Lesson 1

Set a Purpose for Reading Using Pre-Reading Strategies

7.5(A) Establish purpose for reading assigned and self-selected texts.
7.5(B) Generate questions about text before, during, and after reading to deepen understanding and gain information.
7.5(E) Make connections to personal experiences, ideas in other texts, and society.
7.3 Adjust fluency when reading grade-level text based on the reading purpose.
7.4 Self-select text and read independently for a sustained period of time.

Introduction

Real-World Connection

Jody likes to participate in Civil War battle reenactments. In order to prepare for his next reenactment he wants to read two articles on the Battle of Gettysburg and determine how each side portrayed the battle. While reading the articles, he notices that the authors have conflicting opinions concerning what happened and why. He has questions about which point of view is correct. How can Jody figure out which point of view is correct? We will practice the skills in Guided Instruction and Independent Practice. Then, at the end of the lesson, we will revisit Jody and his articles.

What I Am Going to Learn

• Establish a purpose for reading.
• Generate questions before, during, and after reading to enhance understanding and gain information.
• Make connections to personal experiences.
• Adjust fluency based on the purpose for reading.
• Self-select text and read independently for a sustained period of time

What I May Already Know 6.5(A), 6.5(B), 6.5(E)

• I know how to establish a purpose for reading.
• I know how to ask questions to gain understanding.
• I know how to make connections while reading.

Words to Know

purpose
literal question
interpretive question
evaluative question
universal question
connection

Think About It

Fill out a KWL chart. Ask yourself what you know about the topic. Then ask yourself what you want to know or what you hope to find out. As you read the text, look for answers to your questions. After you read, jot down what you learned.
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Understand the TEKS

These vocabulary words will help you understand the TEKS.

Purpose
Before you read, preview the text. Read the title. If there is a headnote, read it. Look at any headings and illustrations. Then predict what information you will find in the text. Do you think a newspaper article is written mostly to inform or to entertain?

Once you have this general idea, set a purpose, or reason, for reading. Here are some purposes you might have.

- To get information
- To gain understanding
- To learn how to do something
- To solve problems
- To decide what action to take
- To be entertained or to enjoy

Narrow, or focus, your purpose based on the topic. For example, you might read an article to find out about the origin of the Olympic Games.

- Suppose a short story is called “The Secret of the Old House.” The illustrations create a mood, or feeling, of mystery and suspense. Of course, you will probably read this story to enjoy yourself or be entertained. What is a more specific purpose you might have for reading?

Determine the rate at which you will read. The rate at which you read depends on your purpose. For example, if you are reading to simply get a general idea of what an article is about, you might skim it, or read it through at a fast pace. If your purpose is to find specific information, you might scan the article, or let your eyes run briefly across it, until you locate the facts you need. If you are trying to understand difficult material and remember details, you might read it slowly and carefully.

Use visual clues and text structures. Headings tell you what information you will find in different sections. A headnote gives you a general idea of what a text is about. **Boldface type** and **italic type** highlight important words. Numbers and dates often contain numerals, making them stand out visually. They also are often linked to important pieces of information. Names of people and places usually begin with a capital letter.

Ask Questions
Ask and answer questions before you read, while you read, and after you read. Sometimes, these are questions you have yourself. Sometimes your teacher will ask questions that are in your textbook.

Some novels contain a reader’s guide at the end. A reader’s guide contains questions to talk about and answer in a book group or with your classmates.

Here are some different types of questions.

- **Literal Questions** are questions the text answers. You may have to search for an answer, but the answer is stated right in the text.

What did Mollie have to do in order to get the job?
• **Interpretive questions** ask you to put together details from the text with your prior knowledge to interpret or tell the meaning. The text does not tell you the answer explicitly. It is not stated but implied.

  Why do you think Hal feared he would not live up to the coach’s expectations?

• **Evaluative questions** ask you to make a judgment. Your answer is not right or wrong, but you need to support it with details.

  Were the reactions of the miners who were trapped believable? Why or why not? Is this how you would have reacted in their place? Explain.

• **Universal questions** go beyond the text. They ask you to use what you learned from the text to see the “bigger picture” to make a generalization about life.

  Why is it important to stand up for your beliefs? Support your response with details from the selection and your prior knowledge.

**Generate Questions**
During reading, it can be helpful for you to generate questions about the topic or the story. These questions can aid you in predicting what will happen and understanding the main thesis. Once you have completed the reading it is a good practice for you to review the answers to the questions.

**Make Connections**
A writer wants readers to make connections between the text and their own experiences. In making this connection, readers will be able to relate to the characters or topics in meaningful ways. Connect what you read to your own personal experiences, to other texts you have read, or to movies, and documentaries. Connect it to events in the real world. These are the types of connections you can make.

- Text-to-self
- Text-to-text
- Text-to-real world

**Adjust Fluency**
When you read, you need to adjust your reading style based on your purpose for reading. If you are reading a narrative for pleasure, then you can read at a high rate. If you are reading either a narrative or an informational text to understand the content, you may need to slow down your reading rate. You may even want to take notes to help you recall what you have read.

**Read Independently**
When you read independently, you should select texts that are of interest to you. If you are engaged in the text, then it is more likely you will be able to read for a sustained period of time without losing interest.
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Guided Instruction

Read the passage below. Then answer the questions in the margin and complete the activities.

Numbers, Numbers, Everywhere

by Patricia D. Lock

Pure mathematics is the world's best game. It is more absorbing than chess, more of a gamble than poker, and lasts longer than Monopoly. It's free. It can be played anywhere—the ancient Greek mathematician Archimedes did it in a bathtub.

—Richard J. Trudeau, professor of mathematics, Stonehill College

1  It's the first thing in the morning and your alarm clock turns the radio on. You snooze for a few minutes, get up, turn on the light, and go to the shower. No math at all, right? Wrong! So many things you touch each day use numbers in ways you don't even think about.

Getting Ready

2  The first numbers you encounter are displayed on your clock. On the radio, you tune to a station by dialing its numbered frequency. When you turn on your light, you start a process that sends power from the electric company through the power lines, into your house, and up to the light bulb. To run the shower,

Guided Questions

Read the title and the quote. Then glance at the headings. Set a purpose for reading.

Read paragraph 1. Highlight the sentence that tells you the big idea that you can make a personal connection to.

You can make personal connections from paragraph 2. Highlight the four examples in which you encounter numbers that you can relate to.
your water provider has to keep the water at enough pressure to get it all the way to your shower, but not too much or it will burst your pipes. Although it is not obvious, both the electric and water service tasks are controlled with numbers—and lots of them.

3 After the shower you get dressed and head to breakfast. But wait! How did you choose your clothes when you bought them? You chose by size—another set of numbers. What’s more, each size is a set of dimensions for length, width, and other measures to determine what size will fit you.

4 After breakfast, the carpool picks you up. In a car there are many questions answered by numbers. You probably know about the speedometer, but what about the speed of the engine? How much gas is left? How many miles per gallon does the car get? Some newer cars will even do the math for you, showing how many miles you have left before you need to fill up.

**At School**

5 The dreaded locker combination may be the first number trouble you have all day, then math class or perhaps history with lots of dates to memorize. If you are lucky, you have a music class. Learning music at an early age has been shown to improve students’ math skills. But enough about school, you already know where the numbers come in there, and let’s not even talk about grades!

**The Rest of the Day**

6 After school, you grab your cell phone (You weren’t really using it in school, were you?) to call your friend. Mobile phones are number-heavy from start to finish. You dial the numbers that identify your friend’s phone. Your phone takes those numbers and sends them in a radio signal to ring your friend’s mobile. Between the dialing of her number and the call being connected, the phone must identify itself to the local service, connect to a transmission tower, and match frequencies with the phone you are calling. All of these actions are number-controlled.

7 After your phone call, you decide to watch some TV. (Or you could do your math homework . . .) When you turn on the TV, a whole list of numerical questions comes up. What channel is airing your show? How is a video transmitted through the air or over wires anyway? How does a signal come down from a satellite? How do we know where the satellite is? The only way to answer these questions is by using numbers.
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8  After TV, you go online. Your computer has a network address (a string of numbers like this: 216.27.61.137) and so do all of the Web sites you visit. When you click on a link, a request is routed through the Internet until it gets to the other site’s computer, which sends back a response. These requests and responses can pass through many other computers (called “routers” because they route the data through the network) both on the trip out and on the trip back, and no two trips need ever be the same. The really astonishing fact is that the trip can take as little as a fraction of a second, even across the world. And all of it is done with numbers!

Tomorrow

9  As you wander through your day, look around and see how many other uses of numbers you can spot. Without numbers and the power they bring us, our lives would be much poorer indeed. Maybe that will make you feel better during your next math test!

Guided Questions

The information in paragraph 8 is complex. Read it slowly and carefully. Highlight the information that helps you understand how your computer links with a Web site.

Based on paragraph 9, what might be a purpose for reading this article?

Critical Thinking

1. Reread the quotation below.

Pure mathematics is the world’s best game.  
It is more absorbing than chess, more of a gamble than poker, and lasts longer than Monopoly.  
It’s free.  
It can be played anywhere—the ancient Greek mathematician Archimedes did it in a bathtub.  

—Richard J. Trudeau, professor of mathematics, Stonehill College

Put the quotation in your own words. How does this quote focus your reading?
When you started reading this article, did you agree with this quotation? How do you feel about it now that you have read the article? Why?

2. Reread paragraphs 2–4. Make a connection to your own life. What things in your own house would not work if you did not know how to use numbers?

3. Reread paragraphs 5–7. Make a connection to your life. As cell phones take on many of the operations of computers, do you think numbers will play more or less of a role? Why?

Suppose as an adult you want to design electronics. How important do you think studying mathematics will be?

What questions does this raise for you?
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4. Think outside your experience. Work with a partner to explain how numbers would affect people in each of the following careers.

Fashion designer

Astronaut

Small business owner

Musician

Sportscaster

How Am I Doing?

★ What questions do you have?

★ How does asking questions before, during, and after reading a text help you gain a better understanding of the text?

★ Fill in the circle that shows how you are doing with the skill.

- I am stuck.
- I almost have it.
- I understand the skill.

Measuring Up to the Texas Essential Knowledge and Skills
Jeremy was in his seat in the studio waiting for the interview to start when Shinichi, the sports news anchor, got that slightly distant look anchors get when a message is coming in. Then, suddenly, Shinichi smiled, his professional good humor replaced by the real thing for a moment. He slapped Jeremy on the shoulder.

"They want you to run. Last minute opening. Amazing."

His eyes lit on Jeremy’s kitbag.

“You do have it all in there, don’t you?” Jeremy nodded. The bag was really just a prop, but he kept it packed as if he were going to run every day. When he failed at the quota lottery, he had thought that his one time in the Olympic stadium, marching in the opening ceremony, had been his last. Nevertheless, he kept training, packing in sweat-soaked hours between the endless interviews, blogs, picoblogs, interactives, and all the other stuff he did to boost the team’s profile. If he couldn’t run he could still serve the team. The team media people loved his dedication to workouts; they said it made him more authentic. But he wasn’t doing it for them.

He hurried to the pre-competition area, security guards looking at him in amazement as they scanned his pass.

The charging room smelled of machine oil with a tang of hot metal. But there was something else. Jeremy sniffed the air carefully: liniment. There was another human athlete here, preparing to compete against a field of machines. He followed his nose through the room...
full of tables, each with a robot athlete lying on it, surrounded by a busy group of technicians. Some tables had a cluster of tubes and wires emerging from the floor with a red rectangle painted around it and the word “Danger” stenciled on the smooth concrete. As he detoured around one, he came upon a robothlete that smelled of burnt insulation. Its technicians were seated, chatting. This must be the reason he had been pulled out of the studio.

He pushed through a curtain that created a makeshift changing area in one corner of a huge work area. The corner was free of tools, computer terminals, and machinery. In fact, it was empty except for a woman with blond hair in tight braids, dressed in running kit.

“Hi, I’m Amy,” she said with a smile.

She looked at the sports bag slung over his shoulder. “Are you running with me today?”

He nodded. There were no men’s or women’s events any more. The performance difference between robots and humans was so great that male/female differences no longer mattered.

“I’ll go check out the opposition while you change.”

There was a requirement that each Olympic event have a minimum of one human starter—they called it “the quota.” In practice it was also the maximum. People came to the Olympics to see the best, and robothletes provided the best. This would be the first event of the 2052 Games with two humans in it, and it would probably be the last.

Jeremy was out on the starting blocks, looking down the field at the hurdles when it finally began to sink in. He was really about to compete in the Olympics. He was going to get his chance. And the crowd was cheering—chanting “JEREMY, AMY . . . JEREMY, AMY.” The chant was so powerful that he could feel it in the air pulsing against his skin. The crowd wanted to watch the best, but they also loved to cheer for the underdog, and he and Amy were the underdogs.

The robothlete’s “muscles”—brushless motors, actuators run by rare Earth magnets, pistons driven by high-pressure nitrogen—didn’t accumulate fatigue acids as they ran. Robothletes didn’t take years to learn the rhythms of the sport or how to judge the pacing between hurdles; they just downloaded the programs from their most successful predecessors and measured distances with laser and ultrasonic rangefinders. It had been decades since a human had beaten one.

“On your marks, ready . . .”

The starting pistol cracked and Jeremy came off the blocks faster than he ever had before. He was ahead of Amy. There were robothletes ahead of him.

He came up on the first hurdle going so fast he was afraid he had overshot his mark, but he flowed over it as if it weren’t there. He could hear the whir of motors and the blasts of exhaust gas from the South African robothlete to one side of him. The two competitors reached the second hurdle and jumped together, but the robothlete took it just a millimeter too low, grazing the top of the hurdle. Perhaps its handlers were tweaking the software, trying to shave milliseconds off its time. It landed badly and went down. It didn’t get up. Running robots were not programmed to get up; if they fell they would lose so there was
no point in getting up. Jeremy twisted in midair to avoid the fallen machine, landed running, judged his distance, and drove himself even harder for the next hurdle.

18 There were bright tracksuits and glittering metal bodies in front of him. He pushed himself harder, beyond anything he had ever done, beyond what he thought possible. He didn’t look back. He could no longer see the other competitors, only the track in front of him, as his focus narrowed to the remaining hurdles, the finish line, and his laboring lungs and burning muscles. There was no time—only an endless now. He didn’t hear the crowd cheering for him or their roar as he crossed the finish line.

19 When he could think again, he found out that he had beaten two robothletes, the South African and a Belgian one, to finish fifth, well outside qualifying. His brief career as an Olympic athlete was over. He had missed his one chance. He mopped his sweating face with a sweat-dampened sleeve. He could see Amy doing the same. There were no towels.

20 The South African machine was being loaded onto a wheeled stretcher. The other robothletes were walking back to the charging room under the supervision of their handlers. Jeremy turned to the nearest handler.

21 “Where are the showers?”

22 “Showers? Water and steam in an electronics workshop? No way. You better go back to your hotel.”

23 “Ladies and gentlemen,” boomed the loudspeakers. “Our humans running today have done something remarkable. They have broken both the men’s record and the women’s.”

24 The stadium erupted in thunderous cheering that seemed to go on endlessly. Amy walked over to shake hands with him, then dropped her hand and hugged him.

25 “Of course that’s unofficial,” the loudspeaker voice broke in. “It’s been a long time since the Olympics kept separate records for humans.”

26 “Jeremy!”

27 He turned at the sound of Shinichi’s voice. The anchorman was at the front of a mob of media, held back by a thin line of security guards. Dozens of cameras pointed at Jeremy. State recorders looked inside his body to build a data construct of every muscle and nerve so fans could feel his exhaustion.

28 “How does it feel to be the fastest man in the world?” said Shinichi.

29 Something shifted inside Jeremy. The dull ache of defeat, of a permanent end to his ambitions, ebbed away.

30 “I gave it my best and I’m happy with that.” Along with billions of others he heard the announcement of his human record and his humble response to it over and over again as it flowed through the WorldNet to phones, fixed screens, and implants . . . and with every repetition it became even truer.
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1 Which statement best explains what type of text this is?

A  It is historical fiction because it is based on events at the Olympics.
B  It is realistic fiction because a robot can run farther and faster than a human.
C  It is a fable because it teaches a lesson based on events could not happen in real life.
D  It is a science-fiction story because the illustration shows a human runner competing against a robot.

2 Which statement best answers the question “what is meant by ‘the quota’”?

F  He had been pulled out of the studio to compete.
G  Now male and female differences no longer mattered.
H  Decades had passed since a human had beaten a robot.
J  Each Olympic event must have a minimum of one human.

3 In what paragraph can you find the answer to why one of the robathletes cannot compete?

A  Paragraph 4
B  Paragraph 6
C  Paragraph 12
D  Paragraph 14

4 Based on what you know about people, why do you think Jeremy is prepared to compete?

F  He knows that he is fast enough to beat a robot.
G  He enjoys giving interviews whether or not he wins.
H  He realizes that each event must have one human competitor.
J  He never gave up the hope that he would have a chance to compete.

5 Which sentence best describes how Jeremy felt about his performance?

A  Our humans running today have done something remarkable.
B  Amy walked over to shake hands with him, then dropped her hand and hugged him.
C  Dozens of cameras pointed at Jeremy.
D  I gave it my best and I’m happy with it.
**Assessment**

Choose the best answer to each question.

1. Which sentence in paragraph 4 explains why Jeremy is prepared for the Olympics?
   - A. *The bag was really just a prop, but he kept it packed as if he were going to run every day.*
   - B. *Nevertheless, he kept training, packing in sweat-soaked hours between . . . all the other stuff he did to boost the team’s profile.*
   - C. *If he couldn’t run he could still serve the team.*
   - D. *They said it made him more authentic.*

2. Which paragraph answers the question why there were no longer any men’s or women’s events?
   - F. Paragraph 7
   - G. Paragraph 10
   - H. Paragraph 12
   - J. Paragraph 17

3. Which of the following purposes might the reader set for this selection?
   - A. To find out if the human won
   - B. To understand how a robot runs
   - C. To identify if robot or humans are more intelligent
   - D. To discover how Jeremy was selected for the team

4. The reader can conclude the selection is titled “Personal Best” because —
   - F. it portrays success as pushing yourself to the limit
   - G. it focuses on how robots are better athletes than humans
   - H. it explains how only the most skilled can compete in the Olympics
   - J. it describes the changes in performance once robots were allowed to compete

5. Which sentence below best clarifies the advantage human athletes have over robothletes?
   - A. *The crowd wanted to watch the best, but they also loved to cheer for the underdog, and he and Amy were the underdogs.*
   - B. *The robothlete’s “muscles”—brushless motors, actuators run by rare Earth magnets; pistons driven by high-pressure nitrogen—didn’t accumulate fatigue acids as they ran.*
   - C. *Running robots were not programmed to get up; if they fell they would lose, so there was no point in getting up.*
   - D. *He mopped his sweating face with a sweat-dampened sleeve.*
Exit Ticket

Now that you have mastered setting a purpose for reading and generating questions to deepen understanding and gain information, let’s revisit the Real-World Connection with Jody and the Civil War battle reenactments.

What is the purpose Jody should set for reading these articles? What questions should Jody use to help him guide his reading? How might Jody’s personal connection to the topic influence his reading?