Mapping your way to success in content area classes

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Challenges in word study

- As teachers we know students must learn topic-related words in order to understand/retain new concepts in different content area classes.
- In the 1940’s and 1950’s, vocabulary knowledge studies focused on recall and recognition, usually through one trial learning followed by a quiz asking participant to list words when given the meaning or to recall and to identify the correct word in a multiple choice test.
- Current research shows us that depth matters. Knowing the multiple meanings of words and reasoning a word’s meaning in context matters.

Intentional Vocabulary Instruction

- To improve the quality of vocabulary instruction in classrooms, content area teachers should maintain a focus on five big ideas:
  - Make it intentional
  - Make it transparent
  - Make it useable
  - Make it personal
  - Make it a priority

For the purpose of this presentation, we are going to focus on Make it personal

Make it personal

- In this strand students are given the opportunity to use new vocabulary in a novel situation. This component is critical if students are to move beyond passive participants and incorporate new subject matter word learning into their funds of knowledge. One strategy to achieve this goal is to use semantic mapping.

Semantic Maps

- Also known as concept/definition maps are used to help students gain understanding of a concept or a vocabulary word.

Benefits of using semantic maps in your classrooms

- Semantic maps give students the opportunity to think about the connections between terms being learned.
- Organize students’ thoughts and visualize the relationship between key concepts in a systematic way.
- Reflect on their understanding.
- Naturally, concept mapping integrates content area learning and vocabulary instruction, and it can be particularly helpful for ESL students.
- Semantic maps can be used as a prereading and as a postreading activity.
How do I prepare to teach semantic maps?
• Step 1 - Select key terms
  ➢ Read your curriculum and select words that are important and critical to the understanding of each unit. Ideally, you should assess students' familiarity with the selected words.
  ➢ Keep your concept maps manageable by selecting a short list of about 8 to 12 terms.
• Marzano provides academic vocabulary word lists for 11 subject areas at:

How do I prepare to teach semantic maps?
• Step 2 – Determine where in the unit or curriculum the maps will be embedded
  ➢ Concept maps work best when applied in addition to a hands-on activity. Keep in mind the following criteria to find the most appropriate place in a unit:
    • A sub-goal of the unit is achieved and there is a body of knowledge to be assessed.
    • A critical point of instruction is achieved and it's important to assess students' understanding before continuing.
    • A critical shift of students' understanding is expected and critical feedback to students is beneficial.

How do I prepare to teach semantic maps?
• Step 3 – Create the activity
  ➢ For maximum insight into students' understanding design an activity where students are only provided with key terms.
  ➢ It is also recommended to give students the opportunity to review and revise the map.

Example of a semantic map

Implementing semantic maps in your classrooms
• Step 1 – Train your students
  ➢ Demonstrate to students how to use a map using a very familiar topic, such as foods or bicycles. Make sure that during demonstration, you are thinking out loud how you are coming up with these words.
• Step 2 – Complete a map with the class
  ➢ This is another opportunity to demonstrate to your students how to use a map. If you want to achieve good results you have to put in the time to demonstrate to your students.

Implementing semantic maps in your classrooms
• Step 3 – Give students the opportunity to complete a map with 3 – 4 peers
  ➢ Give students a blank map with terms they have learned in past units and have them complete it together. Consider heterogeneous groups of students at different reading levels.
  ➢ Assess their progress in small groups. Ask students to share their maps with other groups and find similarities/differences between maps.
  ➢ Consider a whole class discussion on the maps and a creation of one map with every groups' input.

Implementing semantic maps in your classrooms
• Step 4 – Give students the opportunity to work individually on a map and give them specific feedback
  ➢ Focus on the following criteria
    • Complexity of the maps: Do the maps have simple structures or complex networks? Experts students have a tendency to create highly intricate maps and novice students usually design simpler structures.
    • Existence of the most important propositions: These propositions should reflect connections between main ideas. If a student misses the most important connections in a unit he might not have understood them yet.
Implementing semantic maps in your classrooms

- The quality of propositions: The existence of these important propositions indicates that students know that relationships among these concepts exist. To examine the level of these relationships, use a four level rubric. For example, in a science class you can use the following rubric:
  - 0 – mass is an object equal to matter (scientifically irrelevant)
  - 1 – Mass is related to matter (partially incorrect)
  - 2 – Mass measures matter (scientifically correct but thin)
  - 3 – Mass is the amount of stuff in matter (scientifically correct)

Examples of student made semantic maps


Semantic Maps: English Class

- Source: Nancy Frey and Douglas Fisher from Learning Words from Inside Out

Examples of student made semantic maps


Semantic Maps: English Class

- Source: Nancy Frey and Douglas Fisher from Learning Words from Inside Out

Semantic Maps: Math Class

- Source: Keystone Area Education Agency

Semantic Maps: Math Class

- Source: Keystone Area Educational Agency
Let’s practice

- In pairs discuss the topic of Spring Break and fill out a semantic map.

References


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