

Marzano's Nine Top Strategies (part 1)

- *Similarities and Differences
- *Summarizing and Note Taking
- *Reinforcing Effort and Providing Recognition

Categories of Instructional Strategies That Affect Student Achievement

Category	Average Effect Size	Percentile Gain
Identifying similarities and differences	1.61	45
Summarizing and note taking	1.00	34
Reinforcing effort and providing recognition	.80	29
Homework and practice	.77	28
Nonlinguistic representation	.75	27
Cooperative learning	.73	27
Setting objectives and providing feedback	.61	23
Generating and testing hypotheses	.61	23
Questions, cues, and advance organizers	.59	22

1 Similarities and Differences

Methods for Teaching

- Direct teaching with explicit guidance on identifying similarities and differences
 - If you want to focus on specific examples
- Students-directed activity
 - If you want to stimulate divergence in student thinking
- Using graphic organizers or symbolic form
 - If you want to enhance student understanding of the content

Ways to Utilize Similarities and Differences

- Comparing
- Classifying
- Creating metaphors
- Creating Analogies

Comparing: Identifying similarities and differences between or among things or ideas

Comparison Matrix

Characteristics				
	#1	#2	#3	
1.				Similarities Differences
2.				Similarities Differences
3.				Similarities Differences
4.				Similarities Differences

Similarities & Differences

Comparing: Identifying similarities and differences between or among things or ideas

Comparison Matrix: **Global Issues**

Characteristics: <u>Laws & Political Issues</u>	#1 USA	#2 China	#3 England	
1. Abortion				Similarities Differences
2. Civil Rights				Similarities Differences
3. Immigration				Similarities Differences
4. Gun Control				Similarities Differences

Similarities & Differences

Classifying: Grouping things together that are alike into categories on the basis of their characteristics

Similarities & Differences

Example of Classification

The following characters are from books we have read. Organize these characters into two or more categories and explain the rules that govern each category. Be able to explain the placement of each character.



Scout in *To Kill a Mockingbird*

Atticus Finch in *To Kill a Mockingbird*

Boo Radley in *To Kill a Mockingbird*

Jake Barnes in *The Sun Also Rises*

Brett Ashley in *The Sun Also Rises*

Pedro Romero in *The Sun Also Rises*

Celie in *The Color Purple*

Mr. in *The Color Purple*

Shug Avery in *The Color Purple*



Influential	Helpless	Wise

Similarities & Differences

Creating Metaphors:

The process of identifying a general or basic pattern in a specific topic that appears to be quite different but that has the same general pattern

Two literal items connected by an abstract relationship:

“Love is a rose.”

Literal: Rose...the blossom is sweet to smell but if you touch the thorns they can stick you

Abstract: Something wonderful and you want to go near it but if you get too close you might get hurt.

Literal: Love...makes you happy but the person you love can end up hurting you

Similarities & Differences

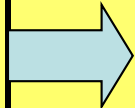
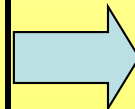
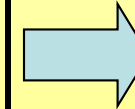
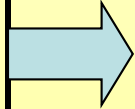
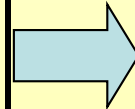
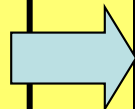
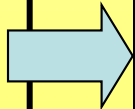
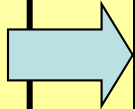
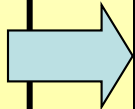
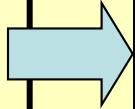
Example of Metaphor

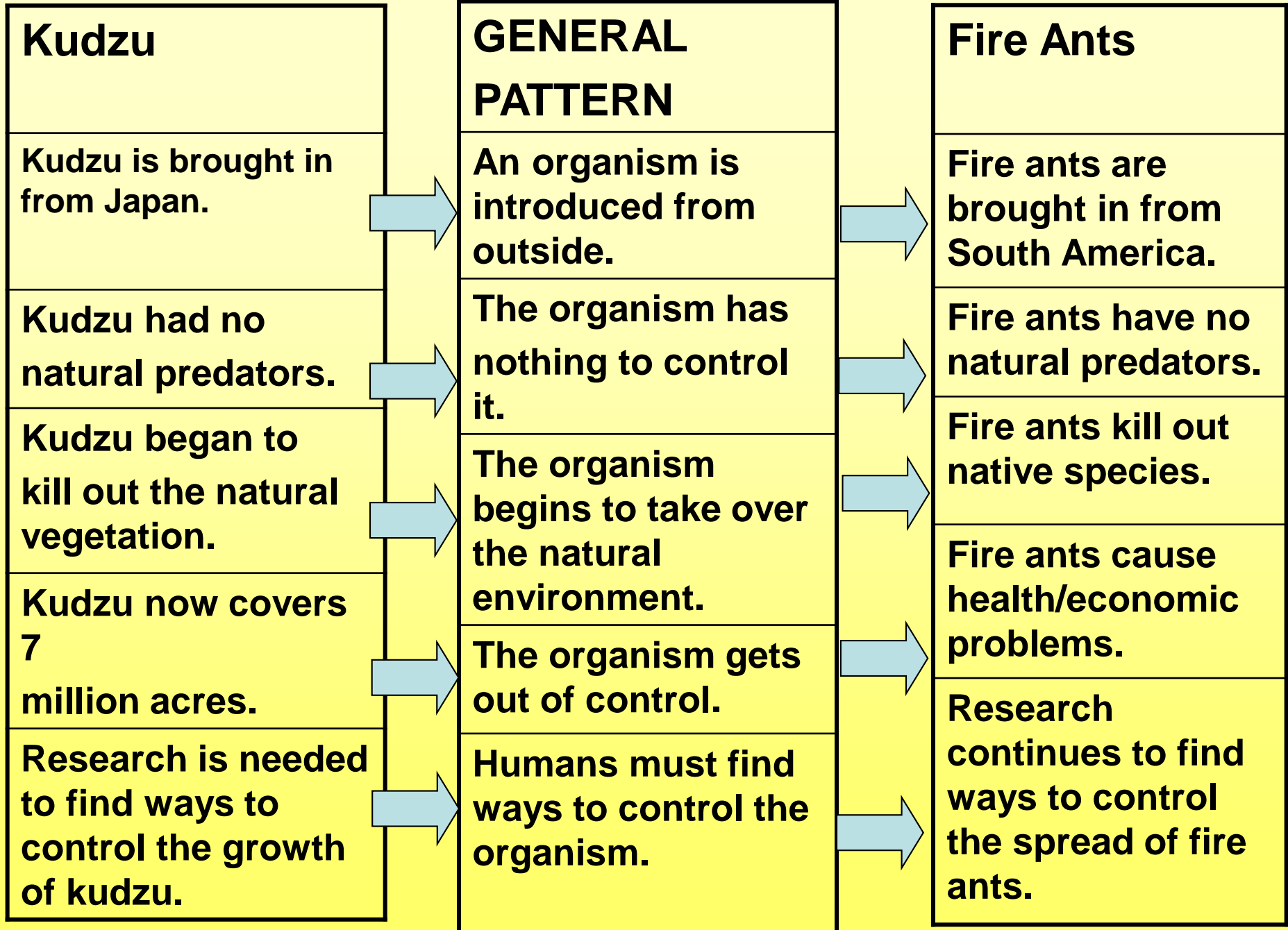
Cell	General, Abstract	Enterprise
Nucleus	The part the runs the system	The bridge
Selectively permeable membrane	Part that keeps out bad things and lets in the good	Transporter Room

Topic

**GENERAL
PATTERN**

Topic





Kudzu

Kudzu is brought in from Japan.

Kudzu had no natural predators.

Kudzu began to kill out the natural vegetation.

Kudzu now covers 7 million acres.

Research is needed to find ways to control the growth of kudzu.

GENERAL PATTERN

An organism is introduced from outside.

The organism has nothing to control it.

The organism begins to take over the natural environment.

The organism gets out of control.

Humans must find ways to control the organism.

Fire Ants

Fire ants are brought in from South America.

Fire ants have no natural predators.

Fire ants kill out native species.

Fire ants cause health/economic problems.

Research continues to find ways to control the spread of fire ants.

Creating Analogies:

Identifying relationships between pairs of concepts; (identifying relationships between the relationships)

Usually done in A is to B as C is to D format

- **Teacher directed**: give an example and have students explain the relationship
 - Thermometer is to temperature as odometer is to distance
- **Student directed**: teacher provides the 1st pair and have students provide the 2nd pair
 - Robert Frost is to poetry as _____ is to _____

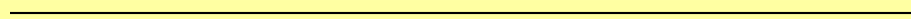
Graphic Organizer for Analogies



Is to



relationship



as



Is to



Similarities & Differences

2 Summarizing and Note Taking

Generalizations

1. Students must delete some information, substitute some information, and keep some information
2. Students must analyze at a fairly deep level
3. Being aware of explicit structure on information helps summarizing

Example of Summarizing...

“The Rule Based Strategy”

1. Delete trivial material unnecessary to understanding
2. Delete redundant material
3. Substitute super-ordinate terms for lists (ex. “flowers” for daisies or roses)
4. Select topic sentence or invent one if it is missing

Summary Frames:

A series of questions that the teacher provides to students to highlight the critical elements for specific types of information.

1. The narrative frame
2. The topic-restriction-illustration frame
3. The definition frame
4. The argumentation frame
5. The conversation frame

Example: Narrative Frame

1. Who are the main characters?
2. When and where did the story take place?
3. What prompted the action in the story?
4. How did the characters express their feelings?
5. What did the main characters decide to do?
6. How did the main characters try to accomplish their goal (s)?
7. What were the consequences?

Example: The Topic- Restriction-Illustration Frame

1. T- What is the general statement or topic?
2. R- What information narrows or restricts the general statement or topic?
3. I- What examples illustrate the topic or restriction?

Example: The Definition Frame

1. What is being defined?
2. To which general category does the item belong?
3. What characteristics separate the item from other things in the general category?
4. What are some different types or classes of the item being defined?

Example: The Argumentation Frame

1. What information is presented that leads to a claim?
2. What is the basic statement or claim that is the focus of the information?
3. What examples or explanations are presented to support this claim?
4. What concessions are made about the claim?

Example: The Problem/ Solution Frame

1. What is the problem?
2. What is a possible solution?
3. What is another solution?
4. What solution has the best chance of succeeding?

Example: The Conversation Frame

1. How did members of the conversation greet each other?
2. What question or topic was insinuated, revealed, or referred to ?
3. How did the discussion progress?
 1. Did either person state facts?
 2. Did either person demand a specific action?
 3. Did either person threaten specific consequences if a demand wasn't met?
 4. Did either person indicate that he/she valued something that the other had done?
4. How did the conversation conclude?

Reciprocal Teaching:

Students read passages and do the following:

- Summarizing
- Questioning
- Clarifying
- Predicting

Note Taking...Generalizations

- Verbatim is the least effective
- Notes are considered a work in progress
- Notes as a study guide for tests
- The more notes that are taken, the better
- Present students with a variety of formats for note taking

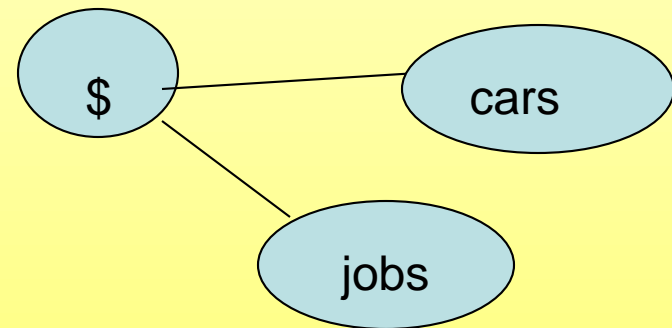
Example of Combination Notes

Student Notes: Combination Technique

Informal Outline:

1. The money that is needed for purchasing a car must come from a job.
2. Jobs are often seen as the main source of financial resources for most teenagers.

Webbing:



Summary statement: In order the students to purchase a car they will probably need a job.

3....Reinforcing Effort and Providing Recognition

1. Not all students realize the importance of believing in effort
2. Students can learn to change their beliefs to an emphasis on effort

Effort and Achievement Rubric

4= excellent, 3= good, 2= need improvement, 1= unacceptable

Effort Rubric	Achievement Rubric
4. I worked on the task until it was completed. I pushed myself to continue working even when difficulties arose. I view difficulties as opportunities to strengthen my understanding	4. I exceeded the objectives of the task or lesson.
3. I worked on the task until it was completed. I pushed myself to continue even when difficulties arose.	3. I met the objectives of the task or lesson.
2. I put some effort into the task but I stopped working when difficulties arose.	2. I met a few of the objectives of the task or lesson, but did not meet others.
1. I put very little effort into the task.	1. I did not meet the objectives of the task or lesson.

Reinforcing effort and providing recognition

Providing Recognition...Generalizations Based on Research

1. Rewards do not necessarily have a negative effect on intrinsic motivation
2. Reward is most effective when it is contingent on the attainment of some standard of performance
3. Abstract symbolic recognition is more effective than tangible rewards

Effective Vs Ineffective Praise

Effective Praise

1. Is delivered contingently
2. Shows particulars of the accomplishment
3. Rewards attainment of specified performance criteria
4. Provides information to students about their competence or the value of their accomplishments
5. Attributes success to effort and ability, implying that similar successes can be expected in the future

Ineffective Praise

1. Is delivered randomly or unsystematically
2. Shows a bland uniformity, made with minimal attention
3. Rewards mere participation without consideration of performance, processes, or outcomes
4. Orients students toward comparing themselves with others and thinking about competing
5. Focuses students' attention on the teacher as an example of external authority that is manipulating them

Reinforcing effort and providing recognition

Final Word on Reinforcing Effort

Reinforcing effort can help teach students one of the most valuable lessons they can learn...the harder you try, the more successful you are.

In addition, providing recognition for attainment of specific goals not only enhances achievement, but it stimulates motivation.