at American Institutes for Research



# Word Knowledge: Semantic Feature Analysis

### College- and Career-Ready Standards Addressed: RL.6.4, RI.6.4, R.10

- Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.
- Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
- Read and comprehend complex literary and informational texts independently and proficiently.

Objective: Students will learn how to complete a semantic feature grid to help them understand connections between words in text.

### Materials

- One short text at appropriate instructional level.
- Whiteboard, overhead, or some type of visual projector for the class to view during instruction.
- Pencil.
- Paper or notebook.
- Semantic Feature Analysis Sheet (see below).

### Suggested Schedule and Group Size

Schedule: Daily, no more than five minutes to 10 minutes per session.

**Recommended group size:** Small group, although exact group size will vary depending upon grade level.

Note: The following script is intended as a model.

#### Activity

| <b>Intervention Principle</b>   | Sample Script and Procedures   |
|---|--|
| Use precise, explicit<br>language to introduce the<br>lesson and its purpose. | We must know the meanings of the words we read in order to<br>understand a text, and we can use strategies to help us learn the<br>meanings of new words. Good readers use semantic feature<br>analysis to help them organize connections between words and<br>information in text. You can use semantic feature analysis to<br>connect your background knowledge to new words or information. |

Adapted with permission from the Meadows Center for Preventing Educational Risk. Denton, C. A., Bryan, D., Wexler, J., Reed, D., & Vaughn, S. (2007). *Effective instruction for middle school students with reading difficulties: The reading teacher's sourcebook* (pp. 155–167). Austin, TX: Meadows Center. Retrieved from <a href="http://www.meadowscenter.org/files/resources/">http://www.meadowscenter.org/files/resources/</a> RTS\_Complete.pdf

|   | What does semantic feature analysis do? (Helps us to organize the connections among items of information in text by connecting background knowledge to new words.)   |  |  |  |  |
|---|--|--|--|--|--|
|   | That's right. Today, we are going to focus on creating a semantic feature analysis grid. Then, we will use our grid to help us organize information from text.   |  |  |  |  |
| Activate background<br>knowledge and connect it to<br>information in the lesson.                        | During our lesson today, we will learn how to use semantic feature<br>analysis to help us organize information from text. Like semantic<br>mapping, semantic feature analysis uses a graphic organizer to<br>show relationships between words. This time, the graphic<br>organizer is a grid. We will practice using a semantic feature<br>analysis grid when we read today.   |  |  |  |  |
|   | What is a semantic feature analysis grid? (A visual illustration or grid that organizes information to help us understand the connections between words.)  |  |  |  |  |
| Use study aides such as<br>graphic organizers to help<br>students learn the steps of a<br>new strategy. | Introduce the Semantic Feature Analysis Sheet to serve as a guide for<br>the students to use as they learn how to create a semantic feature<br>analysis grid and use the strategy of semantic feature analysis to<br>organize essential information from a text. On the analysis sheet,<br>review the organization of the grid.  |  |  |  |  |
|   | The <i>Semantic Feature Analysis Sheet</i> includes a nearly complete<br>gird on the concept of mammals. The grid includes key words and<br>features or characteristics of mammals. In the grid's left column<br>are words that relate to the concept. In its top row are features of<br>the concept.  |  |  |  |  |
|   | This semantic feature analysis grid includes examples of mammals<br>in the left column and features of mammals in the top row. The<br>grid displays the features that are applicable to the words by using<br>a plus sign (+) to indicate that the feature is present or a minus sign<br>(-) to indicate that the feature is not present. For example, a bear is<br>an example of a mammal. The features of a bear are marked by a<br>plus sign if the bear has that feature or by a minus sign if a bear<br>does not have that feature. |  |  |  |  |
| Use modeling to demonstrate<br>how to implement the<br>strategy.  | Later in class you will create a semantic feature analysis grid about<br>a new topic that is in your text for today's reading; but let's<br>practice with this grid first.   |  |  |  |  |
|   | As a class, let's all read the features across the top row of the grid.<br>After we read a feature, let's define what the feature is. What is the<br>first feature? ( <i>Has hair or fur.</i> )  |  |  |  |  |
|   | Yes, "has hair or fur." Does a bear have hair or fur? Yes, so we<br>write a plus sign to indicate that a bear has hair or fur. Some bears<br>have different color fur. Polar bears have white fur. Grizzly bears<br>have brown fur. Black bears have black fur. Panda bears have<br>white and black fur.   |  |  |  |  |

|   | What is the second feature? (Vertebrate.) Who can tell me what a vertebrate is? (An animal that has a backbone.) That's right, a vertebrate is an animal that has a backbone. Is a bear a vertebrate? (Yes.)  |  |  |  |  |  |
|---|---|--|--|--|--|--|
|   | That's right, so we write a plus sign to indicate that a bear is a vertebrate. A bear has a backbone and a skeleton. If a bear did not have a backbone, it would be called an invertebrate.   |  |  |  |  |  |
| Provide opportunities for practice with monitoring and    | Group the students in pairs and provide time for the students to discuss<br>the features on the grid.   |  |  |  |  |  |
| feedback.   | Work with your partner to read the rest of the features across the top row of the grid. Try to define each feature with your partner's help.  |  |  |  |  |  |
|   | Allow the students adequate time to read and discuss the definitions of<br>the feature words or phrases. While students read, monitor their<br>reading. Provide students with corrective feedback if they do not read<br>or define the words correctly. If some students finish while others are<br>still reading, prompt them to move on to the features of a bat.                           |  |  |  |  |  |
| Gradually shift responsibility for completing the task to | <i>After partners are finished, allow pairs to share which feature words they knew.</i>   |  |  |  |  |  |
| students.   | Now let's look at the human example. We need to answer the first three boxes to complete the row. Do humans have hair or fur? ( <i>Yes.</i> ) Write a plus sign to indicate that a human has hair. Work with your partner to finish the next two features.  |  |  |  |  |  |
|   | <i>Provide students a short time to complete the next two features. Allow students time to share responses.</i>   |  |  |  |  |  |
|   | Distribute the text you have chosen. Read the title and the first paragraph together. Explain to the students that they will create their own semantic feature analysis grid from the information in the text.  |  |  |  |  |  |
|   | I will begin by reading the title of our text. Partners check to make<br>sure that your partner is in the correct spot to follow along. Then<br>we'll read the first paragraph together. Let's begin.   |  |  |  |  |  |
|   | After reading the first paragraph, ask students to brainstorm words<br>related to the topic of the text. Write appropriate student responses on<br>the board or projector. Ask questions to prompt students to say key<br>words or examples from the text. Prompt students to think of synonyms<br>to extend their vocabulary of descriptor words to include.                                 |  |  |  |  |  |
|   | Now we'll use the blank <i>Semantic Feature Analysis Grid</i> to create a grid from the information in the text. With your partner, write the topic or concept of the text on the line above the grid. Brainstorm possible words that relate to the topic to include in the grid's left column. Then discuss possible features or characteristics that you can include in the grid's top row. |  |  |  |  |  |

| Allow opportunities for<br>independent practice.<br>Monitor and provide<br>feedback to check for<br>understanding. | Allow students time to write related words and features. Depending on<br>the length and complexity of the text, it may be necessary to read<br>further to allow for deeper understanding of possible words to include.<br>While students discuss possible ideas for words and features, monitor<br>their brainstorming. Provide students with corrective feedback if they<br>do not identify appropriate words or features. If some students finish<br>while others are still writing, prompt them to begin filling in the grid<br>with plus and minus signs as they think appropriate.              |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  | <i>After partners are finished, allow pairs to share the words and features they included in their grids. Ask students to explain their thinking.</i><br><b>Now you will work independently to complete the rest of the grid.</b><br><b>You should continue to write key words or examples in the left</b>   |  |  |  |  |  |
|  | column. Also, you may add other features to describe the concept.<br>Complete as much of the grid as you can by writing plus signs to<br>indicate that features are present or minus signs to indicate that<br>features are not present.   |  |  |  |  |  |
|  | Provide students with guidance and support as needed to identify<br>appropriate words and features. Prompt students to indicate if a<br>feature is present or not. If students do not know if a feature is present,<br>explain how they might use the text to help them decide. If a feature is<br>not discussed in the text and requires students to use their prior<br>knowledge, prompt students to think about a synonym or a definition of<br>the feature to help them decide. If students experience difficulty, allow<br>them to ask for peer support while you are assisting other students. |  |  |  |  |  |
|  | Remember, semantic feature analysis can help us to organize<br>information in text. You can use the <i>Semantic Feature Analysis</i><br><i>Grid</i> to relate words to features or characteristics of a concept you<br>read about in text.   |  |  |  |  |  |
| Error Correction   |  |  |  |  |  |  |
| Provide immediate and<br>explicit error correction.<br>Have the students practice<br>the correct responses.        | <ul> <li>If students make errors while reading the words aloud, provide immediate corrective feedback. Say the correct pronunciation of the words and have students repeat the correct responses.</li> <li>If students incorrectly define a feature, explain the correct</li> </ul>  |  |  |  |  |  |
|  | <ul> <li>definition of the feature.</li> <li>If students do not share the definition of a feature, explain the definition of that feature to ensure that all features and their definitions are discussed.</li> </ul>  |  |  |  |  |  |

### **Semantic Feature Analysis Sheet**

This handout will serve as a guide for students as they learn how to use semantic feature analysis. The grid includes key words (left column) that relate to the features of a topic in the text (top row). Entries in the top row should be edited to coincide with the text to help students organize the information in the most appropriate category headings.

|          | Has hair or fur | Vertebrate | Lives on land<br>(terrestrial) | Lives in water<br>(aquatic) | Able to fly | Herbivore (plant<br>eater) | Carnivore<br>(meat/animal<br>eater) | Omnivore (eats<br>plants and<br>animals) | Marsupial<br>(pouch) | Produces milk |
|----------|-----------------|------------|--------------------------------|-----------------------------|-------------|----------------------------|-------------------------------------|--|----------------------|---------------|
| Bear     | +               | +          | +                              | _                           | _           | —                          | _                                   | +  | —                    | +             |
| Bat      | +               | +          | +                              | _                           | +           | +                          | +                                   | _  | _                    | +             |
| Lion     | +               | +          | +                              | _                           | _           | _                          | +                                   | _  | _                    | +             |
| Seal     | +               | +          | _                              | +                           | _           | _                          | +                                   | _  | _                    | +             |
| Kangaroo | +               | +          | +                              | _                           | _           | +                          | _                                   | _  | +                    | +             |
| Whale    | +               | +          | _                              | +                           | _           | _                          | +                                   | _  | _                    | +             |
| Ferret   | +               | +          | +                              | _                           | _           | _                          | +                                   | _  | _                    | +             |
| Human    |                 |            |                                | _                           | _           | _                          | _                                   | +  | _                    | +             |
|          |                 |            |                                |                             |             |                            |                                     |  |                      |               |
|          |                 |            |                                |                             |             |                            |                                     |  |                      |               |

Sample Semantic Feature Analysis Grid: Examples and Features of Mammals

## Semantic Feature Analysis Grid

| Topic: |  |  |  |  |  |  |  |  |  |  |
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