

**Performing a Nonfiction Content Analysis: Facts, Concepts, and Generalizations\***

One of the best ways to plan for content area instruction is to perform a content analysis. The purpose of a **content analysis** is to help teachers identify the important *facts*, *concepts*, and *generalizations* presented in a given unit of study; an essential process for establishing curriculum objectives and learning activities for students (Martorella, 2000). By carefully analyzing new information to be presented, the teacher is able to locate important information, discard useless trivia, and determine which areas of the unit require deeper development for students. As a result of this process, teachers are able to develop a cohesive unit of study that communicates new knowledge to students and helps build new knowledge. In explaining the significance of analyzing informational text prior to teaching, Martorella (1985) remarked:

What we regard as an individual's knowledge consists of a complex network of the elements of reflection. The fact of our date of birth, for example, is linked in some way to our concept of *birthday*. As further reflection occurs, we incorporate the new information into our network and it becomes related with the old knowledge. (pp. 69–70) [*Authors' note*: This is the stage at which a new generalization is created.]

*Facts* are individual bits of information, or details, presented in a unit under study. In a science unit dealing with our solar system, some of the facts might be on the atmosphere, satellites, and Saturn. For a history unit pertaining to events surrounding the life of Dr. Martin Luther King, Jr., possible facts found in the readings might relate to the March on Washington, sit-ins, and Civil Rights legislation.

*Concepts* are categories into which we group all facts or phenomena known through our experiences (Martorella, 2000). In the previous example of a unit about the *solar* system, satellites and Saturn could be grouped into a single concept called *objects orbiting the sun*. Concepts are usually stated in a simple word, phrase, or sentence that captures the main idea.

A *generalization* is a principle or conclusion that applies to the entire class or sample being examined (T. L. Harris & Hodges, 1995). A generalization is teacher generated,

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written in the language of the students, and usually expressed in complete sentences. Generalizations organize and summarize a large amount of information, sometimes an entire unit. Two examples are:

*There are many reasons why Harry Truman, perhaps an unlikely president, chose public life.*

*Our solar system is made up of many satellites.*

Once facts, concepts, and generalizations have been identified, the teacher should organize them into some form of graphic representation: a traditional outline, semantic web, structured overview, or other preferred form. Arranging information structurally allows the teacher to analyze the unit and begin making decisions about organizing for instruction. One typical query follows:

**Question:** *What should a teacher do if the adopted textbook contains information that is not relevant to any of the major concepts?*

**Answer:** *If the information helps build background understanding for the students that are important to the facts, concepts, and generalizations taught, then the teacher should keep and use that information. If the information serves no real purpose, however, it should not be included in unit activities or discussion.*

Figures 13.4 and 13.5 are examples of partially finished content analysis graphic representations by two middle school teachers. Notice that they are essentially schema maps.

## CONSTRUCTING LEARNING TOOLS

Interesting and informative content area units do not come together by accident; they require deliberate planning and certain key ingredients, which can be drawn from the content analysis you have constructed. Tools you can develop directly from the content analysis are *graphic organizers*, *vocabulary-* and *concept-learning activities*, *study guides*, and *expository text response activities*.

### Using Graphic Organizers or *GO! Charts*

**Graphic organizers** (sometimes referred to as *GO! Charts*) are maps or graphs that

summarize information to be learned and the relationships between ideas (Barron, 1969; Alvermann & Phelps, 2001). It provides a means for presenting new vocabulary and its relationship to larger concepts and generalizations (Tierney, Readence, & Dishner, 1990). Graphic organizers are generally used as an introductory instrument to begin a unit of study, are referred to regularly during the course of the unit, and are used as a review instrument near the end of a unit of study.

Constructing a graphic organizer is a simple matter once a content analysis has been completed: Simplify or condense the facts, concepts, and generalizations in the unit by reducing each to a single word or phrase, then arrange them graphically in the same hierarchical pattern as the content analysis. If a thorough content analysis is not possible, however, the following steps can be used to develop a graphic organizer (adapted from Barron, 1969):

1. Identify all facts and vocabulary that are essential to understanding the unit under study, thus forming the bottom layer of information, or subordinate concepts (Thelen, 1984). For the sake of consistency with the content analysis idea discussed earlier in the chapter, we refer to these subordinate concepts as *facts*.

2. Next, group related facts into clusters. These clusters form a second layer of understanding in the unit we refer to as *concepts*.

3. Finally, concepts that relate to each other should be grouped under the major heading for the unit we refer to as a *generalization*. Most often, the unit will have only a single generalization, but occasionally, two or more generalizations may be needed, especially for large or complex units.

## EXAMPLES OF CONTENT ANALYSES FROM MCLA YEAR 1

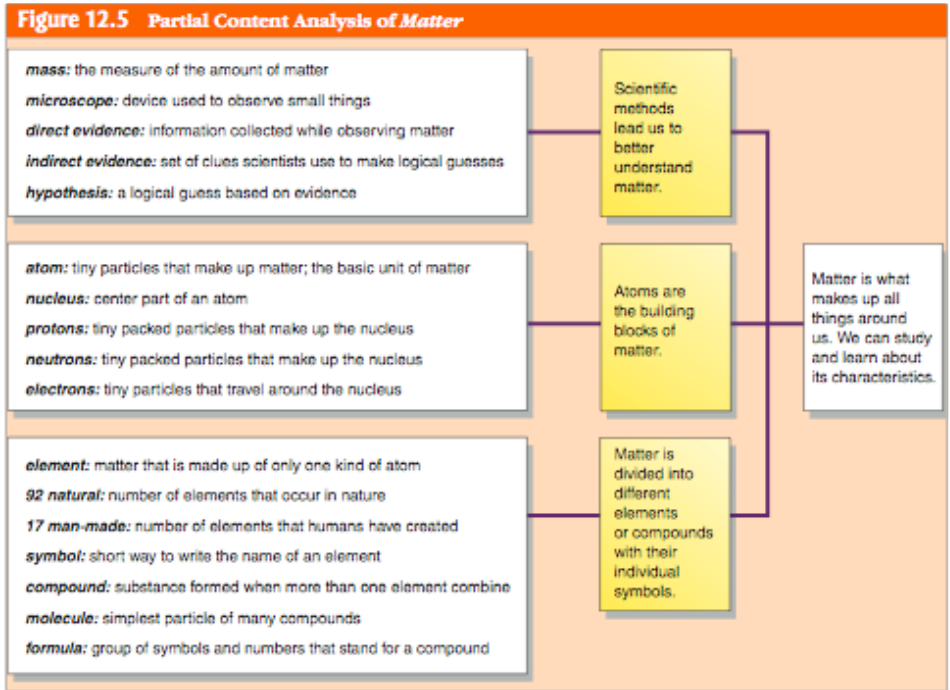
**SOCIAL STUDIES- Content Analysis:** *Durban South Africa, National Geographic Reading Expeditions*  
7.2.spi.1, 7.2.spi.2

Analyze the relationship between the use, availability, and accessibility of resources and a country's standard of living, including the role of technology in resource acquisition and use

7.2.spi.1. recognize basic economic concepts (i.e. imports, exports, barter system, tariffs, closed and emerging markets, supply and demand, inflation, recession, depression).

7.2.spi.2. define renewable and nonrenewable resources+

<i>Facts</i>	<i>Concepts</i>	<i>Generalizations</i>
<b><i>A Safe Place for Ships</i></b>		
Durban = country in South Africa on Indian Ocean Warm, sunny climate Different, beautiful flowers Many varieties of animals live here Game reserves	Great climate for vegetation and animal life	Durban is a country rich in floral and animal resources.
Zulus live in area, had animal skins and ivory Durban has good harbor = a safe place for ships Many ships bring goods to trade	Beginning of trade	Because of its good harbor and the resources to trade, Durban grew into a city.
Farmers grow lots of sugar. Many people from India came to work in industry. 5000 ships every year in harbor Ocean near Durban has great shipping lanes.	Factors for trade present	Resources, plus labor, plus the location of a great harbor have contributed to Durban becoming the largest port in Africa.
<b><i>A Center for Trade</i></b>		
Spices from India Dates from Saudi Arabia Pistachios from Iran	Vast variety of imported goods	Importation of goods from spice market are nearly all grown somewhere else and imported.
Farmers grow sugar can around Durban Bananas are grown	Cash crops	Durban is the biggest sugar port in the world.
Ships carry wood chips, rice, citrus products, coal, steel, and chemicals Passenger boat terminal Vacationers have fun at the harbor	Variety of trades at harbor	The entire harbor is used in a variety of ways to market different goods and services.
<b><i>A Great Place to Visit</i></b>		
Sunny climate Sandy beaches = Golden Mile Surf, sailboard, swim, water slides, fountains, restaurants	Great climate for tourism and vacationers	The climate and animal resources draw tourist trade.
Sea World Snake Park – crocodiles, 80 kinds of snakes Game Reserves – elephants, rhinos, hippos	Many different exotic animals thrive	The climate and animal resources draw tourist trade



Courtesy of David Harlan, Fifth Grade Teacher, Sage Creek Elementary School, Springville, UT.

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## MATH-- Content Analysis

*from MCLA CAP #4 Fall 2006 (Math)*

Generalization: There are different types of functions, and each function can be represented in various ways.

Concept: A sequence of numbers with a pattern can be represented as a function.

- Details:
1. A sequence is an ordered list of numbers.
  2. When a sequence follows a pattern, the value of each number in the sequence depends on the number's place in the list.
  3. When a sequence follows a pattern, the numbers in the sequence are the output values of a function.
  4. The function is the rule that tells you the number in the sequence based on its place in the list.

Concluding sentence: A function is a rule that represents the pattern of a sequence of numbers.

Concept: A function can be represented in a graph.

- Details:
1. The set of input values of a function is the domain.
  2. The set of output values is the range.
  3. A graph shows how data change and relate to each other. A graph of a function shows how the domain is related to the range.
  4. A graph of a function can be a curve or line that shows continuous data. A graph of a function can also show only points.

Concluding sentence: A graph represents the relationship between the input (domain) and output (range) of a function.

Concept: One type of function is a linear function.

- Details:
1. The graph of a linear function is a nonvertical line.
  2. A linear function can be represented with a graph or an equation.
  3. The solutions of a linear equation are the points that make up its graph.

Concluding sentence: A linear function is a function whose graph is a nonvertical line.

Conclusion: A function is a rule that represents the relationship between an input and an output. Functions can be represented in graphs. The graph of a function can look like a curve, a line, or separate points. A function whose graph is a line is called a linear function.