

The Linking Steps

The Linking Steps, which have been designed with students' learning needs in mind, are the procedures a teacher uses to present the content of the Concept

Diagram in an interactive way. The steps are listed here in an order that a number of teachers have found to be effective, but they can be used in any order.

Feel free to adjust the order to fit your teaching style, the characteristics of a given lesson, and the needs of your students.

STEP 1

Convey the Concept Name

In the first step, the concept to be analyzed in-depth is named. The choice of the Targeted Concept is determined by what is considered important for all students to understand. For example, important concepts include those concepts that are referred to frequently across chapters and units or that underlie an understanding of other concepts or bodies of information. As this step is presented, Section 1 of the Concept Diagram is filled in (see Figure 1, p. 6). At the end of Step 1, students should be able to name, in one or two words, the Targeted Concept.

STEP 2

Offer the Overall Concept Name

In the second step, the larger concept or category to which the Targeted Concept belongs is named, and the relationship between the Targeted Concept and the Overall Concept is explained. This step serves two purposes: (a) it helps students understand where the

target concept fits into a bigger picture of relationships and groups of content information; and (b) it establishes a critical component of thinking, that is, the understanding that information does not stand alone but forms networks and hierarchies with other information. As this step is presented, Section 2 of the Concept Diagram (see Figure 1, p. 6) is filled in. At the end of Step 2, students should be able to name the overall Concept and explain how it is related to the Targeted Concept.

STEP 3

Note Key Words

Students sometimes do not realize how much they know about a concept or topic. In Step 3, relevant knowledge about the Targeted Concept is retrieved at the outset to provide students with a body of information they can draw from as the Concept Diagram is constructed. For this purpose, a Key Word List is constructed in Section 3 of the Concept Diagram or, if more space is needed, on the chalkboard or an overhead transparency through a brainstorming process. Students are asked to contribute items to the list that relate to the Targeted Concept and to base their responses on assigned readings, previous lessons, or background knowledge. The teacher also contributes items to the list to fill in gaps in the students' responses. Next, the teacher and students combine like items in the list and identify those items that might be examples of the concept and those that might be characteristics of the concept. Symbols (i.e., ovals for examples and underlining for characteristics) can be used in this identification process. At the end of this step, students should be aware of key ideas related to the concept and how they are related to the concept.

STEP 4

Classify the Characteristics

In the fourth step, questions along with references to the Key Word List are used to help students identify characteristics

of the Targeted Concept and to classify all identified characteristics as "Always," "Sometimes," and "Never Characteristics." At this point, inaccurate understandings about a concept might be identified and clarified. During the discussion, Section 4 of the Concept Diagram is filled in. At the end of this step, students should be able to explain the three types of characteristics associated with the Targeted Concept.

STEP 5

Explore Examples

In the fifth step, items on the Key Word List that students can quickly classify as examples and nonexamples of the Targeted Concept are checked against the characteristics of the concept and written in the ovals in Section 5 of the Concept Diagram. Additionally, items proposed by either the teacher or the students about which the students are uncertain can be placed in the Testing Ground, and time can be allowed for matching the item with each of the characteristics. This step gives students an opportunity to carefully consider where a proposed example should be placed. At the same time, it allows the teacher to guide the thinking process. To qualify as an example, an item must possess all of the Always Characteristics and none of the Never Characteristics. If it is missing one of the Always Characteristics or if it has just one of the Never Characteristics, it is classified as a nonexample. At the end of this step, students should be confident that the examples and nonexamples that they have named and classified are placed appropriately on the diagram; they should also be able to explain why they were placed in a certain way.

STEP 6

Pactice with a New Example(s)

In the sixth step, small groups or individual students can check additional items that might be members of the concept by linking each of the charac-

teristics that must always, sometimes, and never be present against the characteristics of the proposed items. In other words, in this step, students have an opportunity to independently practice their use of the reasoning process in classifying examples. Subsequently, their results can be discussed, and any mistakes or misunderstandings can be corrected. Final decisions may be reflected on the Concept Diagram by entering the examples and nonexamples into Section 5. At the end of this step, students should be able to explain why the new examples and nonexamples have been classified as such.

STEP 7

Tie Down a Definition

In Step 7, a definition of the concept is constructed in Section 7 of the Concept Diagram using all the characteristics that must be present in all members of the concept class. Here, students can evaluate their product by making sure that the definition is expressed in the form of a complete sentence and that it names the Targeted Concept, the Overall Concept, all of the Always Characteristics, as well as any special rules that relate the characteristics to each other.

To remember the seven Linking Steps, you can use the acronym, **CONCEPT**, created by the first letters of the steps. Since the word **CONCEPT** is part of the name of the Concept Mastery Routine, you will be able to associate it readily with the steps of the routine shown above or with the abbreviated steps listed on the blank form of the Concept Diagram on p. 34.

Alternatively, you can transform the steps into your own words and create your own acronym for better recall. (In this case, be sure to include the meaning and content of each step in your routine.) Teachers have found that the acronym helps them plan for a new concept and present the routine.

CONCEPT DIAGRAM

③ Key Words

① CONVEY CONCEPT

② OFFER OVERALL CONCEPT

③ NOTE KEY WORDS

④ CLASSIFY CHARACTERISTICS

Always Present

Sometimes Present

Never Present

①

②

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_____	~~~~~	-----
_____	~~~~~	-----
_____	~~~~~	-----
_____	~~~~~	-----
_____	~~~~~	-----
_____	~~~~~	-----
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⑤ EXPLORE EXAMPLES Examples:

Nonexamples:

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_____	-----
_____	-----
_____	-----
_____	-----
_____	-----
_____	-----
_____	-----

⑥ PRACTICE WITH NEW EXAMPLE

⑦ TIE DOWN A DEFINITION