



Using Graphic Organizer to Teach Science Vocabulary

Objective: To teach students science/photosynthesis content area vocabulary words using a graphic organizer

Setting and Materials:

Settings: science classroom

Materials:

- Semantic Feature Analysis (SFA) graphic organizer labeled with important vocabulary words and important ideas for each student
- Large group display for group discussion (enlarged on screen or drawn on board)

Content Taught

1) Students are taught relationships of concepts and specific vocabulary in science using a graphic organizer based on SFA

Teaching Procedures

1. Pre-read the assignment that will be given to students and identify the main ideas
2. List in a short phrase or a single word the vocabulary that represents each main idea
3. Examine the list and identify (a) words representing the big ideas and (b) which words represent details related to the big idea
4. Organize the vocabulary into a graphic organizer with the big ideas as column headings and the important vocabulary as the row headings
5. Make copies of the graphic organizer for students
6. Before students read the assignment, give them a copy of the graphic organizer and introduce the topic of the assignment and define each concept and vocabulary word
7. Display the graphic organizer, pointing to and defining each big idea word or phrase. Encourage class discussion (experiences or examples) of each term
8. Point to and define each subordinate word or phrase
9. Guide class to determine relationships between the big and subordinate ideas
10. The following symbols are used delineate a relationship between the terms:
 - i. A plus (+) sign represents a positive relationship
 - ii. A minus (-) sign represents a negative relationship
 - iii. A zero (0) represents that there is no relationship

- iv. iv. A question mark (?) represents that that no consensus among the class can be reached and more information is needed
 - v. v. A 0-5 (0-negative relationship, 3-more information is needed, 5- positive relationship) point Likert scale may be used to delineate relationships
11. Have students fill in the chart
 12. Students will read the assignment and confirm their thinking or determine a relationship for the concepts where consensus could not be reached
 13. After students read, review the graphic organizer again as a class to answer any remaining questions and fill in gaps

	Caron Dioxide	Oxygen	Chlorophyll	Chloroplasts	Photosynthesis	Carbohydrate
How sun light effects						
How plant mass effects						
Plant organ						
Raw Materials						
Environmental conditions needed						
Role of the water cycle						
Products of photosynthesis						
Symbols for compounds						

Figure adapted from Anders, P.L., & Bos, C.S. (1986)

Evaluation

Students are evaluated based on their comprehension of the assigned text, including the targeted vocabulary words.

Lesson Plan Based on:

Anders, P.L., & Bos, C.S. (1986). Semantic Feature Analysis: An interactive strategy for vocabulary development and text comprehension. *Journal of Reading*, 29 (7), 610-661. Retrieved from <http://www.istor.org/stable/40029687>

Common Core Standards:

CCSS.ELA-Literacy.SL.11-12.4

Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

CCSS.ELA-Literacy.SL.11-12.6

Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

Modifications:

Make laminated cards with the +, -, 0, and ? symbols for students with motor impairments.

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