Note: Depending on the difficulties of a given text and the teacher's knowledge of the fluency abilities of students, the order of the student silent read and the teacher reading aloud with students following might be reversed. Academic vocabulary could be introduced as the teacher reads aloud or as part of a brief introduction to the text.

5 Part Lesson

1. Briefly introduce text (i.e. draw attention to time period, author etc.) then have students read text silently.

2. Teacher reads the text aloud to students as they follow and draws attention to academic vocabulary.

3. Students reread the text independently or with a partner and summarize (rehearsal / partner reading).

4. Teacher asks a series of text dependent questions about the selection.
   - These questions can only be answered by referring explicitly back to the text being read.
   - Good questions often linger over specific phrases and sentences to ensure careful comprehension of the text.
   - These questions serve as scaffolds and assist in providing a sustained focus.

5. Allow opportunities for text-based writing. Return students to the text for evidence as well as use the text as a guide or mentor text.
Annotating the Parts of a Lesson

<table>
<thead>
<tr>
<th>Part of the lesson</th>
<th>How is instruction different?</th>
<th>How might a teacher plan differently?</th>
<th>What support is needed for teachers to be successful?</th>
<th>What might an administrator notice during a walk through?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briefly introduce text then have students read text silently.</td>
<td></td>
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<td>Teacher reads the text aloud to students as they follow along and draws attention to academic vocabulary.</td>
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<td>Students reread the text independently or with a partner and summarize.</td>
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<td>Teacher asks a series of text dependent questions about the selection.</td>
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<tr>
<td>Allow opportunities for text-based writing.</td>
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</tr>
</tbody>
</table>
Geology is the scientific study of Earth. Geologists study the planet—its formation, its internal structure, its materials, its chemical and physical processes, and its history. Mountains, valleys, plains, sea floors, minerals, rocks, fossils, and the processes that create and destroy each of these are all the domain of the geologist. Geology is divided into two broad categories of study: physical geology and historical geology.

Physical geology is concerned with the processes occurring on or below the surface of Earth and the materials on which they operate. These processes include volcanic eruptions, landslides, earthquakes, and floods. Materials include rocks, air, seawater, soils, and sediment. Physical geology further divides into more specific branches, each of which deals with its own part of Earth’s materials, landforms, and processes. Mineralogy and petrology investigate the composition and origin of minerals and rocks. Volcanologists study lava, rocks, and gases on live, dormant, and extinct volcanoes. Seismologists use instruments to monitor and predict earthquakes and volcanic eruptions.

Historical geology is concerned with the chronology of events, both physical and biological, that have taken place in Earth’s history. Paleontologists study fossils (remains of ancient life) for evidence of the evolution of life on Earth. Fossils not only relate evolution, but also speak of the environment in which the organism lived. Corals in rocks at the top of the Grand Canyon in Arizona, for example, show a shallow sea flooded the area around 290 million years ago. In addition, by determining the ages and types of rocks around the world, geologists piece together continental and oceanic history over the past few billion years. Plate tectonics (the study of the movement of the sections of Earth's crust) adds to Earth's story with details of the changing configuration of the continents and oceans.
Bloom’s Experiment Form (for use with any Science Topic)

**Remembering**
List the materials used in this experiment.
Materials:


**Understanding**
Outline the procedure for conducting this experiment
Procedure:

1. 

2. 

3. 

4. 

5. 

6. 

**Applying**
Record data observed and collected during your experiment.
Data:

<table>
<thead>
<tr>
<th>What I did</th>
<th>What I observed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Analysing**
Examine your data and draw conclusions.
Conclusions:

1. 

2. 

3. 

**Evaluating**
Describe how you would rate the success of your experiment. Establish a set of criteria for measuring the result.


**Creating**
Create a series of “What if” statements about your data to show things that might be different should variables be changed.
What if…

What if…

(Adapted from Graphic Organisers and Planning Outlines, 1997, pp. 25-26).
<table>
<thead>
<tr>
<th>Title</th>
<th>Web Address</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Core State Standards Initiative</td>
<td><a href="http://www.corestandards.org/">http://www.corestandards.org/</a></td>
<td>A complete listing of all the CCSS including appendices.</td>
</tr>
<tr>
<td>NCDPI Wikispaces</td>
<td><a href="http://www.ncdpi.wikispaces.net/">http://www.ncdpi.wikispaces.net/</a></td>
<td>A wide array of instructional tools developed by NCDPI to support educators during the implementation of the new Common Core State and North Carolina Essential Standards.</td>
</tr>
<tr>
<td>NCDPI Wikispaces for Summer Institute 2012</td>
<td><a href="http://sl2012ela.ncdpi.wikispaces.net/">http://sl2012ela.ncdpi.wikispaces.net/</a></td>
<td>The latest information and resources developed and provided by NCDPI.</td>
</tr>
<tr>
<td>ELA Live Binders: Resources</td>
<td><a href="http://www.livebinders.com/play/297779">http://www.livebinders.com/play/297779</a></td>
<td>An organized collection of resources for the ELA Common Core State Standards developed by the North Carolina Department of Public Instruction, English Language Arts Section. This binder will help add clarity to current initiatives. NCDPI will continue to update this binder as more resources to assist educators in implementing these new standards become available.</td>
</tr>
<tr>
<td>ELA Live Binders: CCSS Self Study</td>
<td><a href="http://www.livebinders.com/play/262077">http://www.livebinders.com/play/262077</a></td>
<td>This Live Binder, developed by NCDPI, is directed to those interested in learning about the English Language Arts Common Core State Standards. The binder provides an overview as well as an in-depth, close reading of the standards. The lessons and resources have been taken from the professional development opportunities that have been offered across the state. Updates will continue as needed.</td>
</tr>
<tr>
<td>ACRE: Accountability and Curriculum Reform Effort</td>
<td><a href="http://www.ncpublicschools.org/acre/">http://www.ncpublicschools.org/acre/</a></td>
<td>Developed and maintained by NCDPI, this site provides the latest in CCSS news and resources.</td>
</tr>
<tr>
<td>Engage NY</td>
<td><a href="http://engageny.org/">http://engageny.org/</a></td>
<td>The state of New York as already implemented the CCSS. This site was designed as a go-to site for teaching and learning resources.</td>
</tr>
<tr>
<td>New York City Lessons</td>
<td><a href="http://schools.nyc.gov/Academics/CommonCoreLibrary/SeeStudentWork/default.htm">http://schools.nyc.gov/Academics/CommonCoreLibrary/SeeStudentWork/default.htm</a></td>
<td>This site from the NYC Department of Education provides sample lessons and resources aligned with the CCSS.</td>
</tr>
<tr>
<td>Doing What Works</td>
<td><a href="http://dww.ed.gov/">http://dww.ed.gov/</a></td>
<td>Doing What Works is a site created by the US Department of Public Instruction. The purpose of the site is to help teachers find research-based practices. There are also resources to translate research-based practices into practical tools to improve classroom instruction.</td>
</tr>
<tr>
<td>Ohio Department of Education</td>
<td><a href="http://www.ode.state.oh.us/GD/">http://www.ode.state.oh.us/GD/</a> Templates/Pages/ODE/ODEPrimary.aspx?page=2&amp;TopicRelationID=1696</td>
<td>Resources and materials for each content area including support materials and model curriculums.</td>
</tr>
</tbody>
</table>
1. Read with a pencil in hand, annotate the text.

2. Look for patterns in the things you’ve noticed about the text – repetitions, contradictions, similarities.

3. Ask questions about the patterns you’ve noticed – especially how and why?
Key Ideas and Details

- RST.6-8.1. Cite specific textual evidence to support analysis of science and technical texts.
- RST.6-8.2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

Craft and Structure

- RST.6-8.4. 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 relevant to grades 6–8 texts and topics.
- RST.6-8.5. 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.
- RST.6-8.6. Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

Integration of Knowledge and Ideas

- RST.6-8.7. 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).
- RST.6-8.8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
- RST.6-8.9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

Range of Reading and Level of Text Complexity

- RST.6-8.10. By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.
A Guide to Creating Text Dependent Questions for Close Analytic Reading

Text Dependent Questions: What Are They?

The Common Core State Standards for reading strongly focus on students gathering evidence, knowledge, and insight from what they read. Indeed, eighty to ninety percent of the Reading Standards in each grade require text dependent analysis; accordingly, aligned curriculum materials should have a similar percentage of text dependent questions.

As the name suggests, a text dependent question specifically asks a question that can only be answered by referring explicitly back to the text being read. It does not rely on any particular background information extraneous to the text nor depend on students having other experiences or knowledge; instead it privileges the text itself and what students can extract from what is before them.

For example, in a close analytic reading of Lincoln's "Gettysburg Address," the following would not be text dependent questions:

- Why did the North fight the civil war?
- Have you ever been to a funeral or gravesite?
- Lincoln says that the nation is dedicated to the proposition that "all men are created equal." Why is equality an important value to promote?

The overarching problem with these questions is that they require no familiarity at all with Lincoln's speech in order to answer them. Responding to these sorts of questions instead requires students to go outside the text. Such questions can be tempting to ask because they are likely to get students talking, but they take students away from considering the actual point Lincoln is making. They seek to elicit a personal or general response that relies on individual experience and opinion, and answering them will not move students closer to understanding the text of the "Gettysburg Address."

Good text dependent questions will often linger over specific phrases and sentences to ensure careful comprehension of the text—they help students see something worthwhile that they would not have seen on a more cursory reading. Typical text dependent questions ask students to perform one or more of the following tasks:

- Analyze paragraphs on a sentence by sentence basis and sentences on a word by word basis to determine the role played by individual paragraphs, sentences, phrases, or words
- Investigate how meaning can be altered by changing key words and why an author may have chosen one word over another
- Probe each argument in persuasive text, each idea in informational text, each key detail in literary text, and observe how these build to a whole
- Examine how shifts in the direction of an argument or explanation are achieved and the impact of those shifts
- Question why authors choose to begin and end when they do
- Note and assess patterns of writing and what they achieve
- Consider what the text leaves uncertain or unstated
Creating Text-Dependent Questions for Close Analytic Reading of Texts

An effective set of text dependent questions delves systematically into a text to guide students in extracting the key meanings or ideas found there. They typically begin by exploring specific words, details, and arguments and then move on to examine the impact of those specifics on the text as a whole. Along the way they target academic vocabulary and specific sentence structures as critical focus points for gaining comprehension.

While there is no set process for generating a complete and coherent body of text dependent questions for a text, the following process is a good guide that can serve to generate a core series of questions for close reading of any given text.

Step One: Identify the Core Understandings and Key Ideas of the Text

As in any good reverse engineering or "backwards design" process, teachers should start by identifying the key insights they want students to understand from the text—keeping one eye on the major points being made is crucial for fashioning an overarching set of successful questions and critical for creating an appropriate culminating assignment.

Step Two: Start Small to Build Confidence

The opening questions should be ones that help orientate students to the text and be sufficiently specific enough for them to answer so that they gain confidence to tackle more difficult questions later on.

Step Three: Target Vocabulary and Text Structure

Locate key text structures and the most powerful academic words in the text that are connected to the key ideas and understandings, and craft questions that illuminate these connections.

Step Four: Tackle Tough Sections Head-On

Find the sections of the text that will present the greatest difficulty and craft questions that support students in mastering these sections (these could be sections with difficult syntax, particularly dense information, and tricky transitions or places that offer a variety of possible inferences).

Step Five: Create Coherent Sequences of Text Dependent Questions

The sequence of questions should not be random but should build toward more coherent understanding and analysis to ensure that students learn to stay focused on the text to bring them to a gradual understanding of its meaning.

Step Six: Identify the Standards That Are Being Addressed

Take stock of what standards are being addressed in the series of questions and decide if any other standards are suited to being a focus for this text (forming additional questions that exercise those standards).
Step Seven: Create the Culminating Assessment

Develop a culminating activity around the key ideas or understandings identified earlier that reflects (a) mastery of one or more of the standards, (b) involves writing, and (c) is structured to be completed by students independently.
Rereading

Three key questions to ask students after they have read something:

1. **What does it say? (Literal level)** A literal understanding is a prerequisite for uncovering deeper meaning in the text and is foundational to answering the second question “What does it mean?”

2. **What does it mean? (Interpretation level)** Students are asked to support their statements by returning to the text and providing strong textual evidence. Requires a higher-level interaction with the text.

3. **What does it matter? (Reflection)** The reflective level encourages students to move beyond the book (and self) and into deeper levels of reflective thinking.

Interrogating Texts: 6 Reading Habits to Develop in Your First Year at Harvard

Critical reading—active engagement and interaction with texts—is essential to your academic success at Harvard, and to your intellectual growth. Research has shown that students who read deliberately retain more information and retain it longer. Your college reading assignments will probably be more substantial and more sophisticated than those you are used to from high school. The amount of reading will almost certainly be greater. College students rarely have the luxury of successive re-readings of material, either, given the pace of life in and out of the classroom.

While the strategies below are (for the sake of clarity) listed sequentially, you can probably do most of them simultaneously. They may feel awkward at first, and you may have to deploy them very consciously, especially if you are not used to doing anything more than moving your eyes across the page. But they will quickly become habits, and you will notice the difference—in what you “see” in a reading, and in the confidence with which you approach your texts.

1. Previewing: Look “around” the text before you start reading.

You’ve probably engaged in one version of previewing in the past, when you’ve tried to determine how long an assigned reading is (and how much time and energy, as a result, will demand from you). But you can learn a great deal more about the organization and purpose of a text by taking note of features other than its length.

Previewing enables you to develop a set of expectations about the scope and aim of the text. These very preliminary impressions offer you a way to focus your reading. For instance:

- What does the presence of headnotes, an abstract, or other prefatory material tell you?
- Is the author known to you already? If so, how does his (or her) reputation or credentials influence your perception of what you are about to read? If the author is unfamiliar or unknown, does an editor introduce him or her (by supplying brief biographical information, an assessment of the author’s work, concerns, and importance)?
- How does the disposition or layout of a text prepare you for reading? Is the material broken into parts—subtopics, sections, or the like? Are there long and unbroken blocks of text or smaller paragraphs or “chunks” and what does this suggest? How might the parts of a text guide you toward understanding the flow of inquiry or the arc of the argument that’s being made?
- Does the text seem to be arranged according to certain conventions of discourse? Newspaper articles, for instance, have characteristics that you will recognize; textbooks and scholarly essays are organized quite differently. Texts demand different things of you as you read, so whenever you can, register the type of information you’re presented with.

2. Annotating: Make your reading thinking-intensive from start to finish.

Annotating puts you actively and immediately in a “dialogue” with an author and the issues and ideas you encounter in a written text. It’s also a way to have an ongoing conversation with yourself as you move through the text and to record what that encounter was like for you. Here’s how:

- **Throw away your highlighter**: Highlighting can seem like an active reading strategy, but it can actually distract from the business of learning and dilute your comprehension. Those bright yellow lines you put on a printed page one day can seem strangely cryptic the next, unless you have a method for remembering why they were important to you at another moment in time. Pen or pencil will allow you to do more to a text you have to wrestle with.

- **Mark up the margins of your text with words and phrases**: ideas that occur to you, notes about things that seem important to you, reminders of how issues in a text may connect with class discussion or course themes. This kind of interaction keeps you conscious of the reasons you are reading as well as the purposes your instructor has in mind. Later in the term, when you are reviewing for a test or project, your marginalia will be useful memory triggers.

- **Develop your own symbol system**: asterisk (*) a key idea, for example, or use an exclamation point (!) for the surprising, absurd, bizarre. Your personalized set of hieroglyphs allow you to capture the important—and often fleeting—insights that occur to you as you’re reading. Like notes in your margins, they’ll prove indispensable when you return to a text in search of that perfect passage to use in a paper, or are preparing for a big exam.

- **Get in the habit of hearing yourself ask questions**: “What does this mean?” “Why is the writer drawing that conclusion?” “Why am I being asked to read this text?” etc. Write the questions down (in your margins, at the beginning or end of the reading, in a notebook, or elsewhere). They are reminders of the unfinished business you still
have with a text: something to ask during class discussion, or to come to terms with on your own, once you’ve had a chance to digest the material further or have done other course reading.

3. **Outline, summarize, analyze:** Take the information apart, look at its parts, and then try to put it back together again in language that is meaningful to you.

The best way to determine that you’ve really gotten the point is to be able to state it in your own words.

**Outlining** the argument of a text is a version of annotating, and can be done quite informally in the margins of the text, unless you prefer the more formal Roman numeral model you may have learned in high school. **Outlining** enables you to see the skeleton of an argument: the thesis, the first point and evidence (and so on), through the conclusion. With weighty or difficult readings, that skeleton may not be obvious until you go looking for it.

**Summarizing** accomplishes something similar, but in sentence and paragraph form, and with the connections between ideas made explicit.

**Analyzing** adds an evaluative component to the summarizing process—it requires you not just to restate main ideas, but also to test the logic, credibility, and emotional impact of an argument. In analyzing a text, you reflect upon and decide how effectively (or poorly) its argument has been made. Questions to ask:

- What is the writer asserting?
- What am I being asked to believe or accept? Facts? Opinions? Some mixture?
- What reasons or evidence does the author supply to convince me? Where is the strongest or most effective evidence the author offers — and why is it compelling?

4. **Look for repetitions and patterns:**

The way **language is chosen, used, positioned in a text** can be important indication of what an author considers crucial and what he expects you to glean from his argument. It can also alert you to ideological positions, hidden agendas or biases. Be watching for:

- Recurring images
- Repeated words, phrases, types of examples, or illustrations
- Consistent ways of characterizing people, events, or issues

5. **Contextualize:** Once you’ve finished reading actively and annotating, **take stock for a moment and put it in perspective.**

When you contextualize, you essential “re-view” a text you’ve encountered, framed by its historical, cultural, material, or intellectual circumstances.

- When was it written or where was it published? Do these factors change or otherwise influence how you view a piece?

Also view the reading through the lens of your own experience. Your understanding of the words on the page and their significance is always shaped by what you have come to know and value from living in a particular time and place.

6. **Compare and Contrast:** Set course readings against each other to determine their relationships (hidden or explicit).

- At what point in the term does this reading come? Why that point, do you imagine?
- How does it contribute to the main concepts and themes of the course?
- How does it compare (or contrast) to the ideas presented by texts that come before it? Does it continue a trend, shift direction, or expand the focus of previous readings?
- How has your thinking been altered by this reading? How has it affected your response to the issues and themes of the course?

Susan Gilroy, Librarian for Undergraduate Programs for Writing, Lamont and Widener Libraries 06.05.11
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