

Informational Text Comprehension

Responding to the Common Core
State Standards

Part 1

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BIG IDEAS from Common Core State Standards

Informational Text

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Informational Text - What

The Common Core State Standards addresses informational text in the following categories:

- **Exposition** – factual, textbook-like reading
- **Argument/Persuasion** – texts that use argument to present a position and convince reader
- **Procedural** – step by step instructions; how-to-do something
- **Literary Nonfiction** – uses factual information within a story-like format

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Informational Text - What

Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework

- Grade 4 Literary 50% Informational 50%
- Grade 8 Literary 45% Informational 55%
- Grade 12 Literary 30% Informational 70%

Source: National Assessment Governing Board. (2008). *Reading framework for the 2009 National Assessment of Educational Progress*. Washington, DC: U.S. Government Printing Office.

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Informational Text - Why

Why emphasized in Common Core?

- By sixth grade, 80% of school reading tasks are expository (Venezky, 2007)
- 80% of adult/workplace reading is informational
- Standardized tests are 85% expository (Daniels, 2007)
- Students' success or failure in school is closely tied to their ability to comprehend expository text (Kamil, 2003)

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Informational Text - Where

- The percentages on the table reflect the sum of student reading, not just reading in ELA settings. Teachers of senior English classes, for example, are not required to devote 70 percent of reading to informational texts. Rather, 70 percent of student reading across the grade should be informational.

(*Common Core State Standards*, page 5)

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Informational Text - Where

Informational Text should be read in:

- **Language Arts Classes**
 - To establish background for literature
 - To teach comprehension strategies for informational text reading
 - To provide background knowledge of writing Arguments
- **Content Area Classes**
 - To convey content area information
 - To compare information presented by various authors

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Informational Text - Complex Text

Students should read **variety** of informational text:

- Grade-level text
- **Challenging, complex text**

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Informational Text - Complex Text

Features of Complex Text

- Multiple themes and purposes
- Density of information
- Unfamiliar settings, topics or events
- Lack of repetition

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Informational Text - Complex Text

Features of Complex Text

- Complex sentences
- Uncommon vocabulary
- Lack of words, sentences or paragraphs that review or pull things together for the student
- Longer paragraphs

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Informational Text - Why emphasis on complex text

- expectations for what students read has declined over last 50 years
- cognitive demands reduced due to range of students' learning abilities and reading and writing skills
- a steady downward trend across grades in the complexity of texts since 1962

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Informational Text - Why emphasis on complex text

- students read very few informational texts
 - 7 percent of reading assignments in elementary school
 - 15 percent in middle school
- students' ability to read and comprehend challenging text predicts graduates' postsecondary success

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Informational Text - Close Reading

- **Close reading**
 - Rigorous reading of informational text
 - Creating deep understanding
 - Determining what text says explicitly
 - Making logical inferences
 - Drawing conclusions about content
 - Examining meaning thoroughly

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Informational Text - Text-Dependent Questions

Text-Dependent Questions and Tasks

- do not require information or evidence outside the text
- can only be answered by careful scrutiny of text
- require careful thinking about the text
- require finding **evidence** in text to support response

In other words, YOU MUST READ THE TEXT.

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Informational Text - Preteaching

- Limit amount of preteaching
- Teach necessary vocabulary and background knowledge
- Don't overdo so that students do not have to read the text
- Provide some "cold reads"

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Informational Text - Preteaching

Example- The Jackson Era

Preteaching -

Preparation each section of chapter including vocabulary and background knowledge instruction, and guided section previewing.

Cold Read -

Students read Jackson's Inaugural Address, listing his promises and then comparing those to his actions in office.

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Summarize Big Ideas

What

Why

Where

How

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Common Core State Standards

See **Informational Text Standards** in Support Materials

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Path to the Common Core

Use research-validated practices

- Comprehension
- Vocabulary
- Background Knowledge
- Writing

Use research-validated practices

- Explicit Instruction
 - Design of Instruction
 - Delivery of Instruction

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Path to the Common Core

Use research-validated knowledge on learning.

Attend
Intend
Organize
Rehearse

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Learning Domain-Specific Information

Attend
Intend

Teacher

- I intend to teach critical content
- This information/strategy/skill is important because.....
- We need to remember
- The most important idea is....
- Let's review.....

Students

- I intend to learn critical content
- I will take notes / mark the text/ add notes in the margin/ highlight / create a web / complete graphic organizer / summarize/
- I will study

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Learning Domain-Specific Information

Organize

- **Big ideas** (Example)
 - *Problem* (economic or people's rights)
 - *Solution*
 - *Effect* (problem ends, problem continues, causes a new problem)
Carnine, Crawford, Harness, Hollenbeck and Miller, 1998
- **Graphic organizers**

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Learning Domain-Specific Information

Rehearse

-Repeated practice needed

-The more times students process information the more likely they are to remember it.

Marzano, 2004

-Students require 4 exposures to information to adequately integrate into background knowledge (within a 2 day period) Nuthall, 1999

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Learning Domain-Specific Information

Rehearse

Provide judicious practice (Burke, Hagan, & Grossen, 1998)

- Provide sufficient practice opportunities
- Initial instruction
- Distributed practice
- Cumulative review

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Learning Domain-Specific Information

Rehearse

Develop a PLAN for practice

Example: **Science Teacher's Plan**

Rehearse information during lessons

Entry tasks - Two questions on current topic

Two review questions

Exit tasks - Big ideas from today's Lesson

Friday Review - Teach previous graphic organizer to partner
Play Quizlet vocabulary review game

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Reading Comprehension:

Before Reading
During Reading
After Reading

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Preview - Before Reading Strategies

- Teach the pronunciation and meaning of critical, unknown **vocabulary** words
- Review, teach or activate any necessary **background knowledge**
- **Preview** the text

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Before Reading - Vocabulary

- “direct vocabulary instruction has an impressive track record of improving students’ background knowledge and comprehension of academic content” Marzano, 2001, p. 69
- .97 effect size for direct teaching of vocabulary related to content Stahl & Fairbanks, 1986

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Before Reading - Vocabulary

Attributes of Good Vocabulary Instruction

1. Promote **word learning strategies**
2. Select words that enhance academic success
 - **General Academic Vocabulary** - Generalize across domains (*evidence, observe, investigate, classify, compared to, alternatively, in contrast*)
 - **Domain-Specific Vocabulary** - Specific to a domain or field of study (*suffrage, prokaryote*)
3. Order or group words **semantically**

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Before Reading - Vocabulary

Attributes of Good Vocabulary Instruction

4. Teach words using **explicit instruction**
5. Provide **student-friendly explanations**
6. Teach **parts of words** at the “moment of opportunity” (*biology - bio = life; autoimmune - auto =self*)
7. Provide **multiple exposures** to terms and meanings

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Before Reading - Vocabulary

Attributes of Good Vocabulary Instruction

7. Expand instruction to “**word relatives**” (*category, categories, categorization, categorizer*)
8. Have students maintain vocabulary **log**
9. Maintain a **word wall**
10. Provide judicious **review**

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Before Reading - Vocabulary

- Limit number of words given in depth instruction to 4 to 5 words (Robb, 2003)
- Select words that are **unknown**
- Select words that are **critical** to passage understanding
- Select words that students are likely to use in the **future** (Stahl, 1986)
 - General academic vocabulary found used in many domains
 - Domain-specific vocabulary that provides background knowledge

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Before Reading - Vocabulary

- Select **difficult words** that need interpretation
 - Words not defined within the text
 - Words with abstract referent
 - Words with an unknown concept

(NOTE: Be aware of words that are used differently in your subject.
theory - hunch VS in science a well-established explanation)

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Before Reading - Vocabulary

- **Dictionary Definition**
 - **compulsory** - (1) Employing compulsion; coercive. (2) Required by law or other rule.
- **Student-Friendly Explanation**
 - **Uses known words.**
 - **Is easy to understand.**
- When something is **compulsory**, it is required and you must do it.

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On-line Dictionaries with Student-friendly Explanations

Collins Cobuild Dictionary of American English
<http://www.collinslanguage.com/free-online-cobuild-ESL-dictionary>
dictionary.reverso.net/english/cobuild

Longman's
<http://www.ldoceonline.com>
(Longman's Dictionary of Contemporary English Online)

Heinle's
<http://www.nhd.heinle17e.com/home.aspx>
(Heinle's Newbury Dictionary for American English)

Merriam Webster's
<http://www.learnersdictionary.com>

(Pronunciation assistance: www.howjsay.com)

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Before Reading - Vocabulary

Step 1. Introduce the word.

- a) Write the word on the board or overhead.
- b) Read the word and have the students repeat the word.
- c) Have students tap out the syllables in the word.
- d) Have students read the word by parts as you loop under the word.
- e) Have students repeat the pronunciation of the word.
(If the word is difficult to pronounce or unfamiliar have the students repeat the word a number of times.)

Introduce the word with me.

*This word is **suffrage**. What word? suffrage*

Tap and say the parts of the word. suf frage

Read the word by parts. suf frage

What word? suffrage

***Suffrage** is a noun.*

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Before Reading - Vocabulary

Step 2. Introduce meaning of word.

Option # 1. Present a student-friendly explanation.

- a) Tell students the explanation. OR
- b) Have them read the explanation with you.

Present the definition with me.

*When someone has **suffrage**, they have the right to vote in an election.*

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Before Reading - Vocabulary

Step 2. Introduce meaning of word.

Option # 2. Have students locate the definition in the glossary or text and break the definition into the critical attributes.

Glossary: **Suffrage** - the right to vote

suffrage

- the right
- to vote

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Before Reading - Vocabulary

Step 2. Introduce meaning of word.

Option # 3. Introduce the word using the meaningful parts in the word.

autobiography
auto = self
bio = life
graph = letters, words, or pictures

hydroelectricity
hydro = water

telescope
tele = distant
scope = look at

NOTE: 88% of key science words have Spanish cognates;
1/2 are high frequency words in Spanish

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Common Latin and Greek Roots

aqua	water	Greek	aquarium, aqueduct, aquaculture, aquamarine, aquaplane, aquatic
aud	hearing	Latin	audio, audition, audiovisual, auditorium, audiotape, inaudible
auto	self	Greek	autograph, autobiography, automobile, autocrat, autonomy
astro	star	Greek	astronomy, astrophysics, astrology, astronaut, astronomer, asterisk
biblio	book	Greek	Bible, bibliography, bibliophobia, bibliophile, biblioklept
bio	life	Greek	biography, biology, autobiography, bionic, biotic, antibiotic, biome, biosphere, biometrics
chrono	time	Greek	synchronize, chronology, chronic, chronicle, anachronism
corp	body	Latin	corpse, corporation, corps, incorporate, corporeal, corpulence
demo	the people	Greek	democracy, demography, epidemic, demotic, endemic, pandemic
dic, dict	speak, tell	Latin	dictate, dictation, diction, dictator, verdict, predict, contradict, benediction, jurisdiction, predict, indict, edict
dorm	sleep	Latin	dormant, dormitory, dormer, dormouse, dormition, dormitive
geo	earth	Greek	geology, geologist, geometry, geography, geographer, geopolitical, geothermal, geocentric

Common Latin and Greek Roots

graph	to write, to draw	Greek	autograph, biography, photograph, telegraph, lithograph
hydro	water	Greek	hydroplane, dehydrate, hydroelectric, hydrogen, hydrophone
ject	throw	Latin	reject, deject, project, inject, injection, projection
logos, logy	study	Greek	geology, astrology, biology, numerology, zoology, technology, psychology, anthropology, mythology
luna	moon	Latin	lunar, lunacy, lunatic, interlunar
meter	measure	Greek	meter, thermometer, diameter, geometry, optometry, barometer, centimeter, symmetry, voltammeter
mega	great, large, big	Greek	megaphone, megalith, megalomania, megatons, megalopolis
min	small, little	Latin	minimal, minimize, minimum, mini, miniature, minuscule, minute, minority
mit, mis	send	Latin	mission, transmit, transmission, remit, missile, submission, permit, emit, emissary
path	feeling, suffering	Greek	pathetic, pathology, apathy, antipathy, sympathy, telepathy, empathy, sociopath
ped	foot	Latin	pedestrian, pedal, peddle, peddler, pedicure, pedometer
philia	love, friendship	Greek	philosopher, Philadelphia, philanthropist, philharmonic, Philip

Common Latin and Greek Roots

phono	sound	Greek	phonograph, microphone, symphony, telephone, phonogram, megaphone, phony, euphony, xylophone, phony,
photo	light	Greek	photograph, photosynthesis, telephoto, photometer, photophilia
port	carry	Latin	port, transport, transportation, portable, portage, report
spect	see	Latin	respect, inspection, inspector, spectator, spectacles, prospect
scope	look at	Greek	microscope, telescope, periscope, kaleidoscope, episcopal
sol	sun	Latin	solar, solar system, solstice, solarium, parasol
struct	build, form	Latin	instruct, instruction, construction, reconstruction, destruct, destruction, infrastructure, construe, instrument, instrumental
tele	distant	Greek	telephone, television, telegraph, telephoto, telescope, telepathy, telethon, telegenic
terra	land	Latin	territory, terrestrial, terrace, terrarium, extraterrestrial, Mediterranean Sea, terra cotta, subterranean

Vocabulary

- Recommended resource for science teachers

The Sourcebook for Teaching Science by Norman Herr

Chapter 1, *Building a Scientific Vocabulary* contains lists of roots, prefixes, suffixes by science domain

Before Reading - Vocabulary

Step 3. Illustrate the word with examples.

- a. Concrete examples
 - objects
 - acting out
- a. Visual examples
- b. Verbal examples

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Before Reading - Vocabulary

Suffrage Examples

When the United States was founded only white men with property had suffrage.

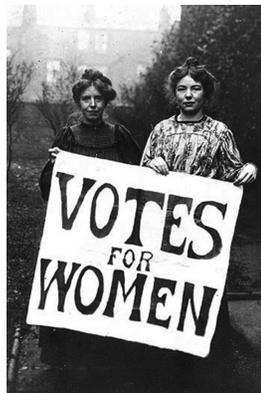
At the time of the American Civil War, most white men had been granted suffrage.

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Before Reading - Vocabulary

Suffrage Examples

In 1920, women were granted suffrage. The passage of the Nineteenth Amendment granted women the right to vote in all United States elections.

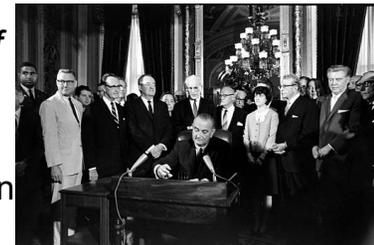


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Before Reading - Vocabulary

Suffrage Examples

The *Voting Rights Act of 1965* outlawed discriminatory voting practices that denied **suffrage** to many African Americans in the United States.



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Before Reading - Vocabulary

Step 4. Check students' understanding.
Option #1. Ask deep processing questions.

Check students' understanding with me.

Why is suffrage a critical aspect of a democracy?

Begin by saying or writing:

Suffrage is a critical aspect of democracy for the following reasons. First, _____

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Before Reading - Vocabulary

Step 4. Check students' understanding.
Option #2. Have students discern between examples and non-examples.

Check students' understanding with me.

Tell me **suffrage** or **not suffrage**.

The right to run for elected office. **not suffrage** Why not?

The right to vote. **suffrage** Why?

The right to develop ads for a candidate. **not suffrage** Why not?

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Before Reading - Vocabulary

Step 4. Check students' understanding.
Option #3. Have students generate their own examples.

Check students' understanding with me.

*Make a list of ways that **suffrage** could be limited or compromised.*

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Before Reading - Vocabulary

suffrage noun
suffragist noun



In 1917, all women in the United States did not have **suffrage**, the right to vote. **Suffragists** in New York City collected more than a million signatures of women demanding voting rights. They then paraded down Fifth Avenue with the signature placards.

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Background Knowledge - What

- ...what one already knows about a subject.
Stevens, 1980
- ...all the knowledge learners have when entering a learning environment that is potentially relevant for acquiring new knowledge.
Biemans & Simons, 1996

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Background Knowledge - Why?

Read this paragraph and explain it to your partner.

From a neuroanatomy text (found in *Background Knowledge* by Fisher and Frey)

Improved vascular definition in radiographs of the arterial phase or of the venous phase can be procured by a process of subtraction whereby positive and negative images of the overlying skull are imposed on one another.

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Background Knowledge - Why?

Read this paragraph and explain it to your partner.

(*Background Knowledge* by Fisher and Frey)

How much a reader already knows about the subject is probably the best predictor of reading comprehension. When readers engage with a text for which they have limited background knowledge, the text is much more difficult to understand than one for which they have ample background knowledge. ...research indicates that children continue to spin their wheels when they don't have the background knowledge required to understand much of what they are reading. p2

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Background Knowledge - Why

- Background knowledge of text has a major impact on whether or not a reader can comprehend text.

Anderson & Pearson, 1984; Bransford, Stein, & Shelton, 1984; Wilson & Anderson, 1986

- Across grades and reading ability, prior knowledge of subject area and key vocabulary results in higher scores on reading comprehension measures.

Langer, 1984; Long, Winograd, & Bridget, 1989; Stevens, 1980

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Background Knowledge - Why

- Average correlation between person's background knowledge of a given topic and extent to which a person learns new information is .66. Marzano, 2004
- Prior knowledge has a large influence on student performance, explaining 30 to 60% of variance in performance. Docy, Segers, & Buehl, 1999

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Background Knowledge

Approaches

1. **Review** what has been taught
2. **Teach** necessary background knowledge
3. **Activate** background knowledge

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Background Knowledge - Review

Review critical information what has been recently taught

- Review** is always ASK (don't tell)
- Adjust** lesson based on responses

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Background Knowledge - Teach

When teaching factual information, remember:

Attend
Intend
Organize
Rehearse

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Teach Background Knowledge

BIG IDEA

Even a thin slice of background knowledge is useful.

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Teach Background Knowledge

Preparation

1. What is critical?
2. What information would ease acquisition of new knowledge?
3. What information would reduce cognitive overload?
4. What information will increase interest and motivation?

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Teach Background Knowledge

Anchor Instruction in:

- Supplementary Informational Text
- Power-point
- Visuals
- Video

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Teach Background Knowledge

Anchor in Video Clip

- Select well-crafted video.
 - Appropriate length
 - Major points stressed
 - Matches necessary background knowledge
- Scaffold “information dense videos” (e.g., watch more than one time, provide limited focus for each viewing)
- Opportunity to focus on visual literacy skills. (Cena & Mitchell, 1998)

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Teach Background Knowledge

Anchor in Video Clip - Instructional Procedure

1. **Focus:** Establish a focus for watching the video.
2. **Response:** Ask students to take notes, complete partial notes, or complete a think sheet or other graphic organizer. Tell students that they will be sharing with their partners.
3. **Share:** Have students share their observations with their partners or team.
4. **Discuss:** Lead students in a discussion of the main ideas from video.
5. **Review/Rehearse:** Ask students questions on the critical content.

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Activate Background Knowledge

Activate Background Knowledge

- Reflection and Recording
- Anticipation guide
- Cloze
- Semantic Mapping

- **Purposes**
- **activate** background knowledge
- **assess** entering level of knowledge

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Activate Background Knowledge

Reflection and Recording

1. Have students state, write down, or record what they know about the topic.

What do I already know about this topic?

Carr & Thompson, 1996; Paeck, van dem Bosh & Keupling, 1982; Smith, Readence & Alvermann, 1983; Spires & Dontey, 1998; Walraven & Reitsma, 1993

2. After reflecting and recording, engage students in a group discussion of the topic.

Dole, et. al. 1991; Schmidt & Patel, 1987; King, 1994; Hansen & Pearson, 1983.

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BUT.....

- Teacher-directed instruction focused on information necessary for understanding text, more effective than activating student knowledge and discussing it.

Dole, Valencia, Greer, & Wardrop, 1991

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Activate Background Knowledge

Cloze Procedure

1. Select a self-contained reading passage.
2. Leave first and last sentence and all punctuation intact.
3. Carefully select the words for omission by using a word count formula, such as every fifth word, or other criteria. Delete words that carry meaning, such as nouns, main verbs adjectives, and adverbs.
4. Have students read the entire passage before they fill in blanks.
5. Encourage the students to fill each blank.
6. Give students an appropriate amount of time to complete the task.
7. Prompt students to reread the completed passage.

Kroeger, Burton, and Preston, 2009; Taylor, 1953

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Activate Background Knowledge

Students' background knowledge is highly related to reading comprehension and overall learning. Given that students often have little _____ of the topic, the teacher can frontload passage reading by _____ recently taught information, by teaching _____ background knowledge or by activating background _____.

When introducing background knowledge directly, the instruction can be anchored to a power-point presentation, informational article, visuals, or a carefully selected _____.

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Activate Background Knowledge

Anticipation Guide

1. The teacher reads the chapter and determines the most important ideas that students should gain.
2. These ideas are stated either as true or false statements.
3. Before reading the chapter, the students read each statement and indicate if they believe the statement is true or false based on their current background knowledge.
4. After reading the chapter and participating in other learning activities, the students read each statement and indicate if they believe the statement to be true or false based on their expanded knowledge.
5. (Optional) Students rewrite false statements, creating true statements. In the end, the students will have a summary of key ideas.

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Activate Background Knowledge

Semantic Mapping

1. Have students generate a list of words that they associate with the concept.
2. Next, have students generate categories for the words.
3. Then, students record words from their list with a matching category.
4. Semantic mapping can be done individually, in pairs, or in cooperative teams.

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Preview - Informational Passage

As the student previews, he/she discovers:

- the topics to be **covered**,
- the information that will be **emphasized**,
- how the material is **organized**.

– In addition, background knowledge is **activated**.

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Preview - Informational Passage

- Guide students in previewing the chapter and formulating a topical outline using the **text structure**: title, introduction, headings, subheadings, questions.
- Has students preview the selection independently, with his/her partner, or with team members.

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Preview - Informational Passage

Warm-Up

Before you read a chapter or a section of a chapter in your science, social studies, or health book, Warm-up. Get an idea of the chapter's content by previewing these parts.

BEGINNING

- Title
- Introduction

MIDDLE

- Headings
- Subheadings

END

- Summary
- Questions

Curriculum Associates, *Skills for School Success*

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