Reading and Writing Across CTE Career Pathways

July 2012
Objectives

- To review research on reading and writing practices in content areas.

- To examine Common Core State Standards (CCSS) literacy standards in technical subjects.

- To examine 2 research-based reading strategies.

- To examine writing practices in technical subjects.
What does the research say?

Reading and Writing across the Curriculum

A Policy Research Brief produced by the National Council of Teachers of English

IN THIS ISSUE
- One Implication of CCSS
- Research-Based Recommendations for Fostering RAWAC

The standards insist that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school. The K-8 standards include expectations for reading, writing, speaking, listening, and language applicable to a range of subjects, including but not limited to ELA. The grades 6–12 standards are divided into two sections: one for ELA and the other for history/social studies, science, and technical subjects. This division reflects the unique, time-honored place of ELA teachers in developing students' literacy skills while at the same time recognizing that teachers in other areas must have a role in this development as well.

Introduction, Common Core State Standards

One Implication of CCSS

The Common Core State Standards (CCSS), an initiative of the National Governors’ Association and the Council of Chief State School Officers, have received attention on reading and writing across the curriculum. Launched in June of 2010, the CCSS have already been adopted by 48 states. These standards, which focus on mathematics and the English language arts, will replace existing standards in states that have agreed to adopt the CCSS. Accordingly, this is a moment when many teachers and instructional leaders across the country are redesigning curriculum to align with the CCSS. It is also a moment when teachers, instructional leaders, and policymakers can reconceptualize reading and writing across the disciplines.

Reception of the CCSS has been mixed, with praise for higher expectations and more uniformity of curriculum alongside concerns about an overemphasis on high-stakes tests and a narrowing of the curriculum. Regardless of what one thinks of them, the CCSS take a clear stand on behalf of reading and writing across the curriculum. The insistence on making reading and writing instruction a shared responsibility” within schools signals that teachers in multiple disciplines will be expected to help foster literacy development, and the CCSS benchmarks specify the expectations. This mandate could provide the foundation for a comprehensive, robust program of reading and writing across the curriculum (RAWAC) in K-12 education. And in schools where ELA teachers have worked with colleagues to establish these programs, the CCSS may provide further support for their early efforts to build a school-wide culture in support of literacy.

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The Status Quo

Building a RAWAC program will require significant transformation in most schools because it has not been a priority. Attention to RAWAC has been limited, and it has declined in recent years. A 2002 study showed that eighth graders reported weekly writing assignments in 60% of social studies, 51% of science, and 12% of mathematics classes. By 2007, these numbers had slipped to 44% and 30% for social studies and science, respectively, with mathematics remaining constant. For twelfth graders the numbers were smaller, with writing assignments reported for 40% in social studies, 20% in science, and 8% in math in 2002, and in 2007 these numbers were 40%, 29%, and 8% respectively.

Furthermore, research shows that most secondary teachers outside ELA struggle to see their subject as inherently linked to conversations about what it means to be a reader or writer who makes sense of science or math. Accordingly, these teachers express little interest in incorporating instruction in reading and writing into their courses. One reason teachers of subjects like science, math, or social studies don’t see the importance of teaching reading and writing is that they have not had opportunities to consider what it would mean. Clearly, if RAWAC is going to be incorporated into classes beyond ELA, teachers’ views of RAWAC need to change, and schools will need to undertake significant programs of professional development.

The Benefits of RAWAC

The research is clear: discipline-based instruction in reading and writing enhances student achievement in all subjects. Studies show that reading and writing across the curriculum are essential to learning. Without strategies for reading course material and opportunities to write thoughtfully about it, students have difficulty mastering concepts. These literacy practices are firmly linked with both thinking and learning. Students who can read with clear comprehension and write effectively about a given subject matter will learn the material much more thoroughly than those who do not. Yet, as research shows, reading and writing cannot be learned once and for all; these skills represent complex arrays of capacities that vary from one discipline to another. Reading and writing in science is not the same as reading and writing in social studies or a technical subject like drafting. This means that student achievement can be enhanced by teachers who focus on helping their students develop strategies for reading and writing within their respective content areas.

Brockton High School in Massachusetts offers a compelling example of the powerfully positive effects of RAWAC. The largest high school in the state, in 1991 its test scores were very near the bottom in Massachusetts, and three out of four students dropped out. After the 1999 test scores were reported, a group of teachers persuaded the administration to let them develop a program that integrated “reading and writing lessons into every class in all subjects, even gym.” By 2001 student retention and test scores had improved dramatically, and in 2009 and 2010 Brockton outsourced 90% of Massachusetts schools. Researchers have studied the Brockton turn-around, and it is clear that RAWAC played a key role.

Research-Based Recommendations for Fostering RAWAC

Reframing RAWAC

Research on the benefits of RAWAC is not new, but implementation of programs that incorporate reading and writing instruction into all subjects has been slow and/or unsuccessful. Preliminary studies show that reframing the teacher’s role in RAWAC can be effective in leading teachers to focus more attention on reading and writing. Specifically, a few strategies for approaching RAWAC can make it more appealing to teachers who wish to incorporate reading and writing into their instruction.

Use low-stakes writing assignments.

Much teacher resistance to introducing writing in multiple content areas is based on the assumption that it means assigning and grading complex essays. While such writing has many benefits, learning can also be enhanced with low-stakes assignments that ask students to explain key concepts, summarize arguments on a given topic, or outline a procedure. Research shows that writing regularly in this way fosters learning because it strengthens connections with course reading.

Provide multiple forms of feedback.

Another source of teacher resistance to incorporating writing into instruction is concern about the need to grade stacks of student papers. Certainly some teacher response is necessary, but student learning can be enhanced by peer responses to writing, whole class discussion of student
ACTIVITY

What reading and writing strategies are you using in your classes?

Identify one strategy or technique that you use consistently.

What reading data do you use to drive instruction in your classroom?

What is the biggest obstacle for your students?

Identify one critical area of need in your classroom when reading and writing about vocational text.
Why should I teach reading and writing?

School Grading

Common Core Standards (CCSS)

PARCC

Adequate Progress for At-Risk Student

Industry Certified Exams and Advanced Courses

College/Post-Secondary Readiness

FCAT

HS Graduation Rate
Literacy Standards — Florida Essential Skills

- The essential skills are being integrated into the standards and benchmarks of the secondary and post secondary Career and Technical Education programs.
- They are the knowledge and skills **essential to success for careers in all career clusters.**
- Students preparing for careers at any level should be able to demonstrate this knowledge and these skills in the context of their chosen cluster and career path.

**Demonstrate language arts knowledge and skills.** — The student will be able to:

1. Locate, comprehend and evaluate key elements of oral and written information. AF2.0
2. Draft, revise, and edit written documents using correct grammar, punctuation and vocabulary. AF2.4
3. Present information formally and informally for specific purposes and audiences. AF2.5

**Use oral and written communication skills in creating, expressing and interpreting information and ideas.** — The student will be able to:

Select and employ appropriate communication concepts and strategies to enhance oral and written communication in the workplace. CM 1.0
Locate, organize and reference written information from various sources. CM 3.0
Design, develop and deliver formal and informal presentations using appropriate media to engage and inform diverse audiences. CM 5.0
Lexile bands for Reading Tasks
CCSS were adopted by the State of Florida in July 2010.
The Standards » English Language Arts Standards

The Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects ("the Standards") are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of K–12 standards in order to help ensure that all students are college and career ready in literacy no later than the end of high school.

The present work, led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA), builds on the foundation laid by states in their decades-long work on crafting high-quality education standards. The Standards also draw on the most important international models as well as research and input from numerous sources, including state departments of education, scholars, assessment developers, professional organizations, educators from kindergarten through college, and parents, students, and other members of the public. In their design and content, refined through successive drafts and numerous rounds of feedback, the Standards represent a synthesis of the best elements of standards-related work to date and an important advance over that previous work.

As developed by CCSSO and NGA, the Standards are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard
The Standards set requirements not only for English language arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Just as students must learn to read, write, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. Literacy standards for grade 6 and above are predicated on teachers of ELA, history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. It is important to note that the 6–12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them. States may incorporate these standards into their standards for those subjects or adopt them as literacy standards.

As a natural outgrowth of meeting the charge to define college and career readiness, the Standards also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the Standards readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who meet the Standards develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.
Common Core Standards

English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects

College and Career Readiness Anchor Standards
found in each of the strands below

READING
Grade Specific Standards
Key Ideas and Details
Craft and Structure
Integration of Knowledge and Ideas
Range of Reading and Level of Text Complexity

WRITING
Grade Specific Standards
Text Types and Purposes
Production and Distribution of Writing
Research to Build and Present Knowledge
Range of Writing

SPEAKING & LISTENING
Grade Specific Standards
Comprehension and Collaboration
Presentation of Knowledge and Ideas

LANGUAGE
Grade Specific Standards
Conventions of Standard English
Knowledge of Language
Vocabulary Acquisition and Use

Literacy in History/Social Studies, Science, and Technical Subjects
Grades 6-12
Reading and Writing standards for content area subjects

Foundational Skills
Grades K-5
Print Concepts
Phonological Awareness
Phonics and Word Recognition
Fluency

Appendices
⇒ A: Research behind the standards and glossary of terms
⇒ B: Text exemplars illustrating complexity, quality and range of reading appropriate and sample performance tasks for various grade levels
⇒ C: Annotated samples of students writing at various grades
# Reading Standards for Literacy in Science and Technical Subjects 6-12

## Key Ideas and Details

<table>
<thead>
<tr>
<th>Grades 6-8 students:</th>
<th>Grades 9-10 students:</th>
<th>Grades 11-12 students:</th>
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<tbody>
<tr>
<td><strong>1.</strong> Cite specific textual evidence to support analysis of science and technical texts.</td>
<td><strong>1.</strong> Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</td>
<td><strong>1.</strong> Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions in authorities and to any gaps or inconsistencies in the account.</td>
</tr>
<tr>
<td><strong>2.</strong> Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.</td>
<td><strong>2.</strong> Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
<td><strong>2.</strong> Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.</td>
</tr>
<tr>
<td><strong>3.</strong> Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</td>
<td><strong>3.</strong> Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</td>
<td><strong>3.</strong> Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, analyzing the specific results based on explanations in the text.</td>
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## Craft and Structure

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<tr>
<td><strong>4.</strong> Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context.</td>
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<tr>
<td><strong>5.</strong> Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.</td>
<td><strong>5.</strong> Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).</td>
<td><strong>5.</strong> Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</td>
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<tr>
<td><strong>6.</strong> Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.</td>
<td><strong>6.</strong> Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.</td>
<td><strong>6.</strong> Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.</td>
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## Integration of Knowledge and Ideas

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<tr>
<td><strong>7.</strong> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).</td>
<td><strong>7.</strong> Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</td>
<td><strong>7.</strong> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</td>
</tr>
<tr>
<td><strong>8.</strong> Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.</td>
<td><strong>8.</strong> Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.</td>
<td><strong>8.</strong> Evaluate the hypothesis, data, analysis, and conclusions in a science or technical text, verifying the data when possible and challenging conclusions with other sources of information.</td>
</tr>
<tr>
<td><strong>9.</strong> Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.</td>
<td><strong>9.</strong> Compare and contrast findings presented in a text with those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</td>
<td><strong>9.</strong> Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</td>
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## Range of Reading and Level of Text Complexity

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<tbody>
<tr>
<td><strong>10.</strong> By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.</td>
<td><strong>10.</strong> By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.</td>
<td><strong>10.</strong> By the end of grade 12, read and comprehend science/technical texts in the grades 11-CCR text complexity band independently and proficiently.</td>
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College and Career Readiness Anchor Standards for Writing

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes*
1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge
7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.
COMMON CORE STATE STANDARDS FOR

English Language Arts &

Literacy in

History/Social Studies, Science, and Technical Subjects

Appendix C: Samples of Student Writing
Student Sample: Grade 12, Informative/Explanatory

A high school senior wrote the essay that follows for a career and technical class. The student had unlimited time to research and write this paper.

Wood Joints

Have you ever wondered how to design complex wood joinery? The types of wood joinery have been around for thousands of years. There are only twelve different main types of joints but there are many that combine more than one for aesthetics or strength. The first step in designing joints is understanding the different types and what their uses are. After you understand the strengths and weaknesses of the different joints you can compare and contrast the joints for aesthetics. This and a lot of practice are what make excellent wood joinery.

The first step in designing joints is to figure out what way the wood will move so it won't destroy the joint. Then figure in the stresses that will be put on the joint. The three types of stresses on joints are compression, tension, and shear. Compression is the weight pushing down on another piece and making it crush down. Tension is things being pulled apart. Shear is when a piece breaks off when overloaded.

There are two categories of joints there are sawed joints and shaped joints. A sawed joint is one that can be cut in one pass with a saw. The shaped joints can be complicated and take multiple cuts. Joints are either made to lock together which are the shaped ones or to make glue surfaces to glue together which are the sawed ones. The twelve types of joints are the butt joints, miter joints, rebate joints, dado joints, groove joints, and lap joints are sawed joints. Scarf joints, finger joints, dovetails, mortise and tenon, dowel joints, and spline joints are shaped joints.

To lay out good joints there are a few tools necessary. You need a good square that is accurate, a steel ruler for measuring, a miter square, a sliding bevel, a protractor, and a caliper. The square is to draw perfect ninety-degree lines. The miter square is so you can check your miters for accuracy. The sliding bevel and protractor is to draw angles other than forty-five degrees. The caliper is to make sure the pieces getting joined are the right thickness.

For a good joint the fit should be tight. But if it is too tight it is not good because the wood joint could crack or break. It should be tight enough that you can either push it together or give it a light tap with a hammer to seat it. Another reason it can't be too tight is because when the glue is applied the wood will expand. Then it may not fit. The reason the wood expands is because putting the glue on is like putting water on it.

The way to make a tight joint is in the layout. A marking knife is a lot more accurate than a pencil. Also make sure you use the same ruler throughout the project because there could be slight variations in different ones. Always mark the waste side of the line and make sure you follow on the right side of the line. If you cut on the wrong side of the line it will not be tight enough.

Now that you know what tools to use the next thing in tight joinery is to make sure all the pieces are the same thickness or the thickness needed. Boards should be cut to a rough length so they are easier to
Reciprocal Teaching

(Palinscar and Brown, 1986)

The power of interactive discussions

The Steps of Reciprocal Teaching

<table>
<thead>
<tr>
<th>Activate Prior Knowledge</th>
<th>Predict</th>
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<tr>
<td>I think I know...</td>
<td>I think this is about...</td>
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<tr>
<td>This reminds me of...</td>
<td>Revise your prediction based on genre.</td>
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<tr>
<th>Clarify</th>
<th>Unknown or unfamiliar words/phrases</th>
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<tr>
<td>I don’t get the [word, part, sentence, picture, page, chapter], so I....</td>
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<tr>
<th>Visualize</th>
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<tr>
<td>Highlight any words/phrases that can be visualized.</td>
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<tr>
<td>Draw an image of the concept, sequence, procedure, etc.</td>
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<tr>
<th>Question</th>
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<td>What is the main idea of...</td>
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<td>[Who, what, when, where, why, how, what if...?</td>
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<tr>
<td>What evidence supports...</td>
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<tr>
<td>What is the main reason... happens?</td>
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<th>Summarize</th>
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<td>This article is about...</td>
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<tr>
<td>The chapter about... begins with..., discusses or develops the idea that..., and ends with...</td>
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<tr>
<td>[First, next, then, finally,...]</td>
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</table>
Let’s try Reciprocal Teaching...

Activate Prior Knowledge
I think I know...

Predict
- I think I will learn....
- I think this is about....
- Revise your prediction based on genre.

Clarify
I don’t get the [word, part, sentence, picture, page, chapter], so I....

Unknown or unfamiliar words/phrases

Visualize
Highlight any words/phrases that can be visualized. Draw an image of the concept, sequence, procedure, etc.

Question
- What is the main idea of....
- [Who, what, when, where, why, how, what if]....?
- What evidence supports....
- What is the main reason.... happens?

Summarize
This article is about.... The chapter about.... begins with.... discusses or develops the idea that...., and ends with.... [First, next, then, finally,....]....

excerpt Is Google Making Us Stupid?
What the Internet is doing to our brains

By Nicholas Carr
Illustrations by Guy Bilardo

"Dave, stop. Stop, will you? Stop, Dave. Will you stop, Dave?" So the supercomputer HAL pleads with the implausible astronaut Dave Bowman in a famous and weirdly poignant scene toward the end of Stanley Kubrick’s 2001: A Space Odyssey. Bowman, having nearly been sent to a deep-space death by the malfunctioning machine, is calmly, coldly disconnecting the memory circuits that control its artificial "brain. "Dave, my mind is going," HAL says, forlornly. "I can feel it. I can feel it."

I can feel it, too. Over the past few years I’ve had an uncomfortable sense that someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. My mind isn’t going—so far as I can tell—but it’s changing. I’m not thinking the way I used to think. I can feel it most strongly when I’m reading. Immersing myself in a book or a lengthy article used to be easy. My mind would get caught up in the narrative or the turns of the argument, and I’d spend hours trolling through long stretches of prose. That’s rarely the case anymore. Now my concentration often starts to drift after two or three pages. I get fidgety, lose the thread, begin looking for something else to do. I feel as if I’m always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle.

I think I know what’s going on. For more than a decade now, I’ve been spending a lot of time online, searching and surfing and sometimes adding to the great databases of the Internet. The Web has been a godsend to me as a writer. Research that once required days in the stacks or periodical rooms of libraries can now be done in minutes. A few Google searches, some quick clicks on hyperlinks, and I’ve got the telltale fact or pithy quote I was after. Even when I’m not working, I’m as likely as not to be foraging in the Web’s info-thickets—reading and writing e-mails, scanning headlines and blog posts, watching videos and listening to podcasts, or just tripping from link to link to link. (Unlike footnotes, to which they’re sometimes likened, hyperlinks don’t merely point to related works; they propel you toward them.)

For me, as for others, the Net is becoming a universal medium, the conduit for most of the information that flows through my eyes and ears into my mind. The advantages of having immediate access to such an incredibly rich store of information are many, and they’ve been widely described and duly applauded. "The perfect recall of silicon memory," Wired’s Clive Thompson has written, "can be an enormous boon to thinking." But that boon comes at a price. As the media theorist Marshall McLuhan pointed out in the 1960s, media are not just passive channels of information. They supply the stuff of thought, but they also shape the process of thought. And what the Net seems to be doing is chipping away my capacity for concentration and contemplation. My mind now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles. Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski.

I’m not the only one. When I mention my troubles with reading to friends and acquaintances—literary types, most of them—many say they’ve having similar experiences. The more they use the Web, the more they have to fight to stay focused on long pieces of writing. Some of the bloggers I follow have also begun mentioning the phenomenon. Scott Karp, who writes a blog about online media, recently confessed that he has stopped reading books altogether. "I was a lit major in college, and used to be a voracious book reader," he wrote. "What happened?" He speculates on the answer: "What if I do all my reading on the web not so much because the way I read has changed, i.e. I’m just seeking convenience, but because the way I THINK has changed?"
Developing high-order questions
Capsicums of the Americas
Taste Variations: Is it the Chile or the Culture?

by Maria de la Vega

Capsicums are simply chilies. We are all used to seeing and using them, whether to make a salsa, a guacamole, or a curry. Chilies are versatile and have the ability to transform ordinary food into spectacular dishes.

Used by different cultures in many ways and in all types of food, chilies are sold in cane, jars, bags, and bulk, and are even used for decoration in a novelet (an arrangement of drying pods) or a flower pot. There are fresh, dried, and smoked chilies, and the same chile changes dramatically as its different stages. Imagine the most common of the chilies — a jalapeño. When fresh, it is green, but as it slowly turns red, its flavor changes and becomes sweeter. Then, if it is smoked, it becomes the famous chipotle with delicious, complex flavors and tones.

Many questions come to mind when one travels and tastes different chilies. I grew up eating and cooking Mexican food, and I can say that I know “my Mexican chilies” a work in progress. I know where I speak when I describe how we use them, how we like them, what we like them spicy hot, and when we don’t want them so hot. I know how to combine the chilies with other ingredients and which specific ingredients those should be. In short, I know the Mexican flavor profile for chilies.

When we research trips to Beard and Pern, I noticed that the chilies look similar but the taste preparations are different. So I began questioning and deliberating with myself about these differences. Are they due to the chil-tea itself or, rather, to a cultural approach?

Creative Play Makes for Kids in Control

by Alex Stagner
The Best Kind of Play for Kids

Organizing play for kids has never seemed like more work. But researchers Adele Diamond and Deborah Leong have some good news: The best kind of play for kids can be both fun and easy — and really only has one main requirement — imagination.

February 20, 2000 — It’s playtime at the Seskyville, O. Porter Early Childhood Center in Bridgeton, N.J., and in one corner of a busy classroom, 4-year-old Zoe Deegan and Emily Herndon want to play bookstore.

But this isn’t a normal school. It’s based on the book Play the Kids Way, a new book that asks: How can we transform our play in ways that help children develop creativity, self-esteem, and social skills? The answer: Make sure kids can be in charge of their own play.

So before Emily and Zoe even think about picking up a toy, they sit down with their teacher at a small classroom table and fill out some paperwork. That’s right: paperwork. On a small blank form, they spell out their fantasies. “I want to play bookstores,” says girl with assistance from her teacher.

Then she draws a picture of herself playing bookstores. Then, together with her teacher, she packs her own imagination so that everyone can enjoy the fun way to engage the kids! Mostly low-income children who live in the poor surrounding community can now begin to develop their imagination and creativity.

Transformation in Play

Now, the reason that the books of the Minds Project, like Zoe and Emily’s book, are so popular, was that kids like Zoe and Emily’s book, which is a book that is written for kids, and it is written for children. They were young and interesting, articulate and funny.

But, while all that play might have looked a lot like what people are doing, something still exists. It actually helps in building a child’s cognitive and executive function — the ability to plan, to control their emotions and behavior, to react quickly, and to adapt self-control and discipline. Executive function — and the self-regulation element — is important. Poor executive function is associated with high dropout rates, drug use, and crime. In fact, good executive function is a better predictor of success in school than a child’s I.Q.

Learning Skills

Unfortunately, play has changed dramatically during the past half-century, and according to many psychological researchers, the play that kids engage in today does not help them build executive function skills. Kids spend more time in front of television and video games. When they aren’t in front of a screen, they often spend their time in teams and lessons — activities parents invest in because they believe that they will help their children to succeed and achieve.

And what’s true for kids is also true for adults. Most adults have found that they have to work hard to develop executive function skills. But there is one technique that researchers say can help kids develop executive function skills — and that is play.

Leong says, “The best way to develop executive function skills is to drink coffee.”
Sustainable Earth: Water

The amount of moisture on Earth has not changed. The water the dinosaurs drank millions of years ago is the same water that falls as rain today. But will there be enough for a more crowded world?

Children play and bathe in an irrigation water tank for rice fields in Punjab, India.

Photograph by John Stummeyer, National Geographic

Clean water is essential for life, but most people in the developed world don’t think much about the water they use for drinking, food preparation, and sanitation. In developing nations, however, the search for safe drinking water can be a daily crisis. Millions of people die each year, most of them children, from largely preventable diseases caused by a lack of access to clean water and proper sanitation.

Sandra Postel, director of the Global Water Policy Project and the National Geographic Society’s freshwater fellow, said freshwater scarcity presents a growing problem to be addressed during the United Nations Conference on Sustainable Development (Rio+20) in Brazil from June 20 to 22. "It manifests itself in the depletion of groundwater and the drying up of rivers and lakes upon which people depend for irrigation to grow their food," she said. "The intersection of water scarcity, food security, and a changing climate on top of it all raises a suite of water concerns that urgently need to be addressed."

Much progress is possible. In fact, due to the dedicated efforts of governments and NGOs since the 1992 Earth Summit, safe drinking water has been made available to some 1.7 billion people around the world, with projects ranging from modern piped plumbing to rainwater collection and storage.

But an estimated 800 million people still don’t have regular access to clean water. "And we haven’t made nearly as much progress on sanitation," Postel said. "Something like 2.7 billion people are without adequate sanitation, so that challenge still looms very large." Policymakers will struggle to lower both numbers even as the planet’s population rises by an expected three billion over the next 50 to 75 years.

Serious Challenges

About 5,000 children die each day due to preventable diarrheal diseases such as cholera and dysentery, which spread when people use contaminated water for drinking or cooking. A lack of water for personal hygiene leads to the spread of totally preventable ailments like trachoma, which has blinded six million people.

Water woes also trap many low-income families in a cycle of poverty and poor education—and the poorest suffer most from lack of access to water. People who spend much of their time in ill health, caring for sick children, or laboriously collecting water at distances averaging 3.75 miles (6 kilometers) a day are denied educational and economic opportunities to better their lives.

Photoshopped or Not? A Tool to Tell

The photographs of celebrities and models in fashion advertisements and magazines are routinely buffed with a helping of digital polish. The resulting shots are slick—colors heightened, a stray hair plucked out, a pimple banished. Or slim dresses—sculpting in or 20 pounds, adding a few inches in height and erasing all wrinkles and blemishes, done using Adobe’s Photoshop software, the photo editor’s magic wand.

"For one thing, then, neither you nor I know that you end up with Barbie," said Mary Farid, a professor of consumer science and a digital forensics expert at Dartmouth.

And that is a problem, feminist legislators in France, Britain and Norway say, and they want digitally altered photos to be labeled. In June, the American Medical Association adopted a policy on body image and advertising that urges advertisers and editors to "discourage the airing of photographs in a manner that would promote unrealistic expectations of appropriate body image."

Farid said he became intrigued by the problem after reading about the photo-labeling proposals in Europe. Commenting on the later alteration of ads as either altered or not altered seems to slow them down, he said. Dr. Farid and Eric Felt, a Ph.D. student in computer science at Dartmouth, are preparing a software tool for measuring how much fashion and beauty photos have been altered, a tool he said that his Dartmouth research is being published in a scholarly journal, Proceedings of the National Academy of Sciences.

Their work is intended as a technological step to address concerns about the prevalence of digitally altered images in advertising and fashion magazines. Such images, research suggests, contribute to eating disorders and anxiety about body image, especially among young women.

The Dartmouth researchers, said Farid and Felt, a former talent agent and marketing executive, could be "highly important" as a tool for objectively measuring the degree to which photos have been altered. He and his wife, Eva Felt, the founders of a women’s online magazine, Of Our Own, are trying to gain support for legislation in America. Their proposal, the Self-Express Act, would require phone that have been "photoshopped" be clearly labeled.

"We’re just as much in advertising and transparency," Farid said. "We’re not trying to demean Photoshop or prevent creative individuals from using it. But if a person’s image is dramatically altered, there should be a reminder that what you’re seeing is about as true as what you saw in ‘Aladdin,’ the animation movie with computer-generated actors and visual effects."

The algorithm developed by Farid and Felt essentially measures how much the image of a person’s face and body has been altered. Many of the before-and-after photos for their research were pulled from the Web sites of professional photo studios, prompting their skills.

The algorithm is meant to mimic human perception. To do that, hundreds of people were recruited online to compare sets of before-and-after images and to determine which ones, from minimally altered to radically changed. The human raters were used to test the software. But, Farid said, "we regrettably had to rely on experts for annotation and data collection."

Yet even without the tool of a new software tool, there is a trend toward Photoshop restraint, said Leslie Jane Seymour, editor in chief of Marie, a magazine for women over 40. Women’s magazine surveys, said Ms. Seymour, a former editor of Marie Claire and Redbook, show that their readers want articles that look ‘great but real.’

"What’s nice is that we’re having this discussion," she said. But readers, she added, have become increasingly sophisticated in understanding that photo reshaping is widespread, and the obviousness of digital transformations becomes noticeable with the before-and-after images printed online and randomized. "Readers aren’t fooled if you really match the image," Ms. Seymour said. "If you’re a good editor, you don’t have to do these. If you give someone a false look, she said, adding, ‘you’re a fool.’"
ACTIVITY

- With your table group, work through the 5 steps of reciprocal teaching.
- Use the reading passage in your packet and the chart paper to record your answers.

Predict
- Write 1 or 2 sentences predicting what the passage will be about.
- I think this is about...
- I think I know......

Clarify
- Write down any words, phrases or ideas that you do not understand.
- I don’t get the [word, part, sentence, picture, page, chapter], so I...

Visualize
- Draw a picture of the concept, sequence or procedure.

Question
- Write a “teacher-like” question about the passage.
- What is the main idea of ....?
- What is the main reason ... happens......?

Summarize
- Write a summary statement about the passage you have read.
- The passage about ... begins with ... discusses or develops the idea ... and ends with ....
**Cloze**

(W.L. Taylor, 1953)

- Teacher prepares reading with blanks inserted for key concepts or vocabulary
- Student reads passage and tries to fill in blanks.
- Student then reads complete passage (no blanks)
- Student goes back to “cloze” version and fills in blanks.
Human Immunodeficiency Virus

Human immunodeficiency virus (HIV) causes acquired immunodeficiency syndrome, _____, a long-term serious viral infection. When the HIV _____ enters the body, the immune system fights the infection by producing special molecules called _______. But this virus spread quickly, and the immune system becomes _____ from fighting it. With a weakened _____ system, parasites, fungi, and bacteria begin _____ the body with more success. The body cannot fight abnormal cells, such as cancer cells, that usually would remain dormant. In most cases, very serious secondary diseases develop.

1. Select a passage.
2. Begin by finding KEY words in the reading. A general rule of thumb is about every 7 – 9 words.
3. Test yourself to see if the remaining words provide enough information to fill in the missing words.
4. This is not only a good review technique, but it is also good for testing key concepts.
How did you do?

Human Immunodeficiency Virus

Human immunodeficiency virus (HIV) causes acquired immunodeficiency syndrome, AIDS, a long-term serious viral infection. When the HIV virus enters the body, the immune system fights the infection by producing special molecules called antibodies. But this virus spread quickly, and the immune system becomes weakened from fighting it. With a weakened immune system, parasites, fungi, and bacteria begin attacking the body with more success. The body cannot fight abnormal cells, such as cancer cells, that usually would remain dormant. In most cases, very serious secondary diseases develop.
ACTIVITY

Culinary - Capsicums of the Americas

Capsicums are simply chilies. We are all used to seeing and using them, whether to make a salsa, a guacamole, or a curry. Chilies are versatile and have the ability to transform ordinary food into spectacular dishes.

Used by different ______ in many ways and in all types of ______, chilies are sold in cans, ______ bags, and bulk, and are even used for ______ in a rista (an arrangement of drying pods) or a flower pot. There are fresh, ______, and smoked chilies, and the same chile ______ dramatically in its different stages. Imagine the most ______ of the chilies—a jalapeno. When fresh, it is ______. But as it slowly turns red, its ______ changes and becomes sweeter. Then, if it is ______, it becomes the famous ______ with delicious, complex ______ and tones.

Fashion and Interior Design - Photoshopped or Not? A Tool to Tell

The photographs of celebrities and models in fashion advertisements and magazines are routinely buffed with a helping of digital polish. The retouching can be slight — colors brightened, a stray______ put in place, a pimple heated. Or it can be drastic — shedding 10 or 20 ______, adding a few inches in height and______ all wrinkles and blemishes, done using Adobe’s ______ software, the photo retoucher’s magic wand.

“Fix one thing, then ______ and pretty soon you end up with ______,” said Hany Farid, a professor of computer science and a digital forensics expert at Dartmouth.

And that is a ______. Feminist legislators in France, Britain and Norway say, and they want digitally altered ______ to be labeled. In June, the American Medical Association adopted a ______ on body image and advertising that urged ______ and others to “discourage the altering of______ in a manner that could promote______ expectations of appropriate body______.”

Child Care - The Best Kind of Play for Kids

Organizing play for kids has never seemed like more work. But researchers Adele Diamond and Deborah Leong have good news: The best kind of play costs nothing and really only has one main requirement — imagination.

In a normal preschool, ______ bookstore would be a pretty casual affair. They would just ______ up some books, set the shiny toy ______ register on the table by the blackboard, and get down to business.

But this isn’t a normal ______. It’s based on the Tools of the Mind program. In other words, it’s a ______ where almost every moment of the ______ is devoted in some way to______ the kids — mostly low-income children who live in the poor surrounding ______ — how to regulate their ______ and emotions.

Read the passage and try to fill in the blanks.

Turn to someone at your table and reads your complete passage (no blanks).

Finally, go back to the original “cloze” version and, if necessary, adjust your answers.

Clean water is essential for life, but most people in the developed world don’t think much about the water they use for drinking, food preparation, and sanitation. In developing nations, however, the search for safe drinking water can be a daily crisis.

Competition can be fierce for this precious _________. Agriculture claims the lion’s share of freshwater worldwide, soaking up some 70 percent, and _________ uses consume another 22 percent. Watersheds and aquifers don’t respect political borders and ________ don’t always work together to share common ________ — so water can be a frequent source of ________ conflict as well.

Day-by-day demand keeps growing, further _________ water sources, from great rivers to underground ________. "We’re going deeper into debt on our ________ use," Postel said, "and that has very significant ______ for global water security. The rate of groundwater ________ has doubled since 1960."
Rules for CLOZE reading

1. Select a passage.
2. Begin by finding KEY words in the reading. A general rule of thumb is about every 7 – 9 words.
3. Test yourself to see if the remaining words provide enough information to fill in the missing words.
4. This is not only a good review technique, but it is also good for testing key concepts.
The One Sentence Syndrome
What does a 500 word response look like?

A 500 word response would average 2 – 2 ½ handwritten pages.

302 type-written words.

341 handwritten words.
(1) I am really concerned about hepatitis. (2) The disease is really hurting many people. (3) But mostly this liver disease can lead to serious long-term chronic illness. (4) It ranges in severity. (5) It can be transmitted in various ways. (6) Vaccination is recommended. (7) I think health care professional should promote early vaccination to help prevent hepatitis.
I am really concerned about hepatitis. The disease is really hurting many people. But mostly this liver disease can lead to serious long-term chronic illness. It ranges in severity. It can be transmitted in various ways. Vaccination is recommended. I think health care professional should promote early vaccination to help prevent hepatitis.

Hepatitis is an inflammation of the liver. Certain drugs, environmental toxins, heavy alcohol use, and bacterial and viral infections all cause hepatitis. There are 3 common types of the disease in the United States: hepatitis A, hepatitis B, and hepatitis C.
(1) I am really concerned about hepatitis. (2) The disease is really hurting many people. (3) But mostly this liver disease can lead to serious long-term chronic illness. (4) It ranges in severity. (5) It can be transmitted in various ways. (6) Vaccination is recommended. (7) I think health care professionals should promote early vaccination to help prevent hepatitis.

(2) The disease is really hurting many people. Hepatitis may cause long-term complications such as spontaneous bacterial peritonitis, a medical condition where fluid in the abdomen becomes infected. In the most severe cases hepatitis can cause liver cancer, liver failure and permanent liver damage, called cirrhosis.
ACTIVITY

Providing Elaboration and Support
1. Count off by 6 at your table group.
2. Read the essay aloud.
3. Each person will be responsible for elaborating on one sentence only.
4. The task is to use the sentence only as the start of your writing. Write 3-4 additional sentences beginning with that sentence.
5. You will have 10 minutes of writing time.
6. Be prepared to share your elaboration with the large group.

Culinary
I wish more chefs would explore Latin cuisines. (1) Chile peppers are common in Latin cooking. (2) Different countries in the Americas prepare chiles differently. (3) In Mexico jalapeños are a popular choice. (4) Peruvian food favors the ajies. (5) In Brazil pimentos in vinegar are common. (6) The Capsicums of the Americas are prepared in many different ways.

Fashion Design
The use of Photoshop to enhance professional images has created some controversial responses among celebrities. (1) Jennifer Huston’s image was altered without her permission. (2) Her fans felt Jennifer was disrespected by the record executives. (3) However, Brad Pitt recognizes that life “keeps moving”. (4) Crow’s feet and furrowed brows are good for him. (5) Clearly, publishers and editors should reconsider the use of photo retouching and the use of digital transformations.

Early Childhood Education
Educators agree that the exercise of self-control and increased cognitive skills benefit preschoolers. (1) Emmy is in preschool. (2) She likes to play. (3) Her teachers use imaginative play activities. (4) Sometimes Emmy has trouble controlling her behavior. (5) Her teachers are working to build Emmy’s cognitive skills. (6) They play games.
ACTIVITY

Providing Elaboration and Support
1. Count off by 6 at your table group.
2. Read the essay aloud.
3. Each person will be responsible for elaborating on one sentence only.
4. The task is to use the sentence only as the start of your writing. Write 3-4 additional sentences beginning with that sentence.
5. You will have 10 minutes of writing time.
6. Be prepared to share your elaboration with the large group.

Nursing
Clean water is essential for life. (1) In developing nations the search for safe drinking water can be a daily crisis. (2) Collecting and storing water is laborious. (3) Using contaminated water creates many difficulties in daily life. (4) Children suffer from preventable ailments. (5) Personal hygiene is affected. (6) The United Nations Conference on Sustainable Development offers some hope.

Environmental Science / STEM
Clean water is essential for life. (1) Water molecules are continually recycled back to Earth as precipitation. (2) Major problems exist for aquatic ecosystems. (3) Some groundwater is fossil water and is finite. (4) Other aquifers are renewable. (5) Water is being removed faster than it is recharged. (6) The Global Water Policy Project recognizes the necessity of clean water as a human right that is essential for life.

Agriculture
Clean water is essential for life. (1) Aquifers do not respect political borders. (2) Water demand from great rivers and underground aquifers grows daily. (3) Agriculture requires a significant amount of water. (4) Farmers world-wide cling to old ways. (5) There are few incentives for farmers to use water more efficiently. (6) Many global projects are being considered to reduce the depletion of ground water.
Text Structure Writing Frames

Writing Frames

- Writing frames are instructional support tools.
- Writing frames guide the writer toward constructing a paragraph with a specific text structure.

Compare and Contrast Paragraph

<table>
<thead>
<tr>
<th>There are several differences between ____________ and ______________. They ________________________________</th>
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<tbody>
<tr>
<td>________________________________________________________________________________________________</td>
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<td>________________________________________________________________________________________________</td>
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<td>________________________________________________________________________________________________</td>
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<tr>
<td>In contrast to ____________, ___________ has ___________. Unlike ________<strong><strong>, ___________ does not</strong></strong></td>
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<td>________________________________________________________________________________________________</td>
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<td>________________________________________________________________________________________________</td>
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<td>________________________________________________________________________________________________</td>
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<td>________________________________________________________________________________________________</td>
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<tr>
<td>On the other hand, ____________ __________________________________________________________________</td>
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</tbody>
</table>

Problem/Solution Paragraph

<table>
<thead>
<tr>
<th>____________ present(s) a dilemma that is ____________. The problem is ______________. This has occurred because __</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________________________________________________________________________________________________________</td>
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<tr>
<td>___________________________________________________________________________________________________________</td>
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<tr>
<td>A resolution is/was possible. To solve it/this, it will be/has been necessary to _____________________________________________________________________________</td>
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<td>___________________________________________________________________________________________________________</td>
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<tr>
<td>The solution(s) include(s) _________________________________________________________________________________</td>
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<td>___________________________________________________________________________________________________________</td>
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</tbody>
</table>
Text Structure Writing Frames

The following writing frames provide a model for the five most common expository text structures.

Writing frames can be used in several ways:

• Model an expository response;

• Guide the writer toward constructing a paragraph with a specific text structure;

• Write relevant content-area information in the blanks.
Description Paragraph
Have you ever ________________? _________________ has/have very interesting characteristics.
It/they has/have _________________.

For instance, it/they has/have _________________.

Sequence Paragraph
The events/process of ___________ is ________________. The first _________________.
Then, _________________.

Next, _________________.

Finally, _________________.

Compare and Contrast Paragraph
There are several differences between _____________ and _________________. They _________________.

Cause and Effect Paragraph
_____________ is influenced by _______________.
Since _______________, then _________________.
Therefore, _________________. This provides explanation for _________________.

Problem/Solution Paragraph
_____________ present(s) a dilemma that is ____________. The problem is _______________.
It/this has/have occurred because _________________.
A resolution is/was possible. To solve it/this, it will _________________.
The solution(s) include(s) _________________.

__________________________________________________________________________.
Writing Fully-developed Essays

Extended Responses
COMMON CORE STATE STANDARDS FOR

English Language Arts
&
Literacy in
History/Social Studies,
Science, and Technical Subjects

Appendix C: Samples of Student Writing
**Informative Essay**

An informative essay provides information about a clearly defined topic. Each point is fully supported and elaborated. Use this template to plan your essay.

<table>
<thead>
<tr>
<th>Introduction (state subject)</th>
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<table>
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<tr>
<th>Thesis statement</th>
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<table>
<thead>
<tr>
<th>Supporting point 1</th>
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<tbody>
<tr>
<td>Evidence</td>
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<table>
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<th>Supporting point 2</th>
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<tr>
<td>Evidence</td>
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<tr>
<th>Supporting point 3</th>
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<tbody>
<tr>
<td>Evidence</td>
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<table>
<thead>
<tr>
<th>Conclusion</th>
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**Opinion Statement**

Opinion statements focus on a clearly stated belief that has strong supporting evidence. Use this template to organize your ideas.

<table>
<thead>
<tr>
<th>State Opinion</th>
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<table>
<thead>
<tr>
<th>Reason 1</th>
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<tr>
<td>Support</td>
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<th>Reason 2</th>
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<td>Support</td>
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<table>
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<th>Reason 3</th>
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<td>Support</td>
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<table>
<thead>
<tr>
<th>Conclusion</th>
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Student Sample: Grade 12, Informative/Explanatory

A high school senior wrote the essay that follows for a career and technical class. The student had unlimited time to research and write this paper.

TIG/GTAW Welding

Welding is a highly demanded trade across the US. There are many types of welding such as wire feed, stick, TIG (Tungsten Inert Gas), and oxy acetylene welding. I will explain the most perfected and efficient welding process of them all, TIG welding. I will take you through shielding gases, tungsten materials, tungsten shapes and shaping, heat and warp age, welding flaws, and some recommendations to prevent welding flaws.

There are many purposes for shielding gases in the welding industry. In general, shielding gases are one of the many variables throughout the TIG welding processes. There are four types of gases and they all have their own characteristics. Shielding gases protect the molten metal and the tungsten from the impurities in the air during welding. Shielding gases also have an effect on the temperature the arc produces and the physical appearance of the weld bead. Flow rates in the TIG welding processes can also affect the shielding aspects of your weld.

The four types of shielding gases throughout the TIG welding processes are: argon (Ar), helium (He), hydrogen (H), and nitrogen (N). Any of those four gases can be mixed together.

Argon is a by-product of oxygen and nitrogen. Before it was produced on a huge scale, argon was a rare gas. Since argon is denser than air, argon can shield welds in deep grooves and tight places. But since argon is denser than air, when overhead welding is necessary, flow rates need to be increased because the argon will fall from the weld. Argon is fairly easy to ionize so it makes it convenient for AC (Alternating Current) welding.

Helium is a by-product of natural gas. Helium increases your weld penetration. Helium is great for welding aged aluminum and is also great for tube mills since helium allows you to weld at higher speeds. Helium is usually mixed with argon to help the shielding aspects since helium is lighter than air. Helium is not used with the AC since it doesn't have the cleaning aspects that argon has.

Hydrogen is not used so much as a shielding gas as much as an additive to other shielding gases. Hydrogen is used when weld penetration and speed is needed. Hydrogen is not used when welding stainless steel since hydrogen is the number one cause of porosity and cracking in mild and stainless steel.

Similar to hydrogen, nitrogen is used as an additive to argon. It also can cause porosity in some ferritic alloys. Ferritic steels are defined as a group of stainless steels with a chromium content range of 12-16.
**Creating scaffolded writing activities**

**Early Childhood Education Project**

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**Preschool Curriculum**

Teachers are always trying to find the connection between meaningful activities with preschoolers and exercises to improve cognitive skills. Think about art, alphabets, music and storytelling activities to build a strong preschool curriculum.

---

**Art**

---

**Alphabets**

---

**Music**

---

**Storytelling**

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**Directions:**

Write a 500 word response explaining how you would use imaginative play to create a strong preschool curriculum. Discuss specific activities and explain how you would apply current cognitive research in early childhood education.
Creating scaffolded writing activities

Design Project
Creating scaffolded writing activities
Science Project

Sustainable Earth
Clean water is essential for life, but most people in the developed world don’t think much about the water they use for drinking, food preparation, and sanitation. Think about the need to conserve freshwater and preserve the extraordinary diversity of life that rivers, lakes, and wetlands sustain.

Directions:
Write a 500 word response that explores the global effort needed to safeguard one of the world’s most important resources—water.

Include information on lowering your water footprint by making small changes to your daily habits.

Explore how local conservation efforts can inspire and empower individuals and communities to conserve freshwater reserves.

Daily Living

Health

Agriculture – Agri-Business

Economics
Creating scaffolded writing activities
Culinary Project

The Flavors of Latin America
The Latin demographic is growing rapidly in this country and people of Latin descent are demanding more Latin food. Think about the moles of Oaxaca, the flavor of Peruvian ceviches, and the rich Brazilian seafood stews of Bahia.

Directions:
Write a 500 word response that explores the Latin cuisines of Mexico, Peru, Colombia and Cuba.

Include information on local hard-to-source ingredients that make each cuisine unique.

Explore why food consumers are increasingly seeking ethnic cuisines—the real ones, not the translated versions—that taste like authentic foods.
ACTIVITY

Essay Planning Sheet

Latin cuisine

Cuban

Peruvian

Mexican

Columbian

After you have completed your planning sheet, decide which main points (in the circles) have good supporting details (in the boxes) which you can develop in the body of your paper. Feel free to add or subtract circles and boxes as you work with your ideas.
CTE-Focused Literacy Program

www.usatodayeducate.com/futureforward
‘Growing concern’ over marketing tainted beef
USDA audit finds lack of limits for contaminants puts public at risk

USA TODAY
April 13, 2010
By Peter Eisler

WASHINGTON — Beef containing harmful pesticides, veterinary antibiotics and heavy metals is being sold to the public because federal agencies have failed to set limits for the contaminants or adequately test for them, a federal audit finds.

Limits have not been set by the EPA and FDA “for many potentially harmful substances, which can impair FSIS’ enforcement activities,” the audit found.

The FSIS said in a written statement that the agency has agreed with the inspector general on the need to develop stronger enforcement for non-compliance.

Some contamination is inadvertent, such as pesticide residues in cows that drink water fouled by crop runoff. Other contaminants, such as antibiotics, often are linked to animal handling practices.

The audit also found that federal rules that require meat inspection officials to be veterinarians are too restrictive and do not allow them to be certified in different specialties. This forces them to “stay within their comfort zone” rather than perform other functions, the report said.

The FSIS said it plans to improve this situation.

Figure 3: Text Complexity Grade Bands and Associated Lexile Ranges (in Lexiles)

<table>
<thead>
<tr>
<th>Text Complexity Grade Band in the Standards</th>
<th>Old Lexile Ranges</th>
<th>Lexile Ranges Aligned to CCR expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-1</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2-3</td>
<td>450-725</td>
<td>450-790</td>
</tr>
<tr>
<td>4-5</td>
<td>645-845</td>
<td>770-980</td>
</tr>
<tr>
<td>6-8</td>
<td>860-1010</td>
<td>955-1155</td>
</tr>
<tr>
<td>9-10</td>
<td>960-1115</td>
<td>1080-1305</td>
</tr>
<tr>
<td>11-CCR</td>
<td>1070-1220</td>
<td>1215-1355</td>
</tr>
</tbody>
</table>
Article of the Week

Part of the reason my students have such a hard time reading is because they bring little prior knowledge and background to the written page. They can decode the words, but the words remain meaningless without a foundation of knowledge.

To help build my students' prior knowledge, I assign them an "Article of the Week" every Monday morning. By the end of the school year I want them to have read 35 to 40 articles about what is going on in the world. It is not enough to simply teach my students to recognize theme in a given novel; if my students are to become literate, they must broaden their reading experiences into real-world text.

Below you will find the articles I assigned this year to my students. Please note, all articles are subject to the copyright protections stipulated by the original source.

"One School Girl's Protest of Seventeen Magazine — Now 75,000 Strong" by Julia Bluhm for Huffingtonpost.com (A Note from Kelly: As the school year comes to a close, this will be the last AoW of the year. Here's to the teachers who are committed to building our students' prior knowledge. You have to know stuff to read stuff.)

"Think Congress Is Sophomoric? A Study Says You're Right" by Lisa Mascaro for the Los Angeles Times
Reading - Writing connection

Losing the Race for Intelligence
Source: Leonard Pitts, Miami Herald, February 6, 2011

ITEM: Only 20 percent of high school science teachers consistently follow National Research Council guidelines encouraging their present students with evidence of evolution. Thirteen percent “explicitly advocate creationism or intelligent design.”

These are among the findings of Penn State political scientists Michael Berkman and Eric Plutzer after examining data from a representative survey of 926 high school biology teachers. Writing in the Jan. 22 issue of Science magazine, they report that most science teachers—50 percent—cheat consistently by such statements as telling students it does not matter if they “believe in evolution, as long as they understand enough to pass a test.” Or they teach evolution on a par with creationism and academia makes up their own minds.

Giant Squid

Once upon a time, there lived a stupid giant. The giant had not always been stupid. Or, perhaps it was more accurate to say the giant had once revered intelligence, reason, and the byproducts thereof. Indeed, the giant was renowned for its ingenuity and standard of living that made it the envy of the world. But much of the world had more envy of the giant. Much of the world admired and respected it. Its basic decency, along with its strength and intelligence, set it apart.

There came a time, however, when the giant retained its strength and arguably even its decency, it lost its intelligence. No one can say exactly how and when this occurred. There was no great blast of thunder and lightning to herald it, no sudden instance when the giant’s intelligence plummeted dramatically from the instant before. No, stupidly crept over the giant with the stealth of twilight, a product less of some abrupt moment than of a thousand moments of complacency, of resting laurels, of allowing curiosity to be teased and bullied out of bright children, of drumming down textbooks so kids could get better grades with less work, of using “elite” like a curse word, and, finally, children having and being able to extricate from and otherwise make critical use of, the things one knows, as a betrayal of some fundamental human authenticity—some need to keep it real.

Stupidity stole over the giant until it could no longer tell science from truth, or conventional wisdom from actual wisdom and in any event, relied ideologically purity over all the rest. Stupidity snaked over the giant until science teachers shrank from teaching science, history books contained history that wasn’t history, late-night comedians would laugh first and best at people on the street who could not see why the War of 1812 was fought, political leaders told outright lies with either smiles and no fear of being caught and you would not have been surprised to hear that someone had fixed mathematics, so that 2+2 could now equal 17, thus preserving the all-important self-esteem of second-grade kids.

Some regarded the giant’s stupidity as a danger. They reasoned that when one is so big that one’s nearest movement or slightest utterance affects the entire world, it’s a good idea if those movements and utterances are animates by something more than autocratic funniness. Others saw the giant’s stupidity as an opportunity. They learned eagerly until they surpassed the giant’s intellect. They grew until they rivaled the giant’s size and strength.

And the giant? It sat on its lauzh in the mud as the world changed about it and new giants rose and shook their facts. The giant did not move. It was watching The Jersey Shore on TV. And it lived noisily ever after.

What happens when mom unplugs teens for 6 months? (excerpt)
Source: Beth H. Harper, Associated Press—Tue Jan 19, 2010

Susan Maushat had out every parent’s fantasy: She unplugged her teenager. For six months, she took away the Internet, TV, iPods, cellphones and video games. The eerie glow of screens stopped lightful up the family room. Electronic devices no longer chirped through the night like “цовиджеты.” And she stopped carrying her iPhone into the bathroom.

The result of what she grandly calls “The Experiment” was more OMG than LOL—and nothing less than immersion in RL (real life). As Maushat explains in a book released in the U.S. this week called “The Winter of Our Disconnect” (Penguin, $16.95), she and another dad assigned small pleasures—like board games, books, lazy Sundays, old photos, family meals and listening to music together instead of everyone plugging into their own iPods.

Her son Bill, a videogame and TV addict, filed his newfound spare time playing saxophone. “He swapped Grand Theft Auto for the Charlie Parker songbook,” Maushat wrote. Bill says the Experiment was merely a “trigger,” and he would have found his way back to music eventually. Either way, he got his serious playing savage that when the guitar ban ended, he sold his game console and is now studying music in college.

Maushat’s oldest, Anni, was less wired and more bookish than the others, so her transition in and out of The Experiment was the least dramatic. Her friends thought the ban was “cool.” If she needed computer for schoolwork, she went to the library. Even now, she swears off Facebook from time to time, just for the heck of it.

Maushat’s youngest daughter, Susie, had the hardest time getting off the grid. Maushat had decided to allow use of the Internet, TV and other electronics outside the home, and Susie immediately took that option, taking her laptop and marching into her dad—Maushat’s ex-husband—for six weeks. Even after she returned to Maushat’s home, she spends hours on a cell phone, consequently for texts and Facebook. But the electronic deprivation had an impact anyway. Susie’s grades improved substantially, Maushat wrote that her kids “awoke slowly from the state of experiential ignorance that had characterized many of their waking hours to become more focused logical thinkers.”

Maushat decided to unplug the family because the kids—ages 14, 15 and 18 when she started the Experiment—didn’t just “lust” media, as she put it. They “inhabit” media. “You can’t remember a time before e-mail, or instant messaging, or Google,” she wrote. Like so many teens, they couldn’t do their homework without simultaneously listening to music, updating Facebook and trading instant messages. If they were amused, instead of laughing, they actually said “LOL” aloud. Her kids had become mere “accessories of their own social networking profile, as if real life were simply a dress rehearsal for more accurately, a photo op for the next status update.”

World Wide Friends

Posted Mar 13, 2010

The first social-networking website, known as SixDegrees, launched 12 years ago. Its members could find and send messages to pals—and then communicate with each other’s friends and family—online. The site went offline in 2000, but the trend of social networking has surged. More and more people are joining sites that let them set up profiles and share photos and updates about anything from their lunch to their daydreams.

U.S.-based giants Facebook and Windows Live are popular just about everywhere. But why is Google’s Orkut site so popular in Latin America? Christopher Wragge, lead analyst at Gartner, credits that site’s simplicity, which gives it an advantage in places with slow Internet access. In many countries, nuances of language and culture make homegrown networks such as China’s Sina Bibo, Russia’s Vorkontakte stronger than imports. Japan’s top site, Mix, links local types as part of its member profiles. Catering to the local belief that knowing that most personal compatibility. And in South Korea, Cyworld uses to create avatars, or alter egos, that express emotions and keen friendships on behalf of their real-life counterparts. —Shelley Szymen

Possible Writing Notebook topics:
- Do you agree with Pitts? Why? Why not?
- What can be done to solve the problem that Pitts describes?
- Do you think being plugged in makes you dumber?
- In what ways does the diagram “World Wide Friends” reinforce the view of Pitts and Harper?
World Wide Friends

In October 2009 more than 830 million users visited social networks via home and office computers. Ten sites (below in dark blue) had the most visitors. Green lines connect countries where networks are most popular to their three favorite sites.

Unique visitors age 15 and over, October 2009 (in millions)

- Facebook: 430
- Windows Live Profile: 164
- Orkut: 54
- Twitter: 58
- Virus: 47
- Baidu Space: 63
- Kaixin001: 24
- QQ Alumni: 43
- Bong: 17
- Bebo: 8
- Studiez Sites: 17
- Bharat Student: 34
- DeviantArt: 17
- Vietnam: 16
- Mixi: 13
- Yahoo: 41
- Hatena Bookmark: 4
- WER-Kennt-Wen: 7

GRAPHIC: OLIVER UBERTI, NG STAFF: HIRAM HENRIQUEZ
1. Stack the chips on the table, face down.

2. The facilitator announces the topic – **Reading and Writing in CTE classrooms**.

3. One student starts by drawing the first chip and reading the prompt.

4. He/she responds to the prompt.

5. The next student draws the next chip and responds to the next prompt.
Miami-Dade County Public Schools

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</table>

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