<table>
<thead>
<tr>
<th>BLOOM’S TAXONOMY</th>
<th>WEBB’S DEPTH OF KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KNOWLEDGE</strong></td>
<td><strong>Recall</strong> – Recall of a fact, information, or procedure (e.g., What are 3 critical skill cues for the overhand throw?)</td>
</tr>
<tr>
<td>“The recall of specifics and universals, involving little more than bringing to mind the appropriate material”</td>
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<tr>
<td><strong>COMPREHENSION</strong></td>
<td><strong>Basic Application of Skill/Concept</strong> – Use of information, conceptual knowledge, procedures, two or more steps, etc. (e.g., Explain why each skill cue is important to the overhand throw. “By stepping forward you are able to throw the ball further.”)</td>
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<td>“Ability to process knowledge on a low level such that the knowledge can be reproduced or communicated without a verbatim repetition.”</td>
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<td><strong>APPLICATION</strong></td>
<td><strong>Strategic Thinking</strong> – Requires reasoning, developing a plan or sequence of steps; has some complexity; more than one possible answer; generally takes less than 10 minutes to do (e.g., Design 2 different plays in basketball and explain what different skills are needed and when the plays should be carried out.)</td>
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<tr>
<td>“The use of abstractions in concrete situations.”</td>
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<td><strong>ANALYSIS</strong></td>
<td><strong>Extended Thinking</strong> – Requires an investigation; time to think and process multiple conditions of the problem or task; and more than 10 minutes to do non-routine manipulations (e.g., Analyze 3 different tennis, racquetball, and badminton strokes for similarities, differences, and purposes. Then, discuss the relationship between the mechanics of the stroke and the strategy for using the stroke during game play.)</td>
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<td>“The breakdown of a situation into its component parts.”</td>
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<td><strong>SYNTHESIS AND EVALUATION</strong></td>
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<td>“Putting together elements &amp; parts to form a whole, then making value judgments about the method.”</td>
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**DOK (Depth of Knowledge)**

**Level 4: Extended Reasoning**
- Requires complex reasoning, planning, and thinking (generally over extended periods of time) for the investigation.
- Assessment activities have multiple steps with extended time provided.
- Students may be asked to relate concepts within the content area and among other content areas.
- Students make real-world applications in new situations.

**Level 3: Strategic Reasoning**
- Focus is on reasoning & planning in order to respond (e.g., write an essay, apply in new/novel situation).
- Complex and abstract thinking is required.
- Often need to provide support for reasoning or conclusions drawn.
- More than one “correct” response or approach is often possible.

**Level 2: Skill/Concept**
- Focus is on applying skills and concepts (in a familiar/typical situation), relationships (compare, cause-effect), main ideas.
- Requires deeper knowledge than definition.
- Explaining how or why.
- Making decisions.
- Estimating, interpreting in order to respond.
- One right answer.

**Level 1: Recall**
- Focus is on specific facts, definitions, details, or using routine procedures (measure, divide, follow recipe, etc.).
- Explaining “that...”
- Can be “difficult” without requiring “deep” content knowledge to respond (memorize a complex theory without being able to explain its meaning or apply it to a real work situation).
- Combination of level ones does NOT = level 2.
- One right answer.

"He who learns but does not think, is lost! He who thinks but does not learn is in great danger." Confucius
### Level One Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting. Conduct basic mathematical calculations. Label locations on a map. Represent in words or diagrams a scientific concept or relationship. Perform routine procedures like measuring length or using punctuation marks correctly. Describe the features of a place or people.

### Level Two Activities
Identify and summarize the major events in a narrative. Use context cues to identify the meaning of unfamiliar words. Solve routine multiple-step problems. Describe the cause/effect of a particular event. Identify patterns in events or behavior. Formulate a routine problem given data and conditions. Organize, represent and interpret data.

### Level Three Activities
Support ideas with details and examples. Use voice appropriate to the purpose and audience. Identify research questions and design investigations for a scientific problem. Develop a scientific model for a complex situation. Determine the author’s purpose and describe how it affects the interpretation of a reading selection. Apply a concept in other contexts.

### Level Four Activities
Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/solutions. Apply mathematical model to illuminate a problem or situation. Analyze and synthesize information from multiple sources. Describe and illustrate how common themes are found across texts from different cultures. Design a mathematical model to inform and solve a practical or abstract situation.
Depth of Knowledge Consistency

Measures the degree to which the knowledge elicited from students on assessments is as complex as what students are expected to know and do as stated in the curriculum/GLEs/Show-Me Standards.
Depth of Knowledge

Level 1  Recall
Recall of a fact, information, or procedure.

Level 2  Skill/Concept
Use information or conceptual knowledge, two or more steps, etc.

Level 3  Strategic Thinking
Requires reasoning, developing plan or a sequence of steps, some complexity, more than one possible answer.

Level 4  Extended Thinking
Requires an investigation, time to think and process multiple conditions of the problem.

http://www.wcer.wisc.edu/wat/TILSA%20Dissemination%20Webb%20presentation%20for%20Training%20July%2024%202005.ppt#286,12,Slide%2012
Expectations for Student Performance

Acquire
- Recall: Memorize
- Skill/Concept: Perform Procedures

Use
- Strategic Thinking: Demonstrate Understanding
- Extended Thinking: Conjecture, Generalize

Extend
- Extended Thinking: Solve non-routine/ make connections
- Analyze Information: Evaluate

This information is adapted from Webb, Norman L., Research Monograph No. 8, "Criteria for Alignment of Expectations and Assessments in Mathematics and Science Education," Council of Chief State School Officers, 1997.

Dr. Bonita Potter, Office of Academic Education – Mississippi
http://www.mde.k12.ms.us/CAPIpresenation.ppt#327,30,Slide 30
BLOOM’S TAXONOMY

KNOWLEDGE / REMEMBERING
“The recall of specifics and universals, involving little more than bringing to mind the appropriate material”

COMPREHENSION / UNDERSTANDING
“Ability to process knowledge on a low level such that the knowledge can be reproduced or communicated without a verbatim repetition.”

APPLICATION / APPLYING
“Using information in another familiar situation.”

ANALYSIS / ANALYSING
“Breaking information into parts to explore understandings and relationships.”

SYNTHESIS and EVALUATION / EVALUATING and CREATING
“Putting together elements & parts to form a whole, then making value judgments about the method.”

WEBB’S DOK

RECALL
Recall of a fact, information, or procedure (e.g., What are 3 critical skill cues for the overhand throw?)

SKILL/ CONCEPT
Use of information, conceptual knowledge, procedures, two or more steps, etc.

STRATEGIC THINKING
Requires reasoning, developing a plan or sequence of steps; has some complexity; more than one possible answer

EXTENDED THINKING
Requires an investigation; time to think and process multiple conditions of the problem or task.

When assigning the DOK level, consider...

- the level of work students are most commonly required to perform

- the *complexity* of the task, rather than its *difficulty*.
  - The DOK level describes the kind of thinking involved in a task, not the likelihood that the task will be completed correctly.

- the complete domain of items that would be appropriate for completing the task.
  - Identify the DOK level of the most common of these items.

If there is a question regarding which of two levels an objective addresses, it is usually appropriate to select the higher of the two levels.