

# MARZANO'S TAXONOMY



## *Processing Knowledge*



### THE COGNITIVE SYSTEM

#### *Using Knowledge*

- Decision Making
- Problem Solving
- Experimenting
- Investigation

#### *Analyzing Knowledge*

- Comparing
- Classifying
- Analyzing Errors
- Inductive Reasoning
- Deductive Reasoning

#### *Comprehending Knowledge*

- Symbolizing
- Integrating

#### *Retrieving Knowledge*

- Recalling
- Recognizing
- Executing

## RETRIEVING KNOWLEDGE

REASONING PROCESS	CUES, TERMS, PHRASES	EXAMPLE TASK
<p><b>Recalling (DK)</b></p> <p><i>Reproducing information on demand</i></p>	<p><i>Recall</i>                      <i>List</i>  <i>Exemplify</i>                <i>Label</i>  <i>Name</i>                        <i>State</i>  <i>Describe, who, what, where, when</i></p>	<p>Label the diagram of the cell</p>
<p><b>Recognizing (DK or PK)</b></p> <p><i>Identifying accurate statements regarding the DK or PK</i></p>	<p><i>Recognize</i>  <i>Select from a list</i>  <i>Identify from a list</i>  <i>Determine if the following statements are true</i></p>	<p>Which of the following did not land on the moon?  A. Neil Armstrong  B. Buzz Aldrin  C. Michael Collins</p>
<p><b>Executing (PK)</b></p> <p><i>Carrying out a mental or physical procedure</i></p>	<p><i>Use</i>                              <i>Make</i>  <i>Demonstrate</i>                <i>Complete</i>  <i>Show</i>                            <i>Draft</i></p>	<p>Provide the next number in the sequence: 7,11,14,18,21, __?.</p>

## COMPREHENDING KNOWLEDGE

REASONING PROCESS	CUES, TERMS, PHRASES	EXAMPLE TASK
<p><b>Symbolizing</b></p> <p><i>Depicting the critical aspects of knowledge in a pictorial or symbolic form</i></p>	<p><i>Symbolize</i>                      <i>Chart</i>  <i>Depict</i>                            <i>Diagram</i>  <i>Represent</i>                      <i>Use a model</i>  <i>Illustrate</i>                        <i>Show</i>  <i>Draw</i></p>	<p>Diagram the structure of the 3 branches of the U.S. government</p>
<p><b>Integrating</b></p> <p><i>Identifying the critical or essential elements of knowledge</i></p>	<p><i>Describe how or why</i>  <i>Describe the key parts of</i>  <i>Describe the effects,</i>  <i>Describe the relationship between</i>  <i>Explain ways in which</i>  <i>Make connections between</i>  <i>Paraphrase, summarize</i></p>	<p>Summarize the main causes of the Civil War</p>

## ANALYZING KNOWLEDGE

REASONING PROCESS	CUES, TERMS, PHRASES	EXAMPLE TASK
<p><b>Comparing</b></p> <p><i>Identifying similarities and differences</i></p>	<p><i>Categorize      Distinguish</i>  <i>Compare          Sort</i>  <i>Differentiate    Discriminate</i>  <i>Compare &amp; Contrast</i>  <i>Create a metaphor</i></p>	<p>Compare and contrast the foreign policy of the U.S. under Presidents Bush and Obama</p>
<p><b>Classifying</b></p> <p><i>Identifying superordinate and subordinate categories to which info belongs</i></p>	<p><i>Classify          Identify categories</i>  <i>Organize        Identify different types</i>  <i>Sort              Identify broader categories</i></p>	<p>Organize the following countries into 3 different regions</p>
<p><b>Deductive Reasoning (Specifying)</b></p> <p><i>Making and defending predictions about what might happen</i></p>	<p><i>Predict          What would have to happen...</i>  <i>Judge            Under what conditions would...</i>  <i>Deduce          Develop an argument for....</i>  <i>Specify          Predict &amp; defend</i></p>	<p>Predict the impact of a 5 degree change in temperature on the Earth</p>
<p><b>Inductive Reasoning (Generalizing)</b></p> <p><i>Inferring new generalizations from known knowledge</i></p>	<p><i>Create a rule, generalization, or principle</i>  <i>Trace the development of...</i>  <i>Form conclusions</i>  <i>What conclusions can be drawn from....</i>  <i>What references can be made....</i></p>	<p>Based on what you know, why do humans build settlements where they do?</p>
<p><b>Analyzing Errors</b></p> <p><i>Identifying logical or factual errors in knowledge</i></p>	<p><i>Identify problems, issues, misunderstandings</i>  <i>Analyze errors in...</i>  <i>Assess, critique</i>  <i>Diagnose</i>  <i>Evaluate, edit, revise</i></p>	<p>Examine candidate's campaign literature to find errors or overgeneralizations</p>

## USING KNOWLEDGE

REASONING PROCESS	CUES, TERMS, PHRASES	EXAMPLE TASK
<p><b>Investigation</b></p> <p><i>Generate a hypothesis and use the assertions and opinions of others to test the hypothesis</i></p>	<p><i>Investigate            Find out about</i>  <i>Research              Take a position on</i>  <i>How did this happen</i>  <i>Why did this happen</i>  <i>What would have happen if</i>  <i>What are the defining features of</i></p>	<p>Research what might happen to the polar ice caps if the temperature of the earth rose 5 degrees</p>
<p><b>Experimenting</b></p> <p><i>Generating and testing a hypothesis by conducting an experiment and collecting data</i></p>	<p><i>Generate and test</i>  <i>Test the idea that</i>  <i>What would happen if</i>  <i>How would you test it</i>  <i>How would you determine if</i>  <i>How can this be explained</i>  <i>Based on this explanation what can be predicted</i></p>	<p>Generate and test a hypothesis about the growth of plants in various medium</p>
<p><b>Problem Solving</b></p> <p><i>Accomplishing a goal for which obstacles exist</i></p>	<p><i>Solve</i>  <i>How would you overcome</i>  <i>Adapt</i>  <i>Develop a strategy to</i>  <i>Figure out a way to</i>  <i>How will you reach your goal under these conditions</i></p>	<p>Determine the best strategy for accomplishing peace in the world</p>
<p><b>Decision Making</b></p> <p><i>Selecting among alternatives that initially appear to be equal and explaining or defending the choice</i></p>	<p><i>Decide</i>  <i>Select the best among the following alternatives,</i>  <i>Which among the following would be best</i>  <i>What is the best way</i>  <i>Which of these is most suitable</i></p>	<p>Choose the best site for a new airport from 3 alternatives. Explain your decision</p>