**Menu of Cross-Curricular Literacy-Enhancing Activities**

**BEFORE-READING**

**1. Semantic Web**

As the pre-reading activity and "Do Now" task at the beginning of every lesson in both the English and science classroom, Semantic Webs will require students to brainstorm words and phrases about a particular topic that is pertinent to the focus of the lesson and the text to be read during it (or the section of text to be revisited, since students read a lot of the textbook and short stories for homework in this unit, so that will often be the case). As a free-form graphic organizer, Semantic Webs allow students to branch off of a main circle (labeled with the topic to be brainstormed) with smaller circles. The graphic organizer organizes and collects students' thoughts in a less mundane format than, for example, a bulleted list. Students will also be able to return to their Semantic Webs after the lesson, adding in what they learned about its topic during the lesson. In order for the graphic organizers to provide students a quick visual of how the lessons changed and/or expanded their knowledge of the Semantic Web topics, students may be prompted to circle their initial ideas and box their afterthoughts.

**DURING-READING**

**2. CAFE Strategy: “Tune In to Interesting Words”**

As a during-reading activity for all the written texts to be read in both the English and science classroom (i.e. poems, short stories, textbook chapters), students will circle any "interesting words" that they come across in the texts. This vocabulary-building strategy will be introduced to students in a mini-lesson in both disciplines, so students see that "interesting words" can be found in both fiction and nonfiction texts. Students will be provided with a homework reference sheet that defines the four types of "interesting words" they may come across: words they cannot pronounce; unknown vocabulary; content area-specific jargon, powerful diction they want to remember for use in their own writing. Since a lot of the short story and textbook reading will be done for homework, students will be using this strategy on most homework nights. They will be held accountable through in-text circling and an AlphaBoxes recoding sheet (described in more depth below). For reinforcement, students will also occasionally revisit their "interesting words" through the daily exit ticket Word Wall Dice Roll (described in more depth below).

Boushey, G. & Moser, J. (2009). Ready reference form: Strategy – Tune in to interesting words and use new vocabulary in speaking and writing. In The CAFE book: Engaging all students in daily literacy assessment & instruction (p. 185). Portland, ME: Stenhouse Publishers.

**AFTER-READING**

**3. AlphaBoxes**

As a during-reading supplement to the CAFE strategy, "Tune In to Interesting Words," AlphaBoxes (which is sometimes called ABC Brainstorm, a pre-reading strategy with a during-reading "vocabulary collection" adaptation) provides a concrete place for students to record and organize the "interesting words" they circle when reading for homework (or during class). It also helps to raise student awareness of unknown vocabulary (i.e. they are less prone to just rush over it if actively on the look-out for them through the aforementioned CAFE strategy). The alphabetical format also allows students to quickly compare their AlphaBoxes with a peer. A quick glance would immediately reveal differences in word dispersal, so sharing some of their "interesting words" with a partner as a little in-class activity will sometimes be implemented when reviewing the homework reading to reinforce the vocabulary (i.e. "I don't have any words for "A" and you have several, what words do you have?"). Two sections of the daily exit ticket Dice Roll require students to pull words from their AlphaBoxes and either define them or use them in a meaningful sentence (a sentence that demonstrates knowledge of the word's meaning). That is another way to reinforce the "interesting" vocabulary. Too often students are made to just circle words, and are then never required to look at them again. The AlphaBoxes and Dice Roll attempt to prevent that from happening. Students will record "interesting words" that they find in their English texts and their science texts on two separate AlphaBoxes because vocabulary is one of the key differences between scientific language and everyday language. Therefore, the separation acknowledges that vocabulary for scientific literacy is different, but the AlphaBoxes standardization signals that vocabulary awareness in each discipline are equally important.

Seminole County Public Schools (2014). ABC Brainstorm. Retrieved from <http://www.scps.k12.fl.us/curriculum/AcademicCore/LanguageArtsandReading/SecondaryReading/BeforeReading.aspx>

West Virgina Department of Education (n.d.). AlphaBoxes. Retrieved from<http://wvde.state.wv.us/strategybank/AlphaBoxes2.html>

**DURING-CLASS**

**4. Venn Diagram Word Wall**

The science and English classroom will have identical classroom Word Walls. Set up as a Venn Diagram, labeled "English" on the right side and "Science" on the left side, the teachers will fill the Word Wall with their unit's key vocabulary as students learn them. When, for example, the science teacher touches upon a key term originally introduced in the English class (and thus already up on her Word Wall on the "English" side), the teacher will physically remove that word's label from the Word Wall and place in in the Venn Diagram's overlap. This will enable the Word Wall to capture discipline-specific vocabulary while also providing a concrete visual for the interdisciplinary overlaps.

Fisher, D., Brozo, W. G., Frey, N., & Ivey, G. (2011). 50: Word Walls. In 50 Instructional Routines to Develop Content Literacy (2nd ed.) (pp. 150-153). Boston, MA: Pearson Education, Inc.

**END-OF-CLASS**

**5. Daily “Exit Ticket” Vocabulary Dice Roll + “Post It, Prove It” Board**

At the end of every day, in both the English and science classrooms, students will receive the opportunity to interact with either the classroom Venn Diagram Word Wall, the unit's Greek/Latin elements, or their AlphaBoxes. The teacher will select a new student every day to roll a dice and determine the small vocabulary task they must complete as an exit ticket. Students must hand in the exit ticket before they leave every day. They will record their exit ticket on a sticky note and post it to the "Post It, Prove It" exit ticket board on their way out of class. This Dice Roll exit ticket activity prevents the classroom Word Wall from being just a wall fixture during the course of the unit, reinforces the Greek and Latin elements discussed in mini-lessons throughout the unit, and brings students' homework AlphaBoxes into the classroom setting.

Fisher, D., Brozo, W. G., Frey, N., & Ivey, G. (2011). 8: Exit slips. In 50 Instructional Routines to Develop Content Literacy (2nd ed.) (pp. 27-28). Boston, MA: Pearson Education, Inc.

**HOMEWORK**

**6. Four-Square Vocabulary Cards (for Venn Diagram Word Wall Key Terms)**

When a new "key term" is added to the classroom Venn Diagram Word Wall in either content area, students will be responsible for creating a Four-Square Vocabulary Card (similar to the Frayer Model) that night for homework. On the cards, students will include the key term, its definition, an original sentence using the term, and an illustration representative of the term. By having these vocabulary cards completed for homework instead of during class immediately when the term is added to the Venn Diagram Word Wall, students will have to revisit the terms, so they will reinforce the classroom content. Students will record the definitions on their worksheets during class (a concrete spot is usually provided when a new key term in introduced), so students will have to revisit their class worksheets and then interact with the word for homework. Students will be encouraged to bring their Four-Square Vocbulary Cards to both their English and science classes, so each content area teacher - when using a term first used in the other discipline - can have students refer to these cards to activate prior knowledge.

Fisher, D., Brozo, W. G., Frey, N., & Ivey, G. (2011). 45: Vocabulary Cards. In 50 Instructional Routines to Develop Content Literacy (2nd ed.) (pp. 135-137). Boston, MA: Pearson Education, Inc.

**DURING-AFTER READING**

**7. Weekly (at least) Greek and Latin Element Mini-Lesson**

Explicit instruction in several Greek and Latin elements will occur throughout the interdisiplinary unit in both disciplines. The chosen morphemes will emerge from the text beings studied or the themes/terms being superimposed onto the texts as the unit's key ideas. This setup allows for the Greek and Latin elements in be immediately grounded in text, increasing relevancy and contextual understanding. Additionally, since the chosen morphemes will be embedded in the key terms for the unit, they will constantly be indirectly reinforced when students revisit the terms in lessons across the disciplines. As a more explicit form of reinforcement, one section of the daily exit ticket Dice Roll requires students to define one of Greek or Latin elements discussed.

**SCIENCE**

* **Inter** (Latin - Between, Jointly, Among) - "interconnectedness"
* **Com** (Latin - Together/Common) - "community," "commensalism"

**ENGLISH**

* **Anti** (Greek - Against, Opposite of) - "antigravity metal" Path
* **Dis** (Latin - Not, Opposite) - "disillusionment"
* **Meta** (Latin - Transference, Change, Beyond) - "metaphor"

Gore, M. C. (2010). Key 15: Teach Greek and Latin morphemes. In Inclusion strategies for secondary classrooms: Keys for struggling learners (pp. 58-59). Thousand Oaks, CA: Corwin.

**DURING/AFTER READING**

**8. CAFE Reading Comprehension Strategy: "Recognize and Explain Cause & Effect Text Structure"**

Both disciplines use many texts with cause and effect text structures. In the English classroom, chaos theory naturally lends itself to this text structure, and understanding it in Bradbury's "A Sound of Thunder" is crucial to comprehending Travis's speech. The science classroom integrates many popular science articles that discuss the consequences of a species extinction or of man's pollution in various ecosystems. Therefore, many graphic organizers - like flow charts and Campfire Metaphor graphic organizers - attend to the cause and effect text structure as during-reading activities. Knowledge of cause and effect in this unit is essential to understanding all three of the unit's key themes, like interconnectedness and accountability. For example, students will need to be able to identify the positive effect of assuming responsibility and the negative effect of not assuming responsibility. Secondly, students will need to be able to identify the effect of a species removal from an ecosystem to understand why humans must take responsibility for their environmental actions and to understand why all species have value.

Boushey, G. & Moser, J. (2009). Ready reference form: Strategy – Recognize and explain cause-and-effect relationships. In The CAFE book: Engaging all students in daily literacy assessment & instruction (p. 168). Portland, ME: Stenhouse Publishers.

**DURING-READING**

**9. Popular Science Articles: CHoMP**

Designed as a during-reading note-taking and paraphrasing strategy for research article comprehension and the avoidance of plagiarism, CHoMP breaks down the nonfiction reading in this interdisciplinary unit into four steps. Students will be given an anchor chart to use as a reference. For the strategy, "C" prompts students to cross out the small words in a paragraph, "H" requires that they highlight the important information, "M" reminds them to make notes using symbols, abbreviations, and pictures, and "P" necessitates that they put those notes into original, complete sentences. Students will do this at predetermined stopping points in the nonfiction articles. They will write in the margins. Therefore, even though most worksheets in the unit have 0.5 inch margins, the popular science articles are compiled onto Microsoft Word Documents with 1.0 inch borders. Since popular science articles are integrated into both the English and science classroom (with the English classroom actually being the one to introduce the strategy with a twin text for "A Sound of Thunder"), both disciplines provide time for students to practice the strategy in a lower-risk environment that scaffolds students to their final research project in their science class. For their final research projects, students will be required to implement the strategy independently on all of the articles they use.

Guinee, K. & Eageton, M. B. (2006). Spinning straw into gold: Transforming information into knowledge during web-based research. English Journal, High School Edition, 95(4), 46-52.