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Text Comprehension Instruction

Comprehension is the reason for reading. If readers can read the words but do not understand what they are reading, they are not really reading.

As they read, good readers are both purposeful and active.

Good readers are purposeful. Good readers have a purpose for reading. They may read to find out how to use a food processor, read a guidebook to gather information about national parks, read a textbook to satisfy the requirements of a course, read a magazine for entertainment, or read a classic novel to experience the pleasures of great literature.

Good readers are active. Good readers think actively as they read. To make sense of what they read, good readers engage in a complicated process. Using their experiences and knowledge of the world, their knowledge of vocabulary and language structure, and their knowledge of reading strategies (or plans), good readers make sense of the text and know how to get the most out of it. They know when they have problems with understanding and how to resolve these problems as they occur.

Research over 30 years has shown that instruction in comprehension can help students understand what they read, remember what they read, and communicate with others about what they read.

What does scientifically-based research tell us about effective

text comprehension instruction?

The scientific research on text comprehension instruction reveals important information about what students should be taught about text comprehension and how it should be taught. The following key findings are of particular interest and value to classroom teachers.

Text comprehension can be improved by instruction that helps readers use specific comprehension strategies.

Comprehension strategies are conscious plans--sets of steps that good readers use to make sense of text. Comprehension strategy instruction helps students become purposeful, active readers who are in control of their own reading comprehension.

The following six strategies appear to have a firm scientific basis for improving text comprehension.

Monitoring comprehension. Students who are good at monitoring their comprehension know when they understand what they read and when they do not. They have strategies to "fix up" problems in their understanding as the problems arise. Research shows that instruction, even in the early grades, can help students become better at monitoring their comprehension.

Comprehension monitoring instruction teaches students to

- be aware of what they ***do*** understand,
- identify what they ***do not*** understand, and
- use appropriate "fix-up" strategies to resolve problems in comprehension.

Metacognition

Metacognition can be defined as "thinking about thinking." Good readers use metacognitive strategies to think about and have control over their reading. Before reading, they might clarify their purpose for reading and preview the text. During reading, they might monitor their understanding, adjusting their reading speed to fit the difficulty of the text and "fixing up" any comprehension problems they have. After reading, they check their understanding of what they read.

Comprehension monitoring, a critical part of metacognition, has received a great deal of attention in the reading research.

Students may use several comprehension monitoring strategies.

- Identify where the difficulty occurs ("I don't understand the second paragraph on page 76.").
- Identify what the difficulty is ("I don't get what the author means when she says, 'Arriving in America was a milestone in my grandmother's life.'").
- Restate the difficult sentence or passage in their own words ("Oh, so the author means that coming to America was a very important event in her grandmother's life.").
- Look back through the text ("The author talked about Mr. McBride in Chapter 2, but I don't remember much about him. Maybe if I reread that chapter, I can figure out why he's acting this way now.").
- Look forward in the text for information that might help them to resolve the difficulty. ("The text says, 'The groundwater may form a stream or pond or create a wetland. People can also bring groundwater to the surface.' Hmm, I don't understand how people can do that . . . Oh, the next section is called 'Wells.' I'll read this section to see if it tells how they do it.").

Using graphic and semantic organizers. Graphic organizers illustrate concepts and interrelationships among concepts in a text, using diagrams or other pictorial devices. Graphic organizers are known by different names, such as maps, webs, graphs, charts, frames, or clusters. Semantic organizers (also called semantic maps or semantic webs) are graphic organizers that look somewhat like a spider web. In a semantic organizer, lines connect a central concept to a variety of related ideas and events.

Regardless of the label, graphic organizers can help readers focus on concepts and how they are related to other concepts. Graphic organizers help students read to learn from informational text in the content areas, such as science and social studies textbooks and trade books. Used with informational text, graphic organizers can help students see how concepts fit common text structures. Graphic organizers are also used with narrative text, or stories, as story maps.

Graphic organizers can:

- help students focus on text structure as they read;
- provide students with tools they can use to examine and visually

8

Fire & Soil

Soil Study

Soil is an essential part of the ecosystem. It is made up of organic material, water, air and billions of organisms. Soils are formed from parent rock that erodes into smaller and smaller particles, both coarse and fine. These particles, deposited by water and wind, are classified by their size from the finest (clay) to the more coarse (silt) to the coarsest (sand). Loam is a soil that is a mixture of all three. The water-holding capacity of soil determines its type, with the finest soils holding water and the coarser ones allowing water to percolate through.

Soil depth worldwide averages only six inches (fifteen centimeters). Soil and its underlying layers form horizons from the surface to the bedrock. These layers are distinct from one another chemically and physically because of their distance from the surface. For example: the top layer of soil is composed primarily of organic material, such as leaves and insects. The second layer, or topsoil, is where seeds germinate and plant roots thrive. The next layer is usually composed of sand and silt, with minerals and clay having been removed and settled into the next layer. Beyond this, the layers usually consist of rocks with little organic matter. The soils of this area tend to show a horizon with a moderately weathered topsoil layer, and subsurface layers of clay.

Soils play an important role in the plant communities of an area. Soils of the Santa Monica Mountains, range from thick, well-drained loams of oak-covered valley bottoms, to areas of chaparral where the soil is rocky, shallow, and lacking in minerals. This type of soil holds little moisture and tends to be dry. The plants of the Santa Monica Mountains have adapted to the soils of their area, which maintain a certain moisture level, nutrient level, and pH level, suitable to the needs of these plants.

http://www.nps.gov/samo/educate/Fire%20Website/pdf/8hand.pdf

Name _____ Subject _____ Date _____

Three-Column Notes

Title=

Main Ideas (Section Titles, Main Details/Facts/Reasons)	**Generate Questions**	**Subtopics** (Examples, Elaborations, Explanations, Questions, Connections, Insights, Comments)

Name _____ Subject _____ Date _____

Three-Column Notes

Title=

Main Ideas (Section Titles, Main Details/Facts/Reasons)	**Generate Questions**	**Subtopics** (Examples, Elaborations, Explanations, Questions, Connections, Insights, Comments)
Soil is made up of Organic material, water, air and billions of organisms.		
Soil is made up of layers.		
Adaptability of planets to different soils		

My Notes

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Bloom's Taxonomy

Level	***Skills Demonstrated***
Knowledge	*define, tell, identify, collect, name, who, when, where*
Comprehension	summarize, describe, contrast, compare,
Application	complete, illustrate, show, solve, modify, relate, classify, discover, order
Analysis	*analyze, separate, explain, connect, compare*
Synthesis	*combine, integrate, modify, rearrange, substitute, plan, create, design, what if, compose, rewrite*
Evaluation	*assess, decide, rank, recommend, convince, judge, explain, support, conclude*

Bloom, B.S. (Ed.) (1956)

Three-Column Notes

Topic= China Geography

Main Ideas (Section Titles, Main Details/Facts/Reasons)	**Generate Questions**	**Subtopics** (Examples, Elaborations, Explanations, Connections, Insights, Comments)

Mountain Ranges		- Himalayas
		  - Difficult to travel
		  - Hard to communicate
		  - World's highest mountain
		  - 24,000 ft
		- Other mountain ranges
		  - Kunlun Shan
		  - Tian Shan
		  - Altai
		  - Da Hinggan Ling

Desert		- North and northwest - Gobi desert - Largest one

Rivers		- Huange He
		  - Begins at the Plateau of Tibet to the Northwest
		  - Called the Yellow River
		  - Floods that bring dsaters
		- Chang Jiang
		  - Sometimes call the Yangtze river
		  - Central and southern China
		  - Send goods to pacific ports

		-

Grade 6

Standard 6.4.2

Writing Prompt:

At the end of the first year of war, the Athenians held, as was their custom, an elaborate funeral for all those killed in the war. The funeral oration over these dead was delivered by the brilliant and charismatic politician and general, Pericles, who perished a little bit later in the horrifying plague that decimated Athens the next year. The Funeral Oration is the classic statement of Athenian ideology, containing practically in full the patriotic sentiment felt by most Athenians. According to Pericles, give two examples that make Athens great?

"Our form of government does not enter into rivalry with the institutions of others. Our government does not copy our neighbors', but is an example to them. It is true that we are called a democracy, for the administration is in the hands of the many and not of the few. But while there exists equal justice to all and alike in their private disputes, the claim of excellence is also recognized; and when a citizen is in any way distinguished, he is preferred to the public service, not as a matter of privilege, but as the reward of merit. Neither is poverty an obstacle, but a man may benefit his country whatever the obscurity of his condition. There is no exclusiveness in our public life, and in our private business we are not suspicious of one another, nor angry with our neighbor if he does what he likes; we do not put on sour looks at him which, though harmless, are not pleasant. While we are thus unconstrained in our private business, a spirit of reverence pervades our public acts; we are prevented from doing wrong by respect for the authorities and for the laws, having a particular regard to those which are ordained for the protection of the injured as well as those unwritten laws which bring upon the transgressor of them the reprobation of the general sentiment.

And we have not forgotten to provide for our weary spirits many relaxations from toil; we have regular games and sacrifices throughout the year; our homes are beautiful and elegant; and the delight which we daily feel in all these things helps to banish sorrow. Because of the greatness of our city the fruits of the whole earth flow in upon us; so that we enjoy the goods of other countries as freely as our own."

Grade 8
Standard 8.10.7

Writing Prompt:
Women writing to the Surgeon about service as a nursing volunteer were advised to contact Miss Dorothea Dix. She interviewed all women who came to Washington to volunteer before approving them for service as nurses for the Union army.
Read Circular Order No. 8 of July 14, 1862 by Dorothea Dix to recruit nurses for the military hospital. Select two of the qualifications you think were the most important for being a good nurse during the Civil War.

Circular No. 8

Washington, D. C., July 14, 1862

No candidate for service in the Women's Department for nursing in the Military Hospitals of the United States, will be received below the age of thirty-five years, nor above fifty.

Only women of strong health, not subjects of chronic disease, nor liable to sudden illnesses, need apply. The duties of the station make large an continued demands on strength.

Matronly persons of experience, good conduct, or superior education and serious disposition, will always have preference: habits of neatness, order, sobriety, and industry, are prerequisites.

All applicants must present certificates of qualifications and good character from at least two persons of trust, testifying to morality, integrity, seriousness, and capacity for care of the sick.

Obedience to rules of service, and conformity to special regulations, will be required and enforced.

Compensation, as regulated by act of Congress, forty cents a day and subsistence. Transportation furnished to and from the place of service

Amount of luggage limited within small compass.

Dress plain, (colors brown, grey, or black,) and while connected with the service without ornaments of any sort.

No applicants accepted for less than three months service: those for longer periods always have preference.

D.L. Dix.

Approved,
William A. Hammond,
Surgeon General.

Grade 11
Standard 11.9.3

Writing Prompt:
The official story was that North Vietnamese torpedo boats launched an "unprovoked attack" against a U.S. destroyer on "routine patrol" in the Tonkin Gulf on Aug. 2 -- and that North Vietnamese PT boats followed up with a "deliberate attack" on a pair of U.S. ships two days later. President Lyndon Johnson told the nation, "After consultation with the leaders of both parties in the Congress, I further announced a decision to ask the Congress for a resolution expressing the unity and determination of the United States in supporting freedom and in protecting peace in southeast Asia.
Johnson referred to the resolution as "like grandma's nightshirt—it covered everything." Find two examples from the resolution that would support Johnson's analogy.

Gulf of Tonkin Resolution

Joint Resolution of Congress
H.J. RES 1145 August 7, 1964

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,
That the Congress approves and supports the determination of the President, as Commander in Chief, to take all necessary measures to repel any armed attack against the forces of the United States and to prevent further aggression.
Section 2. The United States regards as vital to its national interest and to world peace the maintenance of international peace and security in southeast Asia. Consonant with the Constitution of the United States and the Charter of the United Nations and in accordance with its obligations under the Southeast Asia Collective Defense Treaty, the United States is, therefore, prepared, as the President determines, to take all necessary steps, including the use of armed force, to assist any member or protocol state of the Southeast Asia Collective Defense Treaty requesting assistance in defense of its freedom.
Section 3. This resolution shall expire when the President shall determine that the peace and security of the area is reasonably assured by international conditions created by action of the United Nations or otherwise, except that it may be terminated earlier by concurrent resolution of the Congress.

Nancy Pavelsky, Riverside County Office of Education 2004

Writing Prompts for Quick Assessment of Science Content

- Each prompt was designed as an opportunity to show student understanding, some at and many beyond Bloom's "Knowledge Level."

- Each prompt directly assesses at least one science content standard at the grade level indicated.

Grade Six:

Focus on Earth Science

Plate Tectonics and Earth's Structure

Tell how plate tectonics explain major geological events.

Shaping Earth's Surface

How is topography reshaped?

Heat (Thermal Energy) (Physical Science)

Compare these three processes: conduction, convection, radiation.

Energy in the Earth System

What causes a hurricane?

Ecology (Life Science)

Describe how two different kinds of organisms may play similar ecological roles in similar environments.

Resources

Using examples, explain the difference between renewable and nonrenewable resources.

Investigation and Experimentation

Using the above graph, describe the relationship(s) between Variable 1 and Variable 2.

Grade Seven:

Focus on Life Science

Cell Biology

Compare and contrast plant and animal cells.

Genetics

Compare and contrast the life cycles and reproduction of sexual and asexual organisms.

Evolution

How did Darwin conclude that natural selection was the mechanism of evolution?

Earth and Life History (Earth Science)

What is the relationship of plate tectonics to the distribution of organisms?

Structure and Function in Living Systems

Explain how the umbilicus and placenta function during pregnancy.

Physical Principles in Living Systems (Physical Science)

Using what you know about the behavior of light and the structure of the human eye, explain sight.

Investigation and Experimentation

Write a summary of the information contained in the following paragraph.

Grade Eight:

Focus on Physical Science

Motion

What is the difference between speed and velocity?

Forces

What is the role of gravity in forming and maintaining the shape of the planets, stars, and the solar system?

Structure of Matter

Explain how the states of matter depend upon molecular motion.

Earth in the Solar System (Earth Science)

Compare the source of light for bright objects in the sky, e.g., the Sun, Moon, stars, planets.

Reactions

Explain the term “conservation of matter.”

Chemistry in Living Systems (Life Science)

Discuss carbon’s role in the chemistry of living organisms.

Periodic Table

How is the periodic table organized?

Density and Buoyancy

How can a steel ship float?

Investigation and Experimentation

Using the above graph, distinguish between the linear and nonlinear relationships.

Grades Nine Through Twelve

Physics

Motion and Forces

Explain how man made satellites stay in orbit.

Conservation of Energy and Momentum

What is the difference between momentum and energy?

Heat and Thermodynamics

What is the difference between heat flow and work?

Waves

Compare and contrast transverse and longitudinal waves.

Electric and Magnetic Phenomena

Why is plasma considered to be the fourth state of matter?

Chemistry

Atomic and Molecular Structure

What does an element’s position on the periodic table tell you?

Chemical Bonds

Use examples to compare ionic and covalent bonding.

Conservation of Matter and Stoichiometry

Distinguish between “molarity” and “molality.”

Gases and Their Properties

What are the gas laws?

Acids and Bases

Compare and contrast acids and bases.

Solutions

Correctly using the terms solute and solvent, describe the “dissolving process” at the molecular level.

Chemical Thermodynamics

Using examples, compare and contrast exothermic and endothermic reactions.

Reaction Rates

Define a catalyst and explain its role in a reaction.

Chemical Equilibrium

What is meant by equilibrium in a reaction?

Organic Chemistry and Biochemistry

What are polymers?

Nuclear Processes

Compare and contrast the three most common forms of radioactive decay.

Biology/Life Science

Cell Biology

Why do some people classify viruses as living organisms, and some do not?

Genetics

Step by step, explain the process by which ribosomes synthesize proteins.

Ecology

How does the energy pyramid express what happens in a food web?

Evolution

Why do we say that natural selection acts on the phenotype rather than the genotype of an organism?

Physiology

Describe one specific feedback loop in which the nervous and endocrine systems regulate conditions in the body.

Earth Sciences

Earth's Place in the Universe

Build an argument to support the idea that planets are much closer to the Earth than the stars are.

Dynamic Earth Processes

Build an argument for plate tectonics based on features of the ocean floor.

Energy in the Earth System

Explain the mechanism and significance of the greenhouse effect.

Biogeochemical Cycles

Why should I care about the global carbon cycle?

Structure and Composition of the Atmosphere

How does the ozone layer affect me; how do I affect it?

California Geology

What is the source and availability of fresh water in your community?

Investigation and Experimentation

Distinguish between hypothesis and theory as scientific terms.

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