My account Log out **Contextualized Curriculum** Massachusetts Community College for Adult Learners in Math and Literacy & Workforce Development Transformation Agenda Math Forum **General Forum Curriculum Modules Literacy Forum** Resources **Contact Us** Find People Knowing What Is What Print: 🖶 🔊 🗐 How pharmacy technicians rely on reading and understanding technical information in order to ensure patient health and safety. Industry Sector: Healthcare **Content Area:** Literacy Core Topic: Reading technical information Expand All | Collapse All Common Core State Standards **RST.11-12.3:** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **RST.11-12.4:** 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 11-12texts and topics. RST.11-12.10: By the end of grade 12, read and comprehend science/technical texts in the grades 11–12 text complexity band independently and proficiently. Adult Basic Education Standards Reading Standard 1: Learners will comprehend and analyze a variety of texts for various purposes. **R1.3a:** Identify critical information in formatted texts (e.g. forms, timelines, tables, maps, calendars, advertisements, charts, graphs).

R1.3d: Compare / contrast information from simple or adapted multi-paragraph texts.

R1.4a: Distinguish between fact and opinion, fact and fiction, relevant and irrelevant information.

R1.4d: Summarize ideas and information from texts of increasing length and complexity of content.

Reading Standard 2: Learners will acquire skills and vocabulary for reading and comprehending written text.

R2.3a: Use knowledge of common roots, prefixes, and suffixes to determine meaning of words (e.g. interest/disinterest, careful/careless).

R2.3d: Use dictionary to learn meaning of an unfamiliar word.

Industry Overview

Healthcare in America

From neonatal nurses to radiology technologists, medical coders to medical office assistants, health educators to home care aides, the healthcare industry provides a vast and diverse array of services to individuals at every stage of life. Providing <u>nearly 17 million jobs</u> and accounting for an estimated <u>\$18</u> million of the U.S. GDP in 2009, healthcare is the nation's largest industry. In Massachusetts, in particular, healthcare accounts for more than 15% of employment (compared with 12% nationally), accounting for approximately <u>one in six jobs</u>. With an aging baby boomer population that is living longer, there is greater demand for more and higher quality preventative and long-term healthcare across the United States. <u>With eight of the 30 fastest growing occupations</u>, healthcare is predicted to be one of the <u>fastest growing industries</u> both nationwide and in Massachusetts between now and 2020.

Careers in Healthcare

The healthcare industry includes a vast array of jobs related to planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. This industry includes five career pathways:

- therapeutic services, which includes professionals who work directly with patients to improve their health by providing direct care and treatment for patients (for example, a nurse or a physical therapist assistant);
- diagnostic services, which includes professionals who plan and conduct tests to detect and diagnose diseases and injuries, and use test results to plan treatment (for example, a radiologic technologist or a sonographer, who perform diagnostic imaging examinations, such as X-rays or ultrasounds);
- health informatics, which includes professionals who compile and manage health information and records (for example, a medical records and health information technician, who organizes and manages patient databases; higher-level positions, such as administrators of healthcare facilities or departments, are also included in this pathway);
- support services, which includes professionals who provide assistance to other medical professionals, allowing them to do their jobs in diagnosing and treating patients or supporting therapies (for example, food service workers and nutritionists ensure that patients' meals are healthy and meet dietary guidelines); and
- biotechnology research and development, which include careers that involve bioscience research; while many of these professions require doctoral or medical degrees, some entry-level opportunities in the field require only an associate degree (for example, food and agricultural science technicians).

Mathematics and Communication Skills Needed in Healthcare

The growing complexity of the healthcare industry, including changing technologies, requires workers to continuously upgrade their skills. In addition to technical skills specific to their job, mathematics and literacy skills are crucial for success in all occupations across the healthcare industry.

Communication: First and foremost, no matter the job, good healthcare practitioners are committed to giving patients the best care available and keeping abreast of health research and developments in the field. All workers need to be able to read medical journals and understand medical terminology and vocabulary, as well as read and write literate emails to co-workers/supervisors. Many healthcare

jobs also require the ability to read and interpret charts and access and interpret electronic medical records in order to provide quality care.

Many health careers, especially—but not exclusively—those in therapeutic services—involve interacting with patients and their families, in some cases working with people who may be sick, disabled, or dying. Even support staff in a medical office or hospital require effective oral communication skills as well as compassionate interpersonal skills such as the ability to listen and talk to patients to assess needs. Effective communication with colleagues as well as patients is crucial. Healthcare is increasingly a group activity, in which a patient's recovery depends on how well all members of a healthcare team perform specific function, and how well they communicate and collaborate with one another.

Mathematics: From reading charts to interpreting data to measuring and administering correct medicine, basic mathematics skills are essential for providing quality care across most healthcare occupations. Nurses, for example, use mathematics for calculations in all areas of their duties. They use mathematics to calculate dosages, caloric requirements for individual patients, calibrate equipment, and interpret lab results. Charts and patient data are often presented as decimals or percentages, and a nurse must be able to convert between the two, thus requiring competency in understanding and using ratios, proportions and percentages.

Much of modern medicine is based on statistics, and all workers in the industry should have a basic understanding of how statistics are used to influence medical trends. Nurses, for example, need to be aware of the statistics behind prescribing medications and possible side effects or complications. They might use statistics to counsel patients on diagnoses or prognoses, or in gathering patient histories.

Career Opportunities in Healthcare with Education from Community Colleges

Massachusetts Community Colleges play a crucial role in preparing students for careers in health sciences across all sectors of the industry—therapeutic services, diagnostic services, informatics, and support services. All 15 community colleges offer pathways to nursing careers, the largest occupation in the healthcare industry. Additionally, Massachusetts Community Colleges offers associate degree and certificate programs that prepare students to enter occupations across all sectors of the industry, for example:

- Therapeutic services: registered nurse, practical nurse, nursing assistant, certified nurse's aide, massage therapist, fitness trainer and instructor, dental hygienist, dental assistant, <u>pharmacy</u> <u>technician</u>, physical therapist assistant, occupation therapy assistant, respiratory assistant, medical assistant
- *Diagnostic services:* radiologic technologist and technician, radiographer, surgical technologist, sonographer, phlebotomist, paramedic, polysomnographic technologist and technician, medical and clinical laboratory technician, magnetic resonance imaging technologist, nuclear medicine technologist, veterinary technologist
- *Informatics:* Medical record and health information technician, medical coder, medical interpreter, medical biller, medical transcriptionist, health educator

Recent Career Opportunities in Massachusetts

The following is a sample of healthcare job listings in Massachusetts that require an associate's degree or certificate:

- Registered Nurse (RN), AmeriCare At Home, Boston, MA [show]
- Medical Technologist, Emerson Hospital, Concord, MA [show]
- Ultrasound Technologist, Brockton, MA [show]
- Licensed Practical Nurse, Hologic, East Watertown, MA [show]

Employment Outlook for Healthcare

America's aging population is now nearing or entering retirement (opening new jobs), and will continue to require more services and the increased use of innovative medical technology for diagnosis and treatment. As a result, healthcare is one of the fastest growing industries both nationwide and in Massachusetts, where growth is <u>even higher than nationally</u>. For example, in 2010, Baystate Health of Springfield, which employs more than 10,000 across its Western Massachusetts

system, said that it would likely need to hire about 15,000 people between 2010 and 2020 to replace retiring workers and meet increased demand.

One important factor in the healthcare industry is the financial pressure on hospitals to focus on efficiency and profitability, which results in discharging patients as soon as possible. These financial pressures, along with increased healthcare coverage under federal law, will likely result in a growth in out-patient services in the healthcare industry, such as <u>rehabilitation</u> clinics, long-term care facilities, and home care programs. As a result, occupations experiencing the largest growth include home care aides, physical and occupation therapist assistants, dental hygienists, and medical assistants.

Emerging careers in Health/Information Technology (HIT): Estimates based on data from the Bureau of Labor Statistics (BLS), Department of Education, and independent studies indicate a shortfall of approximately 51,000 qualified Health IT (HIT) workers who will be required over the next five years to meet the needs of hospitals and physicians as they move to adopting an electronic healthcare system, facilitated by the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009. The HITECH Act is a key component of healthcare reform. The Act encompasses interoperable electronic health records (EHRs) including computerized systems to order tests and medications, and support systems to aid clinical decision making and the development of a national health information network to permit the secure exchange of electronic health information among providers. The Congressional Budget Office estimates that the incentive mechanisms in the HITECH Act will increase HIT adoption rates from 45 percent to about 70 percent for hospitals and from 65 percent to approximately 90 percent for physicians. To support job growth in this emerging career field and ensure the adoption of EHRs, new types of workers are needed to facilitate information exchange across healthcare providers and public health authorities, and assist in redesigning workflows within healthcare settings to maximize the quality and efficiency benefits of EHRs, while maintaining privacy and security of health information and records. To that end, the Department of Health and Human Services has embarked on an initiative to build the HIT workforce with community colleges as the primary training ground for these new workers: (1) Practice workflow and information management redesign specialists; (2) Clinician/practitioner consultants; (3) Implementation support specialists; (4) Implementation managers; (5) Technical/software support staff; and (6) Trainers. The average hourly earnings for community college program graduates are expected to be in the target range of between \$12.46/hour to \$20.25/hour.

Resources:

Healthcare Employment Outlook:

- <u>Massachusetts Career Information System</u>: Massachusetts-specific information on careers which can be used to look at different industries, occupations within those industries, and the skills and education needed to work in these jobs
- WorkKeys Occupational Profiles
- Bureau of Labor Statistics

Healthcare Career Information:

- Top 5 Reasons to Work in the Healthcare Field, About.com
- Break Into a Healthcare Career, About.com
- Healthcare Initiatives, US Department of Labor
- Six Healthcare Careers that are Booming, Yahoo! Education
- <u>Career Clusters in Health Sciences, National Association of State Directors of Career Technical</u> <u>Education Consortium</u>
- <u>Explore Health Careers, American Dental Education Association</u>

Massachusetts Healthcare Job Listings:

- <u>Massachusetts Healthcare Jobs, Jobs.net</u>
- Healthcare Jobsite, Beyond.com

Workplace Scenario (8th Grade Level)

This scenario is based on the work of a <u>pharmacy technician</u>. For more information, view <u>this video</u>.

You are a certified <u>pharmacy technician</u>. You work at a pharmacy – or drugstore – in a healthcare facility in Boston. This facility provides long-term care for patients. There is always a pharmacist on duty in the pharmacy to manage the work of technicians. You and the other technicians prepare and hand out prescription medicines for patients. You are also responsible for mixing medicines. In addition, you prepare nutritional mixtures. You also mix medicines given to patients intravenously – or through the veins.

You are trained to know how common medicines work and their usual doses. Your job is to first confirm that the doctor's orders are for the correct medicine for the patient's condition. Then you double-check the amount ordered. Finally you prepare the medicine. The orders often contain medical terms that you need to know. Sometimes a doctor orders the wrong medicine or makes a mistake in the amount. You often notice these errors because of your training. You work closely with the pharmacist to be sure that every medicine and <u>dose</u> is correct. Then the medicine can then be released to the nurse who delivers it to the patient.

Workplace Scenario (High School Level)

This scenario is based on the work of a <u>pharmacy technician</u>. For more information, view <u>this video</u>.

You are a certified <u>pharmacy technician</u> at a large long-term care facility in Boston. You are one of several of technicians who are supervised by one of the facility's pharmacists. There is always a pharmacist in the pharmacy to supervise the work of technicians. You and the other technicians prepare and dispense <u>prescription medications</u> for patients. You are also responsible for compounding medications and preparing nutritional solutions and <u>intravenous mixes</u> for patients.

When you receive the doctors' orders, you confirm the medication, double-check the <u>dosage</u> <u>information</u>, and prepare the order. The orders often contain medical terms that you must know in order to be sure that the prescribed medicine is the correct one for the condition. If it is correct, you can then complete the label for the medication. Because of your training and years working in the pharmacy, you know what many of the medications are and how they are used. You also are familiar with how they work and the doses of frequently prescribed medications. Your attention to detail has helped avoid potential problems several times. Occasionally, a doctor mistakenly asks for the wrong medication or prescribes a <u>dose</u> that is far too large or small. You are able to avoid problems with medications by recognizing these errors. You work closely with the pharmacist to make certain that every medication and <u>dose</u> is correct. Then the medication can be released from the pharmacy to the nurse who dispenses the medication.

Core instructional context

Lack of reading skills presents significant challenges to students' career and college readiness. While the majority of the adults in this country are functionally literate, a high number of adults in this country are poor readers and this has major implications for employers. Adults with low literacy levels are more likely to be unemployed or hold very low paying jobs. According to the National Center for Educational Statistics (2003) " ...about 22% of American adults have minimal literacy skills. Some are functionally illiterate in that they can read some words but not enough to understand simple forms or instructions."

In order for students to become good readers, teachers should focus on skills to help build overall literacy, including vocabulary, fluency, and comprehension development.

A good reader

- confidently approaches reading tasks.
- activates their background knowledge before reading.
- knows their purpose for reading.
- can make predictions and choose appropriate strategies for the passage.
- summarizes major ideas and recalls supporting details, make inferences, and paraphrase
- can focus their complete attention on reading.

- uses appropriate word decoding skills.
- can monitor their comprehension during and after reading.
- can anticipate and predict meaning of words by using context clues and other strategies.
- can create visual and sensory images from text.
- has a large repertoire of strategies to help them attack an unfamiliar passage.

The following tactics are ideas to help build student vocabulary and background knowledge, fluency, and comprehension skills.

Building Vocabulary and Background Knowledge

In order for students to raise their reading proficiency, they need repeated exposure to new words.

Encourage students to skim the assigned text and identify unknown words prior to reading and provide descriptions or an explanation of a new term or word for students. One helpful resource to support this is <u>Innovativocab</u>. Students should make notes of unknown words to review and learn by reusing the word in an original sentence and practicing the word orally. They can also provide their own description for the word and attempt to connect the word to a picture or make a personal anecdotal connection to the word.

Another way to help students build vocabulary is to help them build semantic maps, placing the word to be defined in the center and brainstorming ideas about the word. As students identify words that define the main word or mean the same, draw the semantic map to show relationships. The website <u>Visuwords</u> is an online thesaurus that provides semantic maps for words. Once words are entered, rolling over the words in the semantic map provides the definition. Using this website is one way for students to build knowledge about families of words.

Students can also be encouraged to learn Greek and Latin prefixes, suffixes and common root words. Point out to students that they can unlock the meaning of a significant number of new words by knowing these word forms. One resource students might use is "<u>Root Words, Roots and Affixes</u>" or the list "<u>English Language Roots</u>". One strategy the instructor can use is to identify roots and affixes of word that may be unknown to students during a vocabulary lesson. For example, the word "auditor," contains the root aud- meaning to hear or listen and the suffix -tor meaning "one who" or "one who hears or listens."

Finally, have students keep their own vocabulary journal to record unknown words, especially academic words . <u>The Academic Word List</u> is a resource to help with identifying academic words. Have students record graphics and definitions in their own words as this can help students to better retain words over time.

Building Fluency

Fluency—the ability to read with accuracy, speed and expression—is important because it allows the reader to avoid the process of decoding each word along the way. One effective strategy to build fluency is repeated reading or the strategy of reading short passages several times and attempting to read a little faster each time. It will be more difficult for instructors to understand the students' reading issues if they are only asked to read silently. According to Guglielmino (2005), "finding a balance of activities (such as explicit instruction, guided reading, echoing the teacher's reading, reading in pairs, and silent reading) every day within a safe and non-threatening environment is most likely to produce positive results."

One specific strategy to build fluency is **WARF**, which encourages students to:

- Widen your eye span. Read groups of words or phrases rather than one word at the time.
- Avoid skip backs. Keep reading even if you are not sure you understand.
- Read silently. Even if you have to place a finger on your lips to remind you.
- **F**lex your reading rate. When reading important information, read more slowly than when you are reading less important, detailed information.

Other strategies to improve fluency include timed reading, repeated and monitored oral reading, teacher modeling, paired (partner) reading, tape-assisted reading, and chunking. For more information on these strategies, see <u>Florida GED PLUS College Preparation Program Curriculum and Resource Guide</u>.

Improving Comprehension

It is important to teach students that, with practice, reading can become easier. Instructors should consider their approach to teaching comprehension in terms of where particular students' confidence levels are in regards to reading.

Useful strategies for comprehension include retelling or summarizing the passage, discussing the reading and evaluating what was read. Writing a summary of what was read also reinforces the reading-writing connection. Encourage students to take notes as they read using a system such as <u>Cornell Notes</u> or <u>Thinking Notes</u>. Using graphic organizers to help students before, during, and after reading are also great tools, such as these graphic organizers from <u>Scholastic</u>.

Help students learn pre-reading strategies such as <u>TIPP</u>?. This strategy uses skimming to preview the text and develop questions students think the text may answer as they read. Point out that scanning is a different strategy used to locate specific information, such as the answer to a question. This is also a good time to activate prior knowledge with the use of a <u>KWL chart</u> or other strategy to help students recall what they already know about the topic.

Finally, writing for understanding is a way for students to show and for instructors to check for comprehension. Students can keep a journal to predict what a reading will be about and then summarize the entire text after they read sections or individual passages, making note of any questions they have about the text. This is an easy way to model comprehension strategies in the classroom as well.

Reading Technical Texts

Technical texts such as the ISO standards discussed in the scenario are especially challenging to read and comprehend. Reading experts (Fry, 2012, p. 74) suggest five kinds of information to look for in technical text: definitions and terms, examples, classifications and listings, comparison and contrast, and cause and effect. Fry also suggests a seven-step plan for students as they attack technical material.

- 1. Learn the technical terms.
- 2. Analyze the structure and understand it.
- 3. Skim the text, identifying questions you have.
- 4. Be sure you have a full understanding of each section before moving on.
- 5. Read slowly.
- 6. Pay attention to examples
- 7. Summarize after reading.

Example

As described in the scenario, it is crucial that pharmacy technicians possess excellent reading skills in order to ensure patient safety. A technician must be able to understand medical and pharmaceutical terminology, be able to follow complex directions, and even be able to recognize when a doctor's orders might be incorrect.

Consider introducing the topic by showing students a short <u>video</u> on what a <u>pharmacy technician</u> does. Have students <u>brainstorm</u> about the things in their daily life that require following directions (such as giving the babysitter directions on how to make a bottle, following MapQuest directions to travel to a job interview, or setting up an online banking account). Ask students to consider why is it important to follow instructions in their daily life and what could happen if they did not follow directions.

Ask students to think of a place or an object on campus and write down directions to this place or object without using any proper names such as building names or street names. This location could be as small as a trash can in a quad or a painting hung in the foyer of a main building. Then in pairs, have students trade directions and go on a mini "field trip" to see if they can find the correct location. Have students rendezvous back in class within 15 minutes and discuss the process of following the directions. Did they find the correct place or object? Were they able to understand the directions and follow them clearly?

Bring the activity back to the context of the scenario and the importance of being able to read carefully, understand, and then perform based on what was read.

Assessment

Use a classroom-developed reading and literacy assessment such as the sample assessments based on the reading components listed below. Additionally, use a rubric to assess students' written summaries of technical text they have read. Also, use vocabulary quizzes or content quizzes to assess students' knowledge and understanding of the content they've read.

- <u>Reading VALUE Rubric from Association of American Colleges and Universities</u>
- Reading Rubric from Effective Practices in Reading: Specialty Supplies, page 29
- Practice a reading assessment from the Massachusetts State Exam
- <u>Create your own Cloze test</u>
- <u>Create your own vocabulary test</u>

Contextualized learning activities

Summarize Drug Information

Have each student visit the <u>WebMD Drug and Medication</u> website or print out the information for a drug, such as Ambien, so that each student receives an information sheet on a different drug. Be sure to include the "Uses," "Side Effects," "Precautions," and "Interactions" pages. Ask students to read over the information on the drug and then summarize the drug information. When this task is complete, students will go over the summaries in small groups and compare the summarized version to the original information to determine if the most important items were included.

Using a Pharmaceutical Dictionary

Find a few articles from the <u>New England Journal of Medicine</u> website that contain medical terms unknown to students. Have students read an article and look up any words they do not know with Google or with the online <u>Pharmaceutical Drugs Glossary</u>. Have students create a simple <u>Mind Map</u> with the new word in the center of the map. Have students include roots, synonyms, antonyms, and, if possible, related ideas and examples in real life and any personal anecdotes. Alternatively, ask students to use the free online tool, <u>Bubbl.us</u> to record their thoughts.

Translating Medical Jargon

As an extended activity, take the same article from the <u>New England Journal of Medicine</u> and ask students to re-write the article without any medical terms so that anyone might be able to understand it. Students may use the definitions they found previously to help them translate.

Understanding Multi-stepped Processes

Have students research the pharmaceutical approval process by the Federal Drug Administration (FDA) or another complex process such as how a bill is passed into law or how a song is recorded sold and the profits are distributed. Have students present their findings in both a narrative format and a graphical format (such as a flow chart, PowerPoint presentation or Mind Map). The goal is for students to read about complex processes, be able to translate these steps into their own words, and represent the information in an easy to understand format.

Guided Note Taking

Have students select a pharmaceutical article to read from the <u>New York Times</u> or <u>The Economist</u> to practice their ability to read for understanding.

Using the graphic organizer below, have students identify the key topic within the reading. Have students skim the section first, noting the headings to help them do this. Have students <u>brainstorm</u> what they think the reading will be about and predict what they will learn from it. Next, have students read the section and identify the restrictions to the topic. In other words, the main topic might be dangers and prevention measures of Hepatitis B, but as the students analyze the reading selection, they may discover that particular section deals with Hepatitis B in inner city housing projects. This would be a "restriction" to the topic.

The final part of guided note taking is to have students identify illustrations within the reading that are used to strengthen the key points. Have students identify examples they are aware of from their own experience. This can provide opportunities for comparing and contrasting, which is a powerful way for students to learn beyond memorization of facts. Through comparing and contrasting, students are developing new pathways for recalling facts and are more likely to transfer this learning to unrelated situations.

Guided Note Taking	Title of Article:
Торіс	
Restriction	
Illustration	

Taken from Marzano, Pickering, Pollock, Classroom Instruction that Works: Research-based Strategies for Improving Student Achievement (2001).

Mock Pharmacy

Prepare ahead by filling 10 jars, each with a different small candy (such as jelly beans or M&M'S). Make sure each large jar contains candy of only one color, shape and size. Prepare a list of "medications" that describes each medication by shape, size and color. (for example, "upset stomach aide" is a small round red pill with an M on one side, and "headache eradicator" is a large chewable tablet, brown in color with ridges around the edge). Create 25 sample <u>prescriptions</u> on labels and bring to class 25 small empty plastic prescription bottles. Assign each student 10 <u>prescriptions</u> to be made up. Acting as the pharmacist, the instructor will check each to see that each prescription is filled with the correct pill (candy) in the correct quantities.

Make a list of "medications" that interact poorly with each other to challenge students and test their attention to detail while reading. Make at least one of the <u>prescriptions</u> contain a combination that is "lethal" for a patient and see if students catch this.

Contextualized test items

1. Critical Reading Comprehension Worksheets

Visit the <u>Englishforeveryone.org</u> website and scroll down to find eight passages of reading comprehension practice passages with multiple-choice questions. Choose from grades 1-12 based on the reading level of students. Answers to the multiple-choice questions are provided at the end of each passage with explanations.

2. Technical Reading Comprehension Worksheets Visit the Englishforeveryone.org website and scroll down a bit further on the website to find the Informational Reading Comprehension worksheets.Choose "Beginning," "Intermediate," or "Advanced" level depending on the reading level of students. Answers to the multiple-choice guestions are provided at the end of each passage with explanations.

Contextualized project

1. Research a Topic of Interest

Have students go to the <u>American Heart Association</u> website and find information about a specific type of heart disease. (This activity reinforces how to do basic research on a topic of interest to them.) Students should use a Venn diagram to compare the information found on the sites. Repeat this activity with information on similar drugs using the <u>US FDA website</u>. Students can look up drugs that treat similar symptoms such as Advil, Aspirin and Tylenol or Prevacid, Nexium, and Zantac. Alternately, they can compare medications prescribed for family members to learn more about their side effects.

2. Research a Career of Interest

Have students research a career in the medical field that is of interest to them on the <u>Virtual</u> <u>Career Network</u> website. Ask students to present the career to the rest of the class using PowerPoint and including the skills required and types of tasks done a day in the life of this profession. Students could also interview someone with this career in their community and add those anecdotes and data to their presentation.

Additional or extension activities, multimedia, readings and/or resources

Find a longer text that combines the technical and non-technical, such as The Perfect Storm, or other Science Trade novels from the <u>National Science Teachers Association</u> website. Read, discuss, and have students analyze to pull out the technical language and concepts. Pull out passages that are technical and have students read for content and meaning.

Interview a local pharmacist to become familiar with the discourse in the field.

Professional Drug Information Search Engine

Virtual Library: Pharmaceutical Association Links

American Society of Health-System Pharmacists

Instructor Adapted Classroom Materials

Knowing What is What Introductory Lesson Plan, Middlesex Community College, ABE/GED

Knowing What Is What Lesson Plan, Middlesex Community College, ABE/GED

Knowing What Is What Lesson Plan, ABE/GED

Knowing What Is What Lesson Plan, Bristol Community College, ESL

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