in iron at the machinist’s shop, he tried to steal the idea. Annan copied Margaret’s invention and tried to file a patent. He claimed he invented it first. Margaret fought Charles Annan’s claim. She traveled to Washington, D.C. to fight him in court. After days of presenting evidence, Margaret received credit for being the first person to develop the paper-folding device. She was awarded the patent for her invention in 1870.

Margaret spent her life developing new and useful inventions. Eventually, she held the rights to 27 patents. In fact, reporters referred to her as “Lady Edison” because of her many discoveries. Nevertheless, it was her first invention of the paper-bag machine that continues to make our lives simpler, even in today’s modern world.
Compare and Contrast Note-catcher: “Ingenious Inventions by Women”

*How does the way a text is structured support our understanding of complex ideas?

Who is being compared and contrasted?

Alike

Different
**Enduring Understanding:** How did female inventors develop new or improved technologies to meet people’s needs?

Fill in the chart using *three* quotes from the text to show how women developed new or improved technologies to meet people’s needs.

<table>
<thead>
<tr>
<th>Female inventors have developed new or improved technologies to meet people’s needs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVIDENCE (quote from text)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Focus question: Did the invention of the windshield wiper or the paper bag machine meet a greater societal need?

___________________________________________________________________________ (brief introduction to the topic)

___________________________________________________________________________ (opinion statement that includes key terms from the question)

___________________________________________________________________________ (reason why you believe the opinion)

___________________________________________________________________________ (evidence/quote to support the opinion and reason)

___________________________________________________________________________ (evidence/quote to support the opinion and reason)

___________________________________________________________________________ (conclusion that restates the opinion)
January 18, 1896

When you are out on the court playing basketball, or watching it on TV, have you ever wondered who invented the game? The first ever college basketball game was played on January 18, 1896, when the University of Iowa invited student athletes from the new University of Chicago for an experimental game. Final score: Chicago 15, Iowa 12, a bit different from the 100-point scores of today.

In December 1891, Canadian-born James Naismith, a physical education teacher at the YMCA (Young Men's Christian Association) training school, took a soccer ball and a peach basket in the gym and invented basketball. In 1893, he replaced the peach basket with iron hoops and a hammock-style basket. Ten years later came the open-ended nets of today. Before that, you had to retrieve your ball from the basket every time you scored.

In 1963, college games were first broadcast on national TV, but it wasn't until the 1980s that sports fans ranked basketball up there with football and baseball. It's a popular neighborhood sport, too. The next time you shoot hoops with your family or friends, you can tell them how it all got started.
Problem and Solution Note-catcher: “Dr. James Naismith, Inventor of Basketball”

How does the way a text is structured support our understanding of complex ideas?

Key Terms: faced, suitable, skill, relied, relatively

Quotes that explain at least two of Dr. Naismith’s criteria for developing a solution:
Second Read Task Card: The Invention of Basketball

Part I: Problem and Solution note-catcher

1. Independently reread only the second paragraph of the article “Dr. James Naismith, Inventor of Basketball.”

2. As you read, circle the key words: faced, suitable, skill, relied, and relatively. Try to determine the meaning of each word by using a variety of strategies, including context, reference materials, and your understanding about parts of words. Be sure to discuss your thinking with group members.

3. Locate a quote that explains the problem Dr. Naismith was trying to solve. Discuss your thinking with group members, then record the quote in the “PROBLEM” box.

4. Locate a quote from the article that explains what Dr. Naismith invented to solve the problem. Discuss your thinking with group members, then record the quote on the line in the top part of the “SOLUTION” box.

5. Locate at least two quotes that describe Dr. Naismith’s criteria for developing a solution. Discuss your thinking with group members, then record the quotes in the lower half of the “SOLUTION” box.

Part II: Sequential note-catcher

1. Independently reread only the second and third paragraphs of the article “First College Basketball Game.”

2. As you read, circle the key words: replaced, open-ended, broadcast, and ranked. Try to determine the meaning of each word by using a variety of strategies, including context, reference materials, and your understanding about parts of words. Be sure to discuss your thinking with group members.

3. Locate three to five quotes that explain how the game of basketball was developed over time. Discuss your thinking with group members, then record the quotes in sequential order.

Part III: Enduring Understanding

1. Read the “Enduring Understanding” question at the bottom of the Sequential note-catcher.

2. Refer to the text and quotes you recorded into BOTH note-catchers to help you think of an answer to the question.

3. Discuss your thinking with group members.

4. Fill in the chart using quotes from both texts to show how the invention of basketball met people’s needs.
*How does the way a text is structured support our understanding of complex ideas?*

Key Terms: replaced, open-ended, broadcast, ranked

List three to five events that explain the development of basketball, in the order in which they occurred:

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td></td>
</tr>
</tbody>
</table>
**Enduring understanding: How did the invention of basketball meet societal needs?**

Fill in the chart below using evidence from the text to show how the invention of basketball met the needs of society. Use quotes from *both* texts in your response.

<table>
<thead>
<tr>
<th>The invention of basketball met societal needs.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EVIDENCE (quote from text)</td>
<td>SOURCE (name of article)</td>
</tr>
</tbody>
</table>
Refer to the articles and your note-catcher to complete the Venn diagram below.

- In your own words, explain at least two ways the information about the invention of basketball is *similar* in the two articles.
- In your own words, explain at least two ways the information about the invention of basketball is *different* in the two articles.
Synthesis Questions

What is the structure of the article “Dr. James Naismith, Inventor of Basketball”? What is the purpose of the article?

What is the structure of the article “The First College Basketball Game”? What is the purpose of the article?

How did reading two different types of articles help you better understand the invention of the game of basketball?
“Basketball met the greatest societal need.”

“Windshield wipers met the greatest societal need.”
“The paper bag machine met the greatest societal need.”

“The electric motor met the greatest societal need.”
“Big Thinkers: Was Steve Jobs This Generation’s Thomas Edison”

When Steve Jobs, co-founder of Apple, died on October 5 at age 56, countless tributes cited his achievements. Many put his name alongside that of another great achiever. One obituary said of Jobs, "The 20th century’s Thomas Edison has stepped from the stage." Is the comparison an apt one?

Thomas Alva Edison (1847-1931), the world’s most famous inventor, created or improved devices that revolutionized the way people lived. His work brought electricity and electric-powered devices into people’s homes and everyday life for the first time.

Jobs is cited as the inventor or co-inventor on 313 U.S. patents. By contrast, Edison’s name is on 1,093. Though he may not be Edison’s equal in terms of patents, Jobs is clearly one of the world’s great innovators. Other people invented the computer mouse and the MP3 player; Jobs found ways to make such devices sleeker, more versatile, and easier to use.

Jobs founded Apple Computer in 1976 with a high school friend. “We worked hard,” he told students at Stanford University in 2005, “and in 10 years Apple had grown from just the two of us in a garage into a $2 billion company with over 4,000 employees.”

In 1984, Apple introduced the Macintosh. Macs were the first “user-friendly” computers. They let people do what we now take for granted: interact with computers with on-screen images and a mouse rather than by typing in long, tedious commands. Other popular Apple innovations include the iPhone, the first touch-screen cell phone; the iPad, the leading touch-screen tablet; and iTunes, a cheap—and legal—way to buy music online. “A lot of times,” Jobs once said, “people don’t know what they want until you show it to them.”
TFK 2011 Person of the Year Nominee
December 2, 2011
By TIME For Kids Staff

For a quarter of a century, Apple cofounder Steve Jobs pushed and helped define the boundaries of computing technology. In October, Jobs died from a rare form of cancer. Millions of people mourned his death, creating monuments to his memory at Apple stores across the country. Throughout his illness, he never stopped innovating. In fact, he helped push through groundbreaking new products just weeks before he died.

Apple’s first big success was the Apple II personal computer in 1977.

Ten years ago, Jobs introduced the world to a new MP3 player, the now well-known iPod. The company introduced the iTunes Music Store in 2003, allowing consumers to purchase and download music with the touch of a button.

A true breakthrough happened in 2007, when Apple first showed off its iPhone. The product, more than merely a gadget, is essentially a computer that can be carried in your pocket. Consumers agreed that it was a revolutionary product. Many camped out in front of Apple stores to be the first to buy the new device. By 2011, the iPhone was selling more than 220,000 units a day.

In 2010, Apple broke into the tablet computer industry with the iPad. The company sold 14.8 million iPads in 2010, which was well beyond what industry analysts predicted.
Learning Targets Assessed:
I can determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. (RI.5.4)
I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (RI.5.1)
I can explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. (RI.5.3)
I can compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts. (RI.5.5)
I can write opinion pieces on topics or texts, supporting a point of view with reasons and information. (W.5.1)
   a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer’s purpose.
   b. Provide logically ordered reasons that are supported by facts and details.

Directions

- Read the articles “Big Thinkers” and “Steve Jobs.”
- Consider the gist of the articles—what are they mostly about?
- Skim the assessment questions below.
- Reread the texts in chunks to help you think about the answers to the assessment questions.
- Answer short-response questions in complete sentences.
- Be sure to cite evidence from the text to support your thinking.
- Be sure to include key words and phrases from the texts in your short-answer responses.
1. Read the following paragraph from the article “Big Thinkers,” then answer the questions that follow.

“Though he may not be Edison’s equal in terms of patents, Jobs is clearly one of the world’s great innovators. Other people invented the computer mouse and MP3 player; Jobs found ways to make such devices sleeker, more versatile, and easier to use.”

Part A:
What does the word innovators mean in this paragraph?

a. a trendsetter  
b. an inventor  
c. a person who resists change  
d. a person who improves or makes changes to the design of existing inventions

Part B:
Which of the following phrases from the article best helps the reader understand the meaning of the word innovator?

a. “Other people invented the computer mouse and MP3 player; Jobs found ways to make such devices sleeker, more versatile, and easier to use.”

b. “We worked hard.”

c. “Macs were the first user-friendly computers.”

d. “Other popular Apple innovations include the iPhone ...”

2. According to the “Big Thinkers” article, how are Thomas Edison and Steve Jobs similar?

a. They both created or improved technologies that changed people’s lives.

b. They have both patented more than 1,000 new or improved technologies.

c. They both said, “People don’t know what they want until you show it to them.”
3. Structure of Informational Texts

Part A: How are the first three paragraphs of the “Big Thinkers” article structured? (choose one)

a. Cause and Effect
b. Problem-Solution
c. Sequential
d. Descriptive
e. Compare and Contrast

How is the “Steve Jobs” article structured? (choose one)

a. Cause and Effect
b. Problem-Solution
c. Sequential
d. Descriptive
e. Compare and Contrast
Part B. Complete the Venn diagram to show:

- At least two ways “Big Thinkers” and “Steve Jobs” convey *similar* information about Steve Jobs.
- At least two ways “Big Thinkers” and “Steve Jobs” convey *different* information about Steve Jobs.
End of Unit 1 Assessment:
Using Quotes to Explain Relationships and Support an Opinion

Part C: Short Constructed Response

What were you able to understand about Steve Jobs from the “Big Thinkers” and “Steve Jobs” articles? Provide at least one specific example from each article as well as key words and phrases from the texts in your response.
4. Opinion Writing

Think about the following three inventions you have read about in this unit:

• *The electric motor*
• *The game of basketball*
• *Apple computers*

Given what you know about how each of these inventions met people’s needs, which one of the three do you think has been the most important to people?

Refer to the articles “The Invention of the Electric Motor,” “Dr. James Naismith, Inventor of Basketball,” “First College Basketball Game,” “Big Thinkers,” and “Steve Jobs” as well as your Cause and Effect, Problem and Solution, and Sequential note-catchers (from Lessons 7 and 9) to help you form your opinion.

Write a four or five sentence paragraph that includes:

• A brief introduction to the topic
• An opinion statement
• A reason that explains why you believe the opinion
• Two pieces of evidence to support the reason and opinion
• A conclusion that restates the opinion
• Clearly organized ideas
• Key words and phrases from the texts
Learning Target: I can determine the meaning of new words using a variety of strategies.

1. The target in my own words is:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. How am I doing? Circle one.

I need more help to learn this

I understand some of this

I am on my way!

3. The evidence to support my self-assessment is:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
**Learning Target:** I can analyze the way text is structured to support readers’ understanding of complex ideas.

1. The target in my own words is:

   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

2. How am I doing? Circle one.

   I need more help to learn this
   ________________________________
   I understand some of this
   ________________________________
   I am on my way!
   ________________________________

3. The evidence to support my self-assessment is:

   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
Learning Target: I can write an opinion paragraph to explain which invention has been most important to people.

1. The target in my own words is:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. How am I doing? Circle one.

I need more help to learn this  I understand some of this  I am on my way!

3. The evidence to support my self-assessment is:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
### Independent Reading Choice Board

**Name:**

**Date:**

---

**Title of Independent Reading Book/Author’s Name:**

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After reading independently (silently and/or aloud) for at least 30 minutes, write a response to any ONE question from the board except the center square. Complete the center square once you have answered each of the other eight questions.

<table>
<thead>
<tr>
<th>VISUAL ELEMENTS</th>
<th>CONNECTIONS</th>
<th>STRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What visual elements (pictures, text) do you notice in this book?</td>
<td>What connections were you able to make between your independent reading book and other texts, topics explored, or experiences you have had?</td>
<td>How is this book structured?</td>
</tr>
<tr>
<td>How do the visual elements support your understanding of the text?</td>
<td>How does the structure support your understanding of the text?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GENRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What genre is this book? Do you enjoy this genre? Explain.</td>
</tr>
</tbody>
</table>

*Complete this square last.*

<table>
<thead>
<tr>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would you recommend this book and/or this author to someone else? Explain.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which <em>words</em> repeat? List them.</td>
</tr>
</tbody>
</table>

*Why do you think the author chose to repeat these words; why are they important?*

<table>
<thead>
<tr>
<th>READABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your independent reading book too hard, just right, or too easy? Explain.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTEREST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you find this book interesting? Explain.</td>
</tr>
</tbody>
</table>
Learning Resources
CoSer 501
Educational Media

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