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Building vocabulary, background knowledge

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Building vocabulary and background knowledge were big topics at the 2005 International SIM Conference last summer. This issue of *Strategram* will review two of the sessions on these topics, provide a list of resources for more information about theory and suggested classroom activities for vocabulary instruction, and illustrate how SIM can support your classroom vocabulary development program.

University of Kansas Center for Research on Learning doctoral fellow **Monica Harris** says now is a great time to be studying vocabulary instruction and vocabulary development.

“We have this general linear idea of how vocabulary works,” she says. “You have vocabulary knowledge and then—poof!—it becomes reading comprehension. We don’t know exactly what happens between knowing the meaning of a word and actually really comprehending it.”

Monica’s current research is looking at vocabulary instruction overall and specifically the importance of learning root words in addition to prefixes and suffixes. In her session, she listed five books that she recommends for anyone interested in vocabulary

development:

- *Bringing Words to Life: Robust Vocabulary Instruction*, by Isabel L. Beck, Margaret G. McKeown, and Linda Kucan
- *Building Background Knowledge for Academic Achievement: Research on What Works in Schools*, by Robert J. Marzano
- *Teaching Vocabulary in All Classrooms*, by Camille Blachowicz and Peter J. Fisher
- *Teaching Vocabulary to Improve Reading Comprehension*, by William E. Nagy
- *Vocabulary Development*, by Steven A. Stahl

“Using humor and the play on words are so important in bringing kids in and in bringing them along to understanding it,” says Monica Harris, KU-CRL doctoral fellow. Newspaper cartoons are rich sources for incorporating humor and word play with instruction.

Building on principles and ideas presented in these books, Monica drew connections to SIM interventions beyond the obvious *Vocabulary LINC-ing Routine* and *LINC’s Vocabulary Strategy*.

“When you start making your bubbles and doing your Unit Organizer, you start to make kids aware of the language that you are going to use in this section,” Monica says. “The *Mastery Routine*, *Anchoring Routine*, *Comparison Routine*—these are all teaching vocabulary. LINC’s teaches how to study the meaning of one word in that



context. I'm asking us to stretch ourselves and use more than one method to teach vocabulary."

Also, because categorizing is a huge part of vocabulary learning, devices such as the Concept Diagram, Clarifying Table, Comparison Table, Anchoring Table, and Frame that offer opportunities for categorizing are useful. Other benefits are that Content Enhancement Devices can be used in any content area (see figure 1, below, for a math example), and the method of co-constructing these devices encourages students to interact with the word and its meaning.

"Once they use it and start

making it their own, that's when it becomes a part of their vocabulary," says Monica.

Monica also notes that for students to fully understand the nuances of multiple words that represent the same concept requires time and repeated exposures to the words.

Sue Woodruff, independent SIM Professional Developer from Michigan, structured a conference session around the ideas presented in one of the books Monica recommended, Marzano's *Building Background Knowledge for Academic Achievement*.

Noting that some students arrive at high school reading at

the first-, second-, and third-grade levels, Sue listed several elements that should be considered when developing adolescent literacy programs:

- alphabetics and phonetics
- word recognition
- fluency
- comprehension strategies
- vocabulary
- background knowledge
- text structure

The bulk of her presentation examined background knowledge. One thing research has revealed, Sue says, is a strong correlation between background knowledge and vocabulary.

This means, she says, "Every

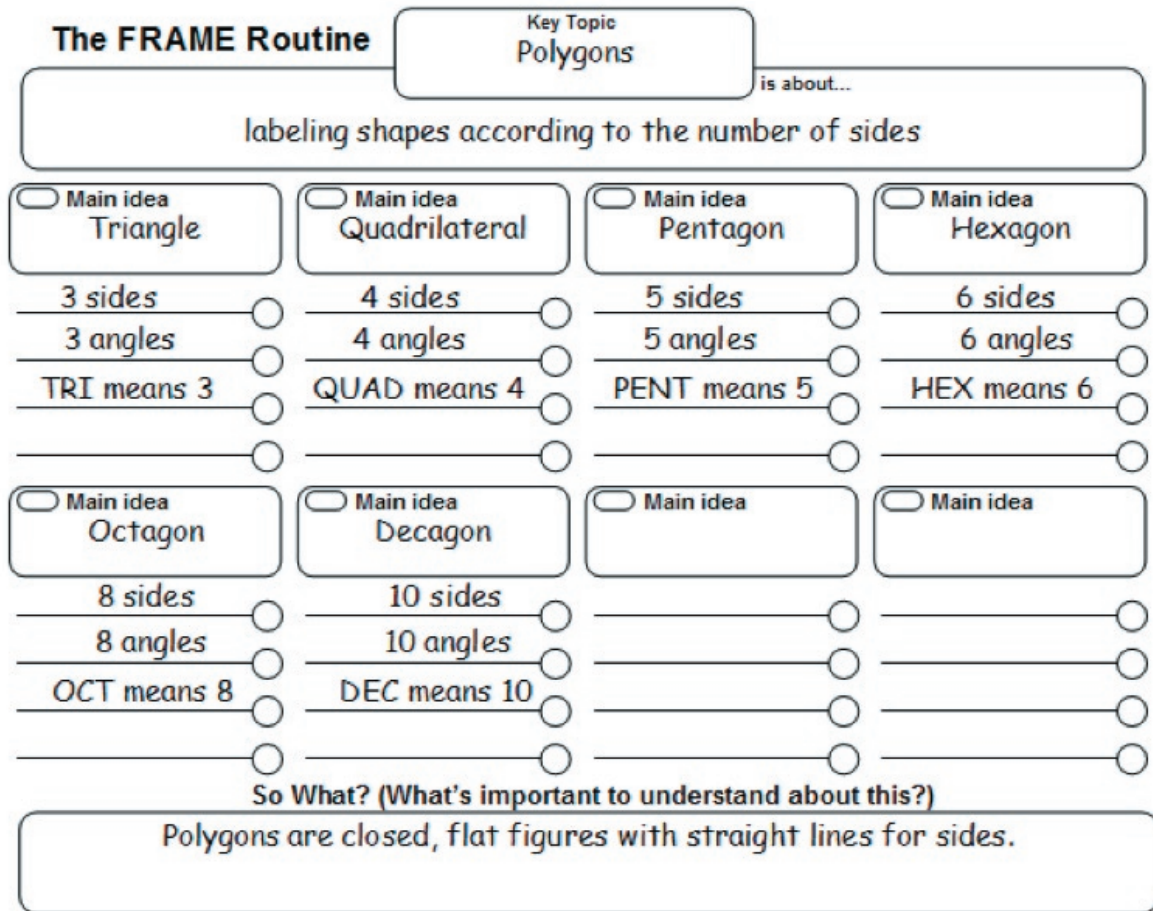


Figure 1: Example of Frame device used to explore math vocabulary

Vocabulary Resources

- *Collins COBUILD New Student's Dictionary* (available in paperback and hardcover)
- *Bringing Words to Life: Robust Vocabulary Instruction* (2002). Isabel L. Beck, Margaret G. McKeown, and Linda Kucan. New York: Guilford Press.
- *Building Background Knowledge for Academic Achievement: Research on What Works in Schools* (2004). Robert J. Marzano. Association for Supervision and Curriculum Development.
- *Teaching Vocabulary in All Classrooms* (2005, third edition). Camille Blachowicz and Peter J. Fisher. Englewood Cliffs, NJ: Prentice Hall
- *Teaching Vocabulary to Improve Reading Comprehension* (1988). William E. Nagy. International Reading Association.
- *The Vocabulary Book: Learning and Instruction* (Language & Literacy Series) (2005). Michael Graves. New York: Teachers College Press.
- *Vocabulary Development* (From Reading Research to Practice, V. 2) (1999) Steven A. Stahl. Cambridge, MA: Brookline Books.
- *Vocabulary Instruction: Research to Practice* (2003). James F. Baumann and Edward J. Kame'enui. New York: Guilford Press.

teacher in the district needs to know about vocabulary.”

Marzano’s book describes different kinds of background knowledge, making a distinction between general background knowledge and academic background knowledge. He also examines factors that affect acquisition of academic background knowledge. Among these are opportunities for chil-

dren to add to their experiences through such activities as travel, listening while someone reads to them, visiting museums, or walking in the woods. Even television, in some cases, can provide opportunities for building background knowledge, Sue says.

Not surprisingly, research has found that whether students have had a variety of such experiences

is strongly related to economics. “Poor students basically have much less access to academically oriented experiences,” says Sue.

Educators have two options for correcting an imbalance in students’ background knowledge: a direct approach and an indirect approach. A direct approach, such as taking students on field trips, is not always practical.

“We don’t have to take students to every state in the union, but we do have to think about how to create some of those virtual experiences for kids,” Sue says, citing this example: “I’ve never been to India, but I’ve read a really great book about India, so I feel like I have some knowledge. That’s a virtual experience.”

Vocabulary is the means by which background knowledge is made manifest.

“The two are very closely related,” says Sue. “We’re talking about experiences versus the words we use to express those experiences.”

One important aspect of building both is that, as research has shown, it is easier for students to learn something new if they already have some background knowledge on which to build.

Sue outlined eight characteristics of effective vocabulary instruction and tied the use of SIM interventions to each.

1. Effective vocabulary instruction does not rely on definitions. Rather, good instruction emphasizes dialogue, describing a word and relating it to students’ experience.

Completing a Clarifying Table when you think students already

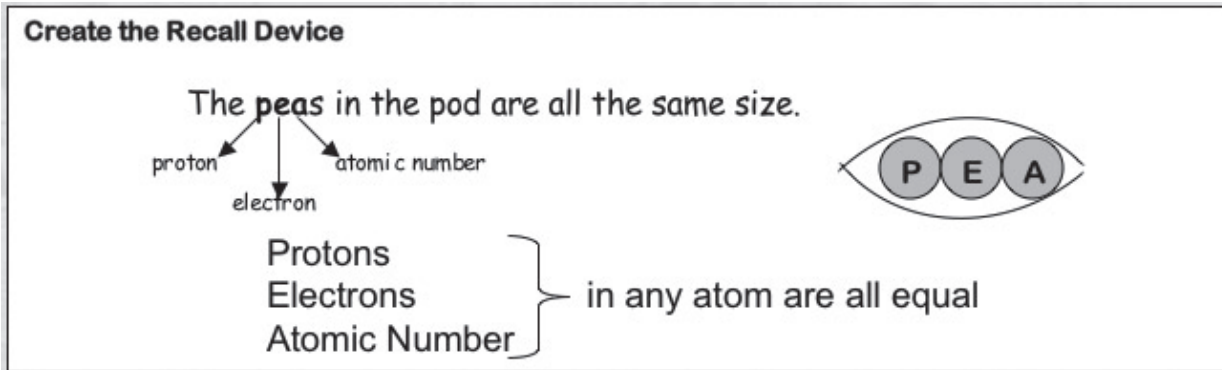


Figure 2: Example of a Recall Device

have some background knowledge or after some class discussion can help students really nail down the meaning of a word, says Sue. “The key here is to make sure the word is really important for student understanding and achievement. We would not want to do Clarify-

ing on words that didn’t really matter. If we’re dealing with students with low vocabulary coming in, we better know what words we need to teach them.”

Other SIM tools that are effective and support this characteristic of instruction:

- The *Vocabulary LINCing Routine* is especially effective as you are presenting and talking about a word.
- The Anchoring Table and Concept Diagram fit well with the many vocabulary words that are concepts.

COMPARISON TABLE			
② OVERALL CONCEPT			
Figurative Language			
① CONCEPT		① CONCEPT	
Metaphor		Personification	
③ CHARACTERISTICS		③ CHARACTERISTICS	
1. comparison of 2 things-emotional 2. figure of speech 3. comm. beyond literary meaning 4. create image 5. emotional value		1. non-human things given human characteristics 2. figure of speech 3. communication beyond lit. mean. 4. create image 5. descriptive value	
④ EXTENSIONS		④ LIKE CATEGORIES	
		Comparisons - Communication Imagery	
④ LIKE CHARACTERISTICS		④ UNLIKE CATEGORIES	
1. imagery 2. figure of speech 3. comm. beyond lit. meaning 4. both comparisons		1. non-human; human char. 2. Descriptive value	
④ UNLIKE CHARACTERISTICS		④ UNLIKE CATEGORIES	
1. comp. of things 2. emotional value		Values Sensory Impressions	
⑥ SUMMARY			
A metaphor is primarily used for emotional value and personification for descriptive value.			
Step 1: Communicate targeted concepts	Step 2: Obtain Overall Concept	Step 3: Make lists of known characteristics	Step 4: Pin down Like Characteristics
Step 5: Assemble Like Categories	Step 6: Record Unlike Characteristics	Step 7: Identify Unlike Categories	Step 8: Nail down a summary
Step 9: Go beyond the basics			

Figure 3: Example Comparison Table exploring “metaphor” and “personification”

In Focus

- The Frame can help illustrate multiple dimensions of a word.

2. Effective vocabulary instruction expresses knowledge of terms in two ways: linguistically and nonlinguistically. In teaching vocabulary, “nonlinguistically” very often means the use of imagery—graphics, pictures, drawings—to enhance understanding.

Examples of SIM interventions that incorporate nonlinguistic or imagery elements:

- Vocabulary LINCing Routine
- Recall Enhancement Routine (see figure 2 on page 4)

- **Visual Imagery Strategy**
In fact, all of the Content Enhancement graphic organizers can be thought of as responding to the need to express knowledge nonlinguistically, Sue says.

3. Effective vocabulary instruction involves gradual shaping through multiple exposures. In other words, says Sue, “practice, practice, practice!” Four types of activities can extend instruction here: comparing, classifying, creating metaphors, and creating analogies.

SIM tools that aid in comparing, classifying, and creating metaphors and analogies:

- Comparing: *Concept Comparison* is the obvious SIM intervention to turn to for comparing terms.
- Classifying: The TOWER Diagram of the *Theme Writing Strategy*, Concept Diagram (always present, sometimes present, never present), and the Frame all encourage students to classify information.
- Metaphors: One example of how SIM can be leveraged here is through creating a metaphor that can be carried throughout the school year when launching a course. A science teacher might use the Course Organizer to present the idea that

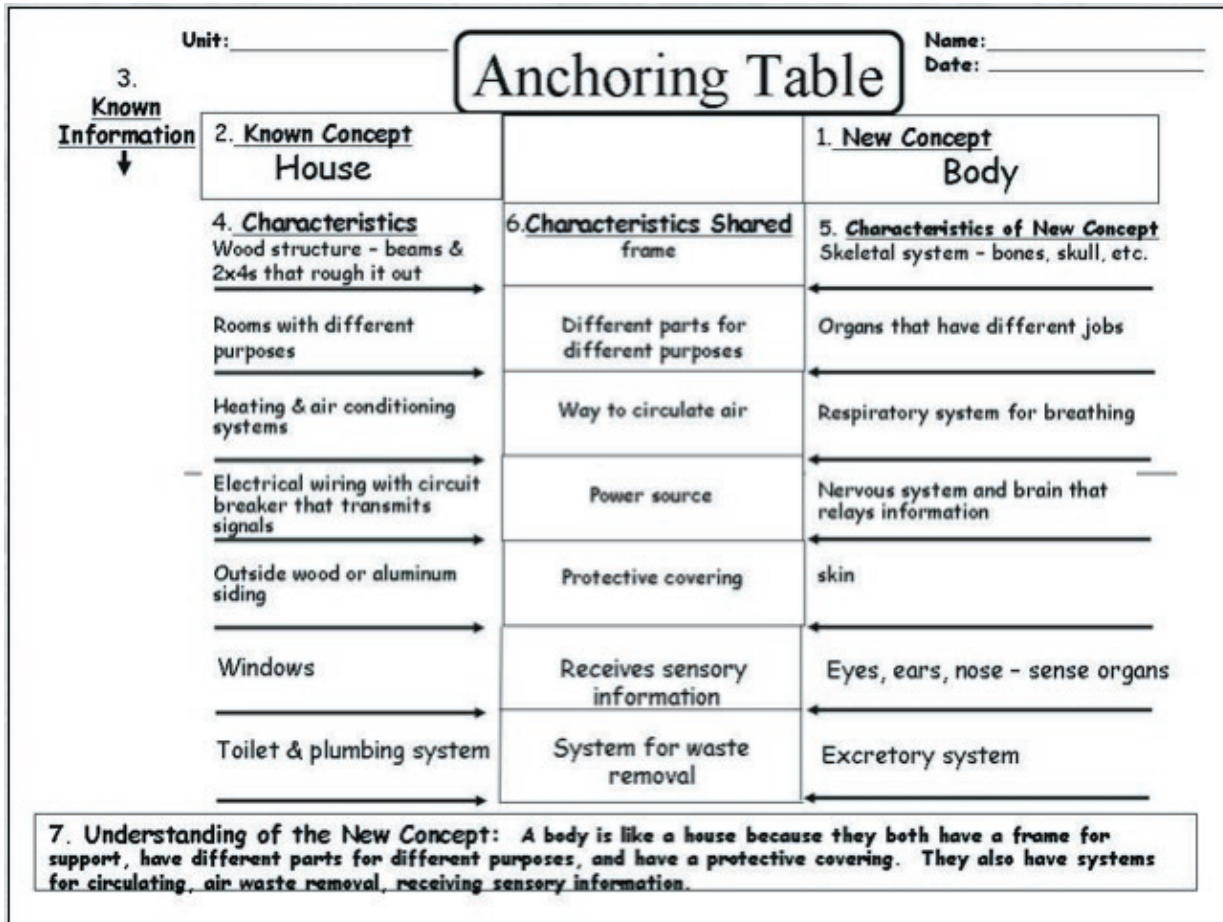


Figure 4: Example Anchoring Table

during the year, students will be looking at the world from the perspective of a scientist, for example.

- Analogies: The Anchoring Table can be used to help promote a deep understanding of critical content, encourage interactivity, and stimulate thinking.

4. Effective vocabulary instruction involves teaching word parts to enhance student understanding. The Word Identification Strategy is designed to help students recognize parts of words and can be very powerful when it is used across a school in all content areas.

“The very first unit that our biology teacher does in 10th grade is biology prefixes and suffixes,” says Sue. “A lot of [our students] know DISSECT and understand. Learning about word parts can really extend the meaning.”

5. With effective vocabulary instruction, different types of words require different types of instruction.

This point refers to teaching words in the context of different parts of speech, Sue says. For example, nouns have certain distinguishing features, as do verbs, prepositions, adjectives, and so

on. A conceptual understanding of those words is important for students.

6. Effective vocabulary instruction involves talking about words learned.

The more we talk about and describe words, Sue says, the more deeply we understand them. Interacting with others and describing words is important to

achieve a comfort level with those words. When a person reaches that comfort level, he or she will use the word in writing. The goal of vocabulary instruction is to help students arrive at a comfort level that allows them to use words fluently in speaking and writing.

This point is connected to the interaction between the language processes of listening, speaking, reading, and writing.

Marzano’s Six Steps to Effective Vocabulary Instruction

1. Teacher provides description, explanation, or example of new term
2. Students restate explanation of the term in their own words.
3. Students create nonlinguistic representation of term.
4. Students periodically do activities that help them add to their knowledge of vocabulary terms.
5. Periodically, students are asked to discuss terms with one another.
6. Periodically, students are involved in games that allow them to play with the terms.

Make a point of including diagrams and drawings on your graphic devices to help students understand vocabulary terms, says Sue Woodruff, SIM Professional Developer. The examples and nonexamples sections of the Concept Diagram, for example, offer prime opportunities to incorporate illustrations.

“What we know about adolescents is as kids get those processes, they really start to interact. One supports the other: As I listen, I learn; I’ve learned something, so now I want to talk about it,” explains Sue.

Talking helps to clarify thinking, pushes students to read a little more, and then maybe inspires them to write about what they’ve learned. Even something as informal as writing an e-mail to a friend can help solidify the meaning of a word for a student.

Related SIM interventions:

- Cooperative Thinking Strategies
- The Content Enhancement element of co-constructing graphic devices through classroom discussion

7. *Effective vocabulary instruction involves playing with targeted words.*

This is the place for games. As students learn and start integrat-

ing pieces of knowledge, using games can make learning exciting and fun and can arouse curiosity. *Strategram* has featured many teacher-tested game ideas over the years. For a complete index to past issues of *Strategram*, visit www.kucrl.org/publications/strategramindex.html.

8. *Effective vocabulary instruction focuses on words with the greatest likelihood of increasing academic success.*

Marzano’s book includes a list of content-specific words, identified by grade level, that are important for students to know based on a survey of standards across the country.

“Word frequency is not necessarily a reliable indicator” of a word’s importance, says Sue. “You would be far better off in thinking about vocabulary and looking at words that really are going to focus on academic achievement and academic success.”

New textbook focuses on math, struggling learners

Pam Hudson and Susan Miller, both members of the SIM Professional Development Network, have recently published a textbook, *Designing and Implementing Mathematics Instruction for Students with Diverse Learning Needs*, available from Allyn & Bacon Education Publishing. The

book integrates explicit teaching practices that have proven effective for students with disabilities with current math standards. The text draws on the instructional methodology found in the SIM’s *Strategic Math Series*.

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Check our web site for information about the Strategic Instruction Model, the Center for Research on Learning, our current projects, and more.

New on [kucrl.org](http://www.kucrl.org):

SIM institutes scheduled for 2006:
http://www.kucrl.org/sim/prof_dev.html

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