Measuring the Great Pyramid

SOURCE: Highlights for Children, Inc.
ByJohn Tabak, Ph.D.

Lexile®: 840L

How tall is the tallest building?

That question troubled the Greek mathematician Thales (THAY-leez) of Miletus (my-LEE-tus) 2,600 years ago. He wanted to measure the largest pyramid in Egypt.

All the huge pyramids of Egypt are more than 4,000 years old. For thousands of years they were the tallest, widest buildings on Earth. The biggest pyramid, the Great Pyramid of Khufu (KOO-foo), was 481 feet tall. But Thales didn't know that—yet.

Most of the story of Thales' life has been forgotten. But we do know that he traveled a lot, so he probably enjoyed meeting new people and seeing new places. We also know that Thales loved science, business, philosophy, and mathematics. Today, he is best remembered as the first of the great Greek philosophers and mathematicians.

Like many tourists, Thales wanted to know the height of the Great Pyramid. He couldn't find anyone to answer his question, so he set out to measure it himself. His method was so clever that people still talk about it.

Thales decided to discover the height of the pyramid by measuring its *shadow*. This was easier and safer than climbing to the top, because in Thales' time the Great Pyramid had a smooth stone covering. (Many centuries later, most of this covering and part of the top were removed to build other things.)

But Thales had a problem. When the Sun was near the horizon, the pyramid's shadow was long. The shadow shortened as the Sun rose in the sky. What time was the right time to measure the shadow?

Thales used a stick to answer that question. He pushed it partway into the ground so that it stood up straight, and he measured the height of the stick.

He reasoned that when the length of the stick's shadow equaled the height of the stick, the height of the pyramid would equal the length of *its* shadow. Measuring the shadow would be like measuring the height, only easier.

Thales waited until the stick's shadow was as long as the stick was tall. At that special time, Thales measured the pyramid's shadow. And he had the answer to his question. 🔺

Finding New Heights

See if Thales' method will work on a fence post, a bush, or anything that you can also measure directly.

You'll need a straight stick, a yard-stick or tape measure, and a sunny day. Be sure that each object is on level ground and that no other shadows interfere. When the length of the stick's shadow is equal to its height, do the other objects' shadows also equal their heights?

Read with Highlights™

Measuring the Great Pyramid

Nonfiction

WORD COUNT
427

By John Tabak, Ph.D.

Art by Matt Smith

Photo by Spectrum Stock

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Disciplinary literacy is an emphasis on the shared ways of reading, writing, speaking, and thinking within a particular content area or academic field.

LEVEL OF DIFFICULTY:

☐ PreK–K
☐ 1–2
☒ 3–6
☐ 6–8
☒ Multilingual Learners (ML)

FOCUS AREA:

☐ Fine Arts
☐ Career and Technical Education
☐ College and Career Readiness
☐ ELA
☐ Exercising Agency
☐ Health
☐ Math
☐ Science
☒ Social Studies
☒ STEM

AVID's WICOR® Methodology

This lesson uses the WICOR (Writing, Inquiry, Collaboration, Organization, Reading) methodology and strategies from AVID's curriculum library and is designed for a variety of learning environments.

AVID ELEMENTARY WEEKLY RESOURCES

Visit the AVID Elementary Weekly matrix for links to lessons, texts, and additional resources.

Measuring the Great Pyramid

SOURCE: Highlights for Children, Inc.
By John Tabak, Ph.D.
Published 2016

AVID's Critical Reading Process

This lesson uses the three phases of the Critical Reading Process.

ACTIVATE

Planning for Reading
Establish a purpose for reading. Then, intentionally identify strategies that are needed to successfully read the text. Both content and skill development play a role in planning, as does identifying how a "content expert" would read the text.

Selecting the Text
Educators will select texts initially, with the goal being that students will eventually play a role in the selection process. To maximize the effectiveness of texts, use the suggested text-selection criteria to identify the ideal text.

Pre-Reading
Determine what work needs to be done prior to the successful reading of a text. Preview the text and connect to or build background knowledge by looking both inside and outside the text.

ENGAGE

Building Vocabulary
Understand and connect key academic and content-related vocabulary to aid in deeper comprehension of the text.

Interacting With the Text
Interact with the text to process information as it is read, including numbering paragraphs or chunking texts, marking texts to isolate key information, writing in the margins, questioning, and visualizing texts. Usually, a deeper processing of a text occurs over multiple reads with varying purposes for each read.

EXTEND

Extending Beyond the Text
Utilize the text to complete the assigned academic task. "Extend" strategies focus on the development of academic thinking skills such as apply, analyze, evaluate, and synthesize.

Educator Preparation

Academic Task:

Synthesize "Measuring the Great Pyramid," written by John Tabak, Ph.D., through Costa's Levels of Thinking to create Found Poetry.

Learning Objectives:

- Students will examine text-related images and record their thinking.
- Students will create and answer leveled questions connected to the text.
- Students will collaboratively identify a theme or idea of the text and use words from the text to craft a response written in verse.

Essential Question:

Why was Thales's method for measuring the Great Pyramid an important discovery?

Focused Note-Taking:

A variety of note-taking formats may be utilized throughout the stages of the Critical Reading Process, including two- and three-column notes. Consider using a fillable template available in the Teacher Resources section of the AVID Elementary Weekly website.

Getting Started:

Estimated Preparation Time: 15–20 minutes

Instructional Time: 90–120 minutes

Resources Needed:

- This lesson includes blended learning strategies with various tool options. Review the entire lesson to determine tools and materials for your learning environment; some phases may require advance setup. Visit the Blended Learning Toolkit on the AVID Elementary Weekly Teacher Resources webpage for ideas, tools, and tip sheets supporting learning and collaboration within your blended learning environment.
  - **Activate:**
    - Pre-Reading: Images connected to the text in digital (Google Slides/MS PowerPoint, Padlet, or another way for students to access images) or printed form and two-column note-taking structure
  - **Engage:**
    - Vocabulary: Student focused notes
    - Interacting With the Text: *Student Resource: AE Foundations Costa's Levels of Thinking*; three-column note-taking structure, chart paper, or digital chart (Google Docs or Slides); and student focused notes
  - **Extend:**
    - Extend: *Educator Resource: Sample Found Poems,* word bank*,* and student focused notes
- Please see the AVID Elementary Weekly matrix for links to the Student and Educator Resources mentioned here in a variety of formats.

Establish a purpose for reading, build background knowledge, and set students up for success.

PLANNING FOR READING

Restate the academic task and identify the strategies that will be needed to successfully engage with the text. Recognize where students are in the gradual release of responsibility; decide whether this activity will be modeled with the entire class, in small groups, or with students working individually; and identify opportunities for blended learning. *See the Teacher Resources page for more information about AVID instructional methodologies and blended learning.*

Think through the following questions and identify how the chosen text fits within the broader context of your instructional unit so students are making connections to their prior knowledge.

- What previously taught content and prior knowledge is connected to the new text?
- What key content-related or general academic vocabulary do students need to know prior to reading the text?

SELECTING THE TEXT

This text meets the following features of an ideal text:

☐ Rigorous
☒ Develops key content or academic thinking skills
☒ Length is appropriate for the purpose
☐ Format allows for interaction
☐ Balanced perspective or multiple viewpoints
☐ High Interest

- Students practice disciplinary literacy as they engage with this text like a content expert.
- The length of this text allows students to engage in all phases of the critical reading process within 1–2 class periods.

Instructional Steps

PRE-READING

Focused Note-Taking

Allow students an opportunity to set up their notes and record the Essential Question before engaging in the learning.

Image Tour

1. In advance, set up Google Slides/MS PowerPoint, Padlet, or another way for students to access images that connect with the text. For additional scaffolding, use teacher modeling with the whole group.
2. Have students set up two-column notes with one side labeled "Image" and the other labeled "Thoughts."
3. Break students into small groups and have each group begin at one of the images around the room.
4. For the first round, have students work with their group to study the image, identifying a key term or concept the image represents and recording their thoughts in their notes. Repeat this step until students have recorded their predictions about each of the images displayed in the room.

5. For the second round, reveal the key term or concept for each image. Then, have students revisit the images with these key terms or concepts in mind. Ask them to think about how the key terms or concepts might relate to the text and record their predictions in their notes.
6. Debrief by having groups review their notes and share their thoughts about the images.
7. As students read and interact with the text, refer to the images when appropriate to enhance student understanding and comprehension. Students can return to the images and leave comments to make connections to their new learnings.

ENGAGE

Build vocabulary and engage in purposeful rereads.

BUILDING VOCABULARY

Vocabulary development can happen at any stage in the reading process.

Academic Words:
- philosophy (p. 3)
- philosophers (p. 3)
- method (p. 3)
- removed (p. 3)

Content-Area Words:
- mathematician (p. 2)
- pyramid (p. 2)
- height (p. 3)
- horizon (p. 3)
- rose (p. 3)
- equaled (p. 4)

Total Physical Response

1. Introduce the academic and content-area vocabulary words to students by saying each word aloud. For scaffolding, have students repeat the words aloud.
2. Discuss the meaning or provide a working definition for each word. This activity can be done as a whole group with teacher modeling.
3. As a whole group, with partners, or in small groups, have students develop gestures, facial expressions, and movements for the words. Body movements should illustrate the meaning of the word.
4. Give students time to add their new learning to their notes.

INTERACTING WITH THE TEXT

Students process information during this stage. Purposeful rereads are essential for learning.

First Read: Read for the Gist

Have students read the text one time through to identify the main idea, or for scaffolding, teachers may conduct a read-aloud. This is a "pencil-down, digital-ink-free" read.

1. Pair students with elbow partners or create small groups to discuss what they got from the first read.
2. Ask students to capture the main idea that sums up the gist of the text in their notes.

3. If students are struggling to identify the main idea, ask that they identify the 5 W's (who, what, where, when, why) and the H (how). This can be modeled, done with a partner, or done individually.

Purposeful Reread: Get Organized

Number the paragraphs or sections of the text as a class. Read the first two words of each paragraph or section and ask students to call out the number of the paragraph. While they call out the number, they will also number that paragraph or section in the margin of their text.

Costa's Levels of Thinking

1. Discuss with students the importance of critical thinking and how the types of questions asked shape the depth of learning.
2. Provide students with *Student Resource: AE Foundations Costa's Levels of Thinking*.
3. Explain that the three levels of questions are broken up primarily by where the answer can be found.
   - Level 1: Can be thought of as a "copy and paste." The answers can be found by pointing to a place within the text (e.g., "Define 'reliable.'").
   - Level 2: Requires looking at two places and pulling information together (e.g., "Compare fruits and vegetables.").
   - Level 3: Information may be pulled from many places, but brain power and higher-level thinking are needed to make a final decision about what is right (e.g., "Predict what will happen to Ralph when he gets his motorcycle.").
4. On chart paper or using a digital tool like Google Docs or Slides, have students create a three-column note-taking page and label it with the headings "Question," "Level," and "Answer." Allow students to work in groups to create questions at each level (without identifying the level of the question on their chart). Students should create a Level 1, Level 2, and Level 3 question based on the text, without listing the questions in numerical order. Students are encouraged to use their Costa's Levels of Thinking handout as a resource to assist their writing.
5. Once charts are completed, have groups visit another group's chart to identify the level of each question and then answer the questions within the appropriate columns.
6. At the end of the activity, have a whole-group discussion about the questions, and have a few groups share some examples. Allow time for students to reflect on their learning and add to their notes.
7. For additional scaffolding, instead of having students create questions, the teacher may model asking different levels of questions as they read the text aloud while pausing to pose the questions. Allow students time to discuss their thoughts with a partner when asking Level 2 or 3 questions.

Reading tasks should be directly connected to what students will do with the text after they have read and understand it.

EXTENDING BEYOND THE TEXT

This stage uses the text to develop academic thinking skills.

ACADEMIC THINKING SKILLS:

☐ Analyze
☐ Evaluate
☒ Synthesize
☐ Apply

Found Poetry

1. Review *Educator Resource: Sample Found Poems* with students so they have a model or mentor text to use as a guide. For additional scaffolding, use teacher modeling with the whole group.
2. In partners or small groups, ask students to determine a major theme or idea that stands out in the text. Example themes might include asking and answering questions, thinking outside the box, finding new ways to do something, and being problem solvers. They should refer to the text to find supporting quotations to justify their choices and refer to their notes as a resource.
3. Ask students to reread the article and identify key words and phrases that help support the theme or idea. These will be the source words for their found poems. Consider asking students to include two or more vocabulary words as part of their choices. A word bank may be provided for additional support.
4. Have students make a list in their notes of all the words and phrases they collect from the text.
5. Next, students should cross out words and phrases that don't seem to fit into the overall theme or might be too "dull" for a poem. The goal is to try to cut the original list in half.
6. Ask students to reexamine the remaining words to determine the overall tone of the poem. Students should make sure that the remaining text contributes to creating that overall tone and theme.
7. Next, students should organize the remaining words and phrases in a way that makes sense according to their theme. They can change the order of each excerpt, but they can't change the original words themselves.
8. Once the order of their poems is drafted, students should read their poems to ensure that the intended message is conveyed. If it is not, they can return to the text to find additional words and phrases to add.
9. Have students then create a title for their poems that is more descriptive than simply "Found Poem."
10. Have students participate in a Gallery Tour to share their poems.
11. Ask students to reflect and summarize their learning in their notes. For scaffolding, students may use letters and visuals to summarize their learning.

See how your spending habits differ from previous generations

SOURCE: *The Washington Post*
By Alyssa Flowers and Kevin Schaul
Published June 25, 2024

Lexile®: 1170L

Fifty years ago, the average American household spent more on clothing than health care, and putting food on the table cost about as much as keeping a roof overhead. Since then, technological advances, globalization and housing shortages have radically reshaped how Americans spend their dollars.

Health-care, housing and education expenses have increased since 1972, while money spent on food, clothing and transportation has declined, according to a Washington Post analysis of Consumer Expenditure Survey data.

The typical American household has also changed. Families have fewer children, and young people are slower to create their own households. More people have college degrees, and retirees make up a swelling share of the population.

Some of the biggest shifts in day-to-day life have left their fingerprints in spending. Home computers and internet access were practically nonexistent in 1984 and now make up 2 percent of household expenses. And tobacco spending has declined sharply since 1972, when it took up more of the average budget than fresh fruits and vegetables.

But other lifestyle changes barely register.

Restaurant food has made up a remarkably steady share of Americans' pocketbooks in the last 50 years, as has

entertainment, which includes tickets to shows, audiovisual equipment, pets, hobbies and more. Spending on telephones, including cellphones, has been consistent since 1984, the first year with detailed data on phones.

What Americans buy within those categories, however, has evolved. Cellphones and data plans have replaced landlines and expensive phone bills. Restaurant spending moved away from lunches toward dinners, especially after 2020.

In contrast, the share of money going toward essentials like food, housing and medical care has dramatically changed.

The biggest shift has been in housing. At its low in 1984, 19 percent of a household's budget went to housing costs. Today, it's 27 percent.

The drastic rise stems from a decades-long housing shortage fueled by the increasing cost of building new homes, according to Laurie Goodman, an institute fellow at Urban Institute's Housing Finance Policy Center.

"Every aspect of [home building] has way outpaced inflation, from labor costs to land costs, which goes back to zoning, to building costs, which go back to building codes," says Goodman.

Renters and homeowners both felt these rising costs from 1984 to the mid-2000s. After the Great Recession, though, rent expenses continued going up while the cost of homeownership dropped.

While interest rates are high now, they've generally been low since 2000. That's benefited homeowners, who can lock in a rate when they purchase or refinance to lower rates. Renters, on the other hand, are subject to new market rates every time they renew or start a lease.

Food has had the opposite trajectory since 1972. It's gone from 20 percent of household spending to 14 percent over the past half-century, mostly in lower grocery bills. Much of that drop comes from higher

efficiency farming. Farms in 2022 were twice as productive as they were in the 1970s.

"What we see in America pretty early on is a technological bias in favor of capital and equipment," says Peter Coclanis, a professor of history at the University of North Carolina at Chapel Hill, "which raised the efficiency of American agriculture. And some of this efficiency gain translated into cheaper food costs."

And while food prices have rapidly risen in the last few years, Americans still put less of their money toward food than people in any other wealthy nation. For instance, spending on groceries in France takes up twice as much of household spending than in the United States.

"We have, in a relative sense, the cheapest food in the world," says Coclanis.

Changes in taste have also played a role. Today's typical American household spends drastically less on meat, especially beef, and more on produce and prepared food.

Prepared foods, snacks, condiments and seasonings — categorized as "miscellaneous" — take up nearly three times the share of supermarket bills as they did in 1972, with prepared foods accounting for most of that increase.

Technological advances helped drive down food expenses, but had the opposite effect for health care. More medical knowledge often translates to more medical care.

"We're healthier than we were decades ago," said Larry Levitt, executive vice president of health policy at KFF, a nonprofit health policy and research organization. "But the increases in health spending have been wildly out of whack with improvements to health."

Other wealthy nations where governments step in to keep health-care costs down have achieved similar or better improvements at far lower costs, according to Levitt. Health spending per capita in the

United States is nearly double the average of other wealthy nations.

Health-care costs have also grown because of consolidation, creating an industry dominated by large providers, less competition and higher prices. Researchers estimate that hospital mergers alone accounted for over a billion-dollar increase in private health-care spending between 2010 and 2015.

In contrast to medical services and housing construction, products like clothing and vehicles can be made en masse in countries with lower labor costs and shipped to American consumers.

In 1972, the vast majority of clothing was made in the United States. Fifty years later, that share was 3 percent. Free trade agreements and the declining power of organized labor in the United States helped companies move manufacturing overseas, which reduced the prices of many consumer goods.

And even though Americans spend far less on clothing today, they're buying five times as much as they did in the 1980s. A similar pattern holds in transportation: American households are more likely to have multiple cars today, but vehicles take up less of their budget.

The Consumer Expenditure Survey doesn't provide a complete view of American budgets. Most kinds of savings and investments aren't included. It counts the full cost of big-ticket items, like cars or college tuition, at time of purchase, rather than in loan payments over time. Still, the data provides an unparalleled view into American spending habits over the last half-century.

In the near term, experts believe health care, which tends to lag inflation, is expected to continue taking up a greater share of pocketbooks. And experts say cost savings in overseas manufacturing will probably temper, preventing further falls in the prices of many consumer goods.

Some long-run changes in consumer spending are predictable: nearly 1 in 4 Americans will be 65 or older by 2050, probably continuing the rise in health-care expenses. Others are unforeseeable: Five years ago, no one would have predicted the pandemic spike in pet spending. In another 50 years, perhaps transportation dollars will finally go to flying cars.

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This story uses data from the Bureau of Labor Statistics' Consumer Expenditure Survey. Payments toward mortgage principal were added to overall housing costs and total consumer spending to more closely align with; payments toward Social Security and some types of pensions were excluded because of a 2004 methodology change in estimating tax payments based on income.

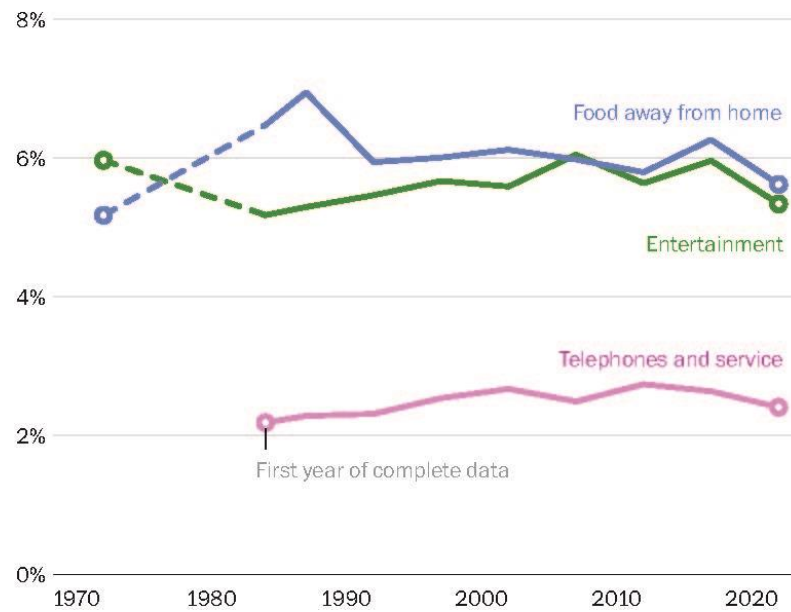## Housing is the largest expense by far for Americans today

Percent of total household spending
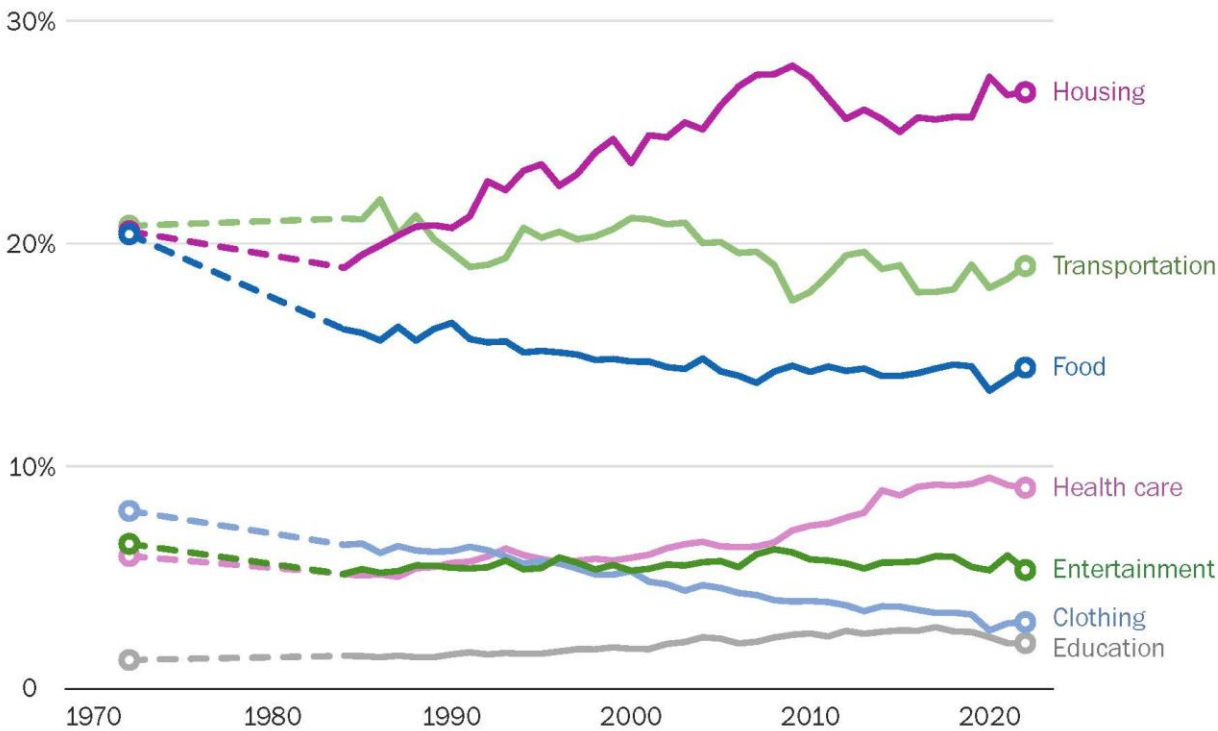
Note: Housing costs include rent, payments towards mortgage principal, mortgage interests and charges, property taxes, maintenance and insurance.
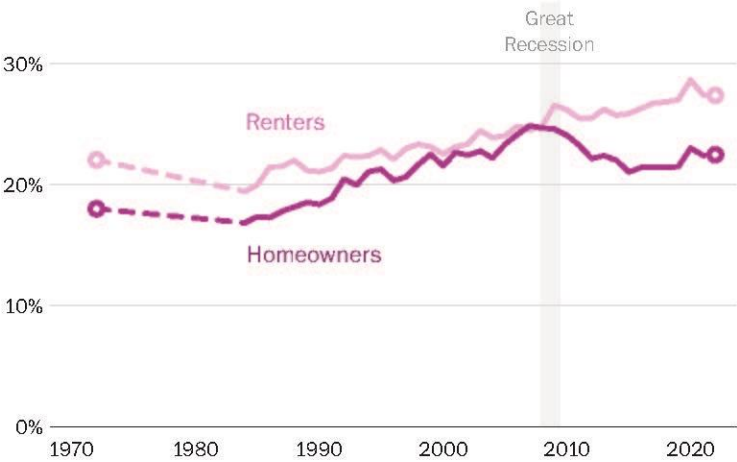
Spending on restaurants, entertainment and phones remains consistent

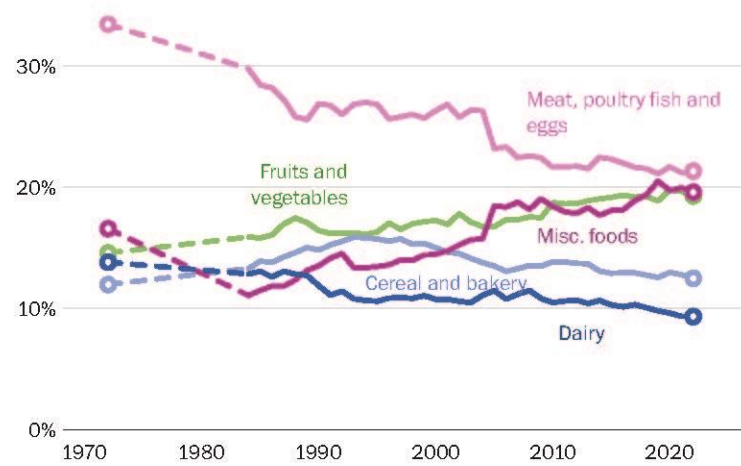Percent of total household spending

Homeowners' costs dropped, but renters' costs continued to rise

Housing costs as percent of total household spending

Today's grocery bills tally less on meat and more on produce

Percent of grocery spending

Disciplinary literacy is an emphasis on the shared ways of reading, writing, speaking, and thinking within a particular content area or academic field.

LEVEL OF DIFFICULTY:

☐ Foundational
☒ Intermediate
☐ Advanced
☐ Multilingual Learners (ML)

FOCUS AREA:

☐ Fine Arts
☐ Career and Technical Education
☐ College and Career Readiness
☐ ELA
☐ Health
☒ Math
☐ Science
☐ Exercising Agency
☐ Social Studies
☐ STEM

AVID's WICOR® Methodology

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AVID Weekly Resources

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See how your spending habits differ from previous generations

SOURCE: *The Washington Post*
By Alyssa Flowers and Kevin Schaul
Published June 25, 2024

AVID's Critical Reading Process

This lesson uses the three phases of the Critical Reading Process.

ACTIVATE

Planning for Reading
Establish a purpose for reading. Then, intentionally identify strategies that are needed to successfully read the text. Both content and skill development play a role in planning, as does identifying how a "content expert" would read the text.

Selecting the Text
Educators will select texts initially, with the goal being that students will eventually play a role in the selection process. To maximize the effectiveness of texts, use the suggested text-selection criteria to identify the ideal text.

Pre-Reading
Determine what work needs to be done prior to the successful reading of a text. Preview the text and connect to or build background knowledge by looking both inside and outside the text.

ENGAGE

Building Vocabulary
Understand and connect key academic and content-related vocabulary to aid in deeper comprehension of the text.

Interacting With the Text
Interact with the text to process information as it is read, including numbering paragraphs or chunking texts, marking texts to isolate key information, writing in the margins, questioning, and visualizing texts. Usually, a deeper processing of a text occurs over multiple reads with varying purposes for each read.

EXTEND

Extending Beyond the Text
Utilize the text to complete the assigned academic task. "Extend" strategies focus on the development of academic thinking skills such as apply, analyze, evaluate, and synthesize.

Educator Preparation

Academic Task:

Analyze "See how your spending habits differ from previous generations," written by Alyssa Flowers and Kevin Schaul, through Costa's Levels of Thinking to determine the information that changes and stays the same, and why.

Learning Objectives:

- Students will collaborate with peers to analyze data patterns.
- Students will identify patterns in data that changes over time.

Essential Question:

How have spending habits changed over time?

Focused Note-Taking:

A variety of note-taking formats may be utilized throughout the stages of the Critical Reading Process, including three-column notes and Cornell notes. Consider using a fillable template available in the Teacher Resources section of the AVID Weekly website.

Getting Started:

Estimated Preparation Time: 20 minutes

Instructional Time: 120 minutes

Resources Needed:

- This lesson includes blended learning strategies with various tool options. Review the entire lesson to determine tools and materials for your learning environment; some phases may require advance setup. Visit the Blended Learning Toolkit on the AVID Weekly Teacher Resources webpage for ideas, tools, and tip sheets supporting learning and collaboration within your blended learning environment.
  - **Activate:**
    - Pre-Reading: Kami or Google Slides/MS PowerPoint
  - **Engage:**
    - Vocabulary: Paper or digital tool for note-taking
    - Interacting With the Text: Chart paper or collaborative Google Docs or Slides document
  - **Extend:**
    - Extend: *Educator Resource: Change, Same, Why Organizer*
- Please see the AVID Weekly matrix for links to the Student and Educator Resources mentioned here in a variety of formats.

Establish a purpose for reading, build background knowledge, and set students up for success.

PLANNING FOR READING

Restate the academic task and identify the strategies that will be needed to successfully engage with the text. Recognize where students are in the gradual release of responsibility; decide whether this activity will be modeled with the entire class, in small groups, or with students working individually; and identify opportunities for blended learning. *See the Teacher Resources page for more information about AVID instructional methodologies and blended learning.*

Think through the following questions and identify how the chosen text fits within the broader context of your instructional unit so students are making connections to their prior knowledge.

- How does the text fit into the overall instructional unit or overall learning experience?
- What academic tasks are associated with reading the text?

SELECTING THE TEXT

This text meets the following features of an ideal text:

☒ Rigorous
☐ Develops key content or academic thinking skills
☐ Length is appropriate for the purpose
☐ Format allows for interaction
☒ Balanced perspective or multiple viewpoints
☐ High interest

- This text may serve as a catalyst for personal and intellectual growth.
- Engagement with this text fosters inquiry and curiosity.
- This text builds reading stamina and provides the opportunity for students to reach higher and/or deeper.

Instructional Steps

PRE-READING

Focused Note-Taking

Allow students an opportunity to set up their notes and record the Essential Question before engaging in the learning.

Interpreting and Analyzing Nonlinguistic Representations

In advance, set up Kami, Google Slides/MS PowerPoint, or another tool to analyze the graph using any of the following questions. For additional scaffolding, use teacher modeling with the whole group:
- What do you see?
- What do you think when you see this?
- What wonderings do you have about the information in this nonlinguistic representation?
- How would you describe what you see to others?
- What is happening? How do you know?
- How does this connect to your own experiences?
- What would change if _____?

- Imagine this graph was something you created. Why would you have created it?

ENGAGE

Build vocabulary and engage in purposeful rereads.

BUILDING VOCABULARY

Vocabulary development can happen at any stage in the reading process.

Academic Words:
- radically (par. 1)
- evolved (par. 7)
- consolidation (par. 23)
- predictable (par. 29)

Content-Area Words:
- globalization (par. 1)
- inflation (par. 11)
- consumer (par. 24)

Vocabulary Awareness Chart

1. Have students create a three-column note-taking structure replicating a vocabulary awareness chart with the column titles "Word," "Visual," and "Definition" or provide them with *Student Resource: Vocabulary Awareness Chart—Prior to Reading*. Instruct them to add the vocabulary words above to their chart. For additional scaffolding, use teacher modeling with the whole group by engaging in a Read-Aloud and Think-Aloud.
2. In small groups or with a partner, have students compare their charts, discuss word meanings, develop authentic definitions, and write any questions they have. The words might not all have definitions at this point.
3. Lead a whole-class discussion providing students with the opportunity to discuss the "no clue" words, make predictions about possible definitions, share words in the "Heard or seen it before" column, and ask their written questions. Add to a collaborative Google Docs/MS Word document or select another tool to facilitate collaboration and record new connections.
4. As students read the article or as the teacher does a Read-Aloud, have them add to or revise definitions as word meanings become clearer. Encourage them to also add other words that they do not understand to the chart.
5. Revisit the charts after reading. Have students review or revise their definitions based upon their reading, then engage in a whole-group discussion around words that are providing the most difficulty.

INTERACTING WITH THE TEXT

Students process information during this stage. Purposeful rereads are essential for learning.

First Read: Read for the Gist

Have students read the text one time through to identify the main idea, or for scaffolding, teachers may conduct a read-aloud. This is a "pencil-down, digital-ink-free" read.

1. Pair students with elbow partners or create small groups to discuss what they got from the first read.
2. Ask students to capture the main idea that sums up the gist of the text in their notes.

3. If students are struggling to identify the main idea, ask that they identify the 5 W's (who, what, where, when, why) and the H (how). This can be modeled, done with a partner, or done individually.

Purposeful Reread: Get Organized

Number the paragraphs or sections of the text as a class. Read the first two words of each paragraph or section and ask students to call out the number of the paragraph. While they call out the number, they will also number that paragraph or section in the margin of their text.

Costa's Levels of Thinking

1. Discuss with students the importance of critical thinking and how the types of questions asked shape the depth of learning.
2. Provide students with *Student Resource: Costa's Levels of Thinking and Questioning: Math*.
3. Explain that the three levels of questions are broken up primarily by where the answer can be found.
   - Level 1 – Can be thought of as a "copy and paste." The answers can be found by pointing to a place within the text (e.g., "Define *reliable*").
   - Level 2 – Requires looking at two places and pulling information together (e.g., "Compare fruits and vegetables").
   - Level 3 – Information may be pulled from many places, but brain power and higher-level thinking are needed to make a final decision about what is right (e.g., "Predict what will happen to Ralph when he gets his motorcycle").
4. On chart paper or a digital format such as a collaborative Google Docs or Slides document, have students create a three-column notes page and label it with the headings "Question," "Level," and "Answer." Allow students to work in groups to create questions at each level (without identifying the level of the question on their chart). Students should create a level 1, level 2, and level 3 question based on the text, without listing the questions in numerical order. Students are encouraged to use their Costa's Levels of Thinking handout as a resource to assist their writing.
5. Once charts are completed, have groups visit another group's chart to identify the level of each question and then answer the questions within the appropriate columns.
6. At the end of the activity, have a whole-group discussion about the questions, and have a few groups share some examples. Allow time for students to reflect on their learning and add to their notes.
7. For additional scaffolding, instead of having students create questions, the teacher may model asking different levels of questions as they read the text aloud while pausing to pose the questions. Allow students time to discuss their thoughts with a partner when asking level 2 or 3 questions.

"I Wonder…" Roundtable

1. Arrange students in groups of four to six. Students will need their annotated article, notes, and a writing tool. Assign one student the role of recorder. This can be completed as a whole group activity with teacher modeling.
2. Provide students with 3–5 minutes to review their article and notes and to begin independently generating "I wonder" questions about the topic or text.
3. Invite students to proceed around the table or breakout room, each student sharing one "wondering" at a time. The recorder will record the responses on paper or digitally in a shared document or page. Remind the students that they should not stop and discuss or critique the responses.
4. Allow enough time for groups to go around the table or breakout room several times. When time is called, students should review the list of "I wonder…" statements and write some questions they would like to explore further.

Reading tasks should be directly connected to what students will do with the text after they have read and understand it.

EXTENDING BEYOND THE TEXT

This stage uses the text to develop academic thinking skills.

ACADEMIC THINKING SKILLS:

☒ Analyze
☐ Evaluate
☐ Synthesize
☐ Apply

Change, Same, Why

1. Have students work with a partner to reread the text, focusing on the changes in American consumers' spending over time and highlighting areas of the text where change occurs regarding that concept or topic. To do this, students should look specifically for transition words.
2. Provide a digital or paper copy of *Educator Resource: Change, Same, Why Organizer* and walk students through the setup of the organizer.
3. Students should first add all of the identified changes over time in the "Change" column of the organizer.
4. After students list the changes, instruct them to engage in a discussion of what stayed the same over time (continuity) despite the changes that occurred. They should add these ideas into the "Same" column.
5. Then, students should discuss why they believe there were changes or continuity over time, adding their reasoning to the "Why" column.
6. Ask a few groups to share some of their examples with the class and encourage groups to add new information to their own organizers.
7. Students should reflect on their learning and summarize their notes by answering the Essential Question.

Extensions:

1. Students can create a timeline to visually depict changes and continuity over time.
2. Students can engage in a Socratic Seminar to discuss their "Why" column. Why are these documented changes significant? Why should we care?
3. Students can create a formal presentation to discuss their findings from the article.
4. Students can create a household budget based off different decades to illustrate cost of living expenses based on a median salary in that period.