

# ***Missouri School Improvement Program 4<sup>th</sup> Cycle Overview***

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# Sample Assessments

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Who: DESE-selected sampling of teachers from all subject areas

What: All assessments (except daily “practice” homework) used during two-week window

When: The first two weeks in October

Where: Schools undergoing full reviews or targeted MAP standard reviews

Why: To help answer essential curriculum question, “Is the written curriculum implemented within buildings and classrooms in the district?”

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# *Part II*

## *Classroom Observations*

## **Purpose of informal observation**

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To provide the team with strategies for using an informal observation approach and data collection to inform reflective feedback on ***the prevailing instructional practices*** utilized in the district.



# ***Classroom Instruction that Works***

## **Nine categories of instructional strategies**

<b>Category</b>	<b>ES</b>	<b>Percentile gain</b>
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 representations	.75	27
Cooperative learning	.73	27
Setting goals and providing feedback	.61	23
Generating and testing hypotheses	.61	23
Cues, Questions, and Advance Organizers	.59	22

# Instructional Delivery Methods

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- **Lecture:** Delivery of information to a group by the teacher
  - teacher-controlled
- **Question and Answer:** An expression of inquiry that calls for a reply
  - an accountability tool
- **Class Discussion:** Dialogue among students and teacher
  - Open-ended questions are used and students are encouraged to ask questions of each other
- **Guided Practice:** Teacher-led short activities with students attempting the task at hand
  - The teacher must closely monitor what the students are doing to see that the instruction has "taken." Mistakes need to be corrected if seen by the teacher

# Instructional Delivery Methods

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- **Cooperative Learning:** Students working together as partners or in structured small teams on clearly defined learning tasks
  - Students may be responsible for each other's learning and are held individually accountable for the group's success. Examples include think-pair-share, round robin, jigsaw, inside/outside circle, etc.
- **Group Work:** Students working together in partners or small groups
  - Groups of students sitting together doing their own work who are free to talk with each other as they work
  - Groups of students completing a project together without clear identification of roles
- **Hands-on/experiments/laboratory work:** Instructional activities that include both content and process promoting student discussion
- **Peer evaluation:** Instructional activities, such as peer review, peer assessment, peer tutoring, and peer editing, designed to give students real responsibility to assess and provide feedback

# Instructional Delivery Methods

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- **Learning Centers:** Designated classroom areas where students partake in specific learning activities
- **Distance Learning:** Usually involves a situation in which the teacher and students are separated by time, location, or both
  - It can be used to supplement or enhance curriculum and assessment through real-time electronic field trips or videoconferencing, to deliver and/or receive courses in real time from remote sites, or to take online courses.
- **Seat Work:** Worksheets or textbook reading assigned for individual practice or study
- **Student presentations:** Students present projects, experiences, or discoveries to their classmates in a formal setting

# Instructional Strategies

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- **Advance Organizer:** An instructional unit that is used before direct instruction or before a new topic; allows the learner to recall and transfer prior knowledge to the new information being presented in the lesson
- **Graphic Organizer:** a visual communication tool using symbols to convey meaning, express ideas, or depict relationships between facts, terms, and/or ideas within a learning task
  - May be referred to as knowledge maps, concept maps, story maps, cognitive organizers, or concept diagrams.
- **Nonlinguistic representations:** Students acquire and retain knowledge through visual imagery, kinesthetic activity, auditory experiences, and so forth. Students may create concept maps, idea webs, dramatizations, or computer simulations to represent their thinking.
- **Problem-based/Project-based learning:** A teaching method that requires students to use knowledge and skills they have acquired or need to develop to solve a real-world problem through an extended inquiry process

# Instructional Strategies

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- **Research-generating and testing hypotheses:** Students make predictions or draw conclusions and explain their thinking as they test and generate hypotheses.
- **Similarities or differences:** Students identify similarities and differences using or creating comparisons, classifications, metaphors, or analogies.
- **Summarizing/note-taking:** Students learn to identify the most important aspects of what they are learning by taking notes or summarizing material.

# Depth of Knowledge (DOK)

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## Norman Webb's alignment system

- **Categorical Concurrence** --- measures the extent to which the same or consistent categories of content appear in the standards and the assessments.
- **Depth-of-Knowledge Consistency** --- measures the degree to which the knowledge elicited from students on the assessment is as complex within the context area as what students are expected to know and do as stated in the standards.
- **Range-of-Knowledge Correspondence** --- determines whether the span of knowledge expected of students on the basis of a standard corresponds to the span of knowledge that students need in order to correctly answer the corresponding assessment items/activities.
- **Balance of Representation** --- measures whether objectives that fall under a specific standard are given relatively equal emphasis on the assessment.
- **Source of Challenge** --- determines whether the primary difficulty of the assessment items is significantly related to students' knowledge and skill in the content area as represented in the standards.

# **Depth of Knowledge Consistency**

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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

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**"The mind is not  
a vessel to be  
filled but a fire  
to be kindled."**

*—On Listening to Lectures (Plutarch)*

# Depth of Knowledge

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## Level 1 Recall

Recall of a fact, information, or procedure.

## Level 2 Skill/Concept

Use information or conceptual knowledge, two or more steps, etc.

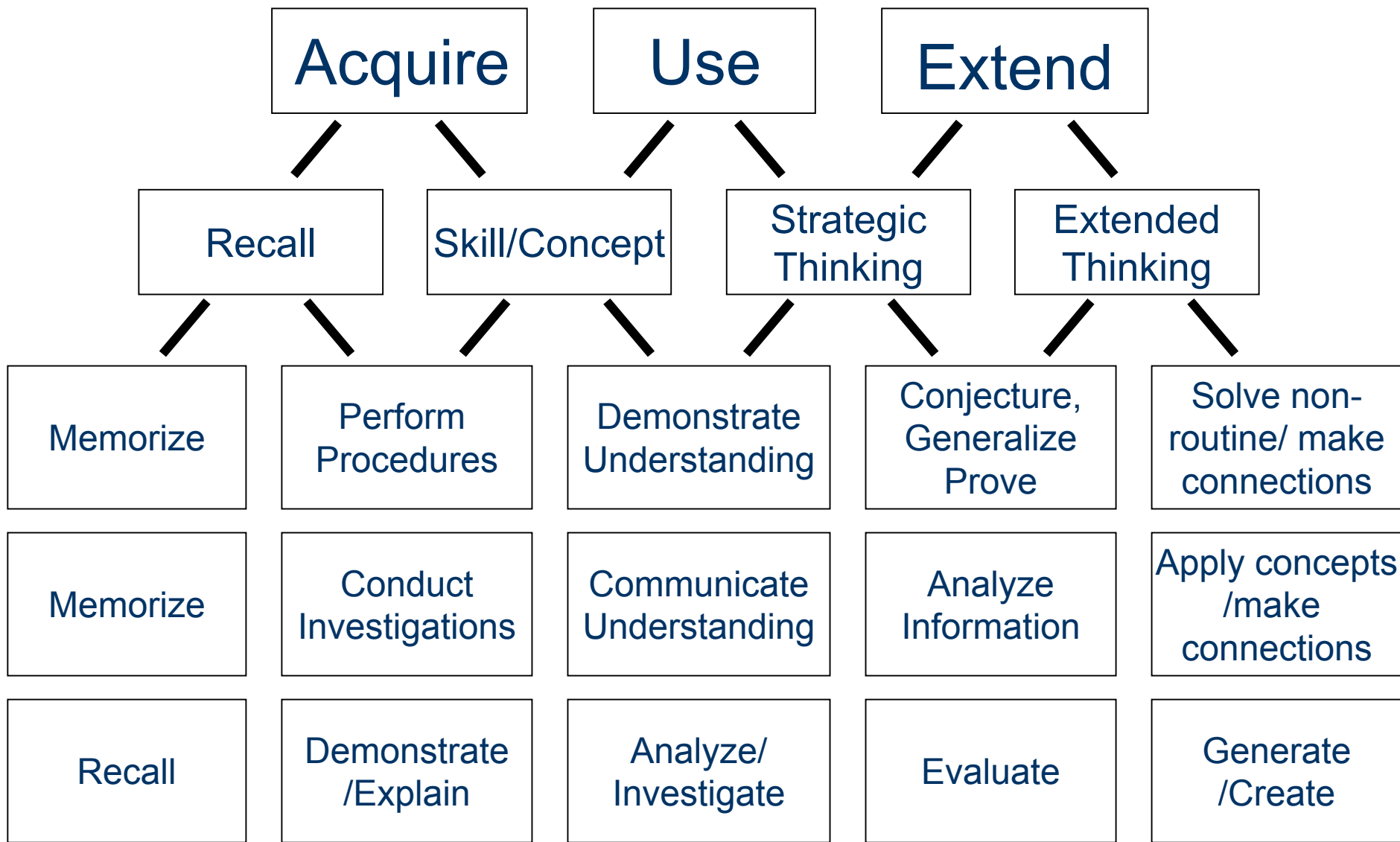
## Level 3 Strategic Thinking

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.

# Expectations for Student Performance



## **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...

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- 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.

# Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
<p>Recall elements and details of story structure, such as sequence of events, character, plot and setting.</p> <p>Conduct basic mathematical calculations.</p> <p>Label locations on a map.</p> <p>Represent in words or diagrams a scientific concept or relationship.</p> <p>Perform routine procedures like measuring length or using punctuation marks correctly.</p> <p>Describe the features of a place or people.</p>	<p>Identify and summarize the major events in a narrative.</p> <p>Use context cues to identify the meaning of unfamiliar words.</p> <p>Solve routine multiple-step problems.</p> <p>Describe the cause/effect of a particular event.</p> <p>Identify patterns in events or behavior.</p> <p>Formulate a routine problem given data and conditions.</p> <p>Organize, represent and interpret data.</p>	<p>Support ideas with details and examples.</p> <p>Use voice appropriate to the purpose and audience.</p> <p>Identify research questions and design investigations for a scientific problem.</p> <p>Develop a scientific model for a complex situation.</p> <p>Determine the author's purpose and describe how it affects the interpretation of a reading selection.</p> <p>Apply a concept in other contexts.</p>	<p>Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/ solutions.</p> <p>Apply mathematical model to illuminate a problem or situation.</p> <p>Analyze and synthesize information from multiple sources.</p> <p>Describe and illustrate how common themes are found across texts from different cultures.</p> <p>Design a mathematical model to inform and solve a practical or abstract situation.</p>

## **What does this LOOK like in the classroom?**

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Level One (Recall) –

Level Two (Skill/Concept) –

Level Three (Strategic Thinking) –

Level Four (Extended Thinking) –

# Procedures

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- School

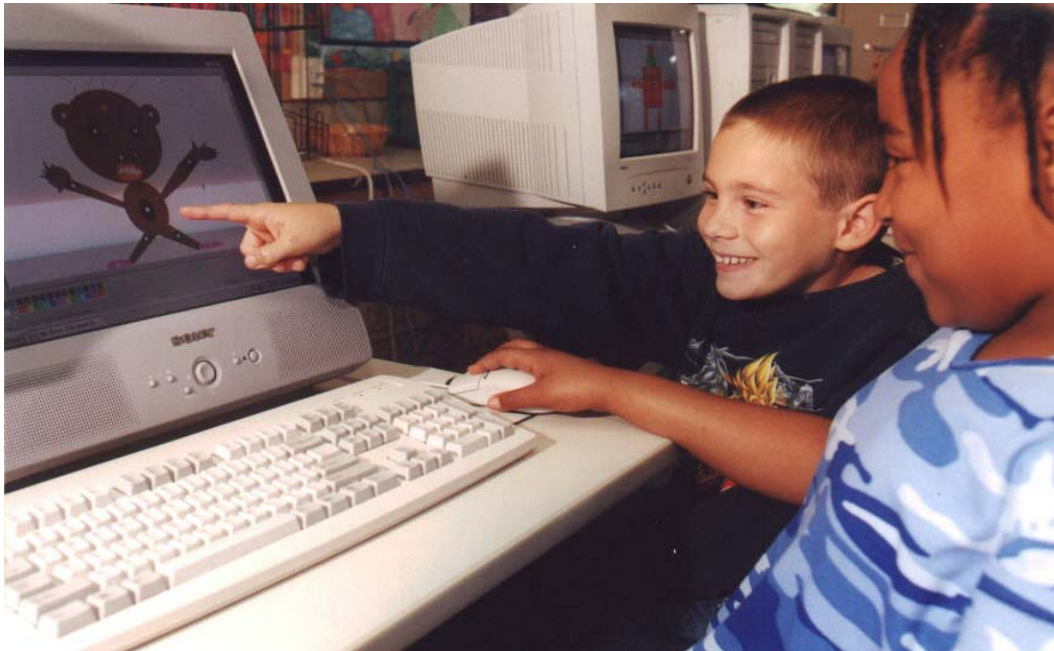
- Is there a good match among the curriculum objectives, instruction and what teachers are assessing?
  - DOK of curriculum objectives
  - DOK of instruction
  - DOK of summative assessment items

- Administrator

- What is the DOK of the assessments in the building?
  - Expectations
  - Curriculum Alignment
  - Curriculum Implementation

# Understanding Grappling's Technology and Learning Spectrum

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# Grappling's TECHNOLOGY AND LEARNING SPECTRUM

## Technology Literacy Uses

### Technology Focus - Acquiring/Practicing

#### Technology Skills

"Just-in-case" technology skills are acquired for possible future needs

- *Literacy classes*
- *Learning hardware and software*
- *Students projects are technology focused rather than expecting standards to intentionally drive the use of technology for learning*
- *Curriculum provides "topics" for technology uses*

### Instructional Focus

#### Technology-centered pedagogy

- *Teacher talk is "technology talk" rather than "learning talk."*

Technology uses are organized for their own sake

- *Acquiring and assessing technical skills*
- *Offered as separate and/or optional experiences/programs*
- *Allowed when "real work" is completed or considered alternative "reward" activities*
- *Research done to learn tools and processes*
- *Teachers view technology as something to learn or do*

### Staff Development Focus

Designated "experts" tend to be self-initiating in learning on their own. Other interested staff mostly learn on their own time and own dime.

## Adapting Uses

### Technology Focus - Optional/Adaptive Learning Tasks

Integrating is translated into "use it for something, anything...just use it"

- *Drill and practice with content software*
- *Instructional games*
- *Productivity tools used to adapt assignments/tasks given in the past without technology*
- *Curriculum provides "topics" for technology uses*

### Instructional Focus

#### Teacher-centered, Direct Instruction pedagogy

- *Teacher talk is "same stories with new tools" – there is confusion that new tools make new instructional stories.*

Technology uses are adapted/provided but still optional for traditional curriculum goals.

- *Teacher and student roles remain the same*
- *Learning/assessment practices are unchanged*
- *Student experiences depend upon teacher directed assignments*
- *Research is "go look up" and "tell me back"*
- *Teachers view technology as interesting but optional and not necessary to achieve present curriculum goals*

### Staff Development Focus

Participation and support while encouraged is still optional as well as unfocused. Staff development funding is inadequate – less than 30% of total technology budget supports staff development.

## Transforming Uses

### Technology Focus - Essential Learning Tasks

Integrating is "just-in-time" technology skills as needed for learning content standards/projects

- *Complex learning and thinking tools*
- *Community learning tools*
- *Assessment tools*
- *Productivity tools used to construct meaning, and produce information useful to others*

### Instructional Focus

#### Student-centered, constructivist pedagogy

- *Teacher talk is "new stories with new tools."*

Technology uses enable new learning tasks not possible without technology

- *Student roles expand to include explorers, producers of knowledge, communicators and self-directed learners*
- *Teacher roles expand to include facilitators, designers, learners, and researchers*
- *Learning and assessment practices are changed*
- *Students initiate technology uses as they create their own learning experiences*
- *Research is sustained inquiry for original thinking and conclusions useful to others*
- *Teachers view technology as essential for development of high-order thinking skills (HOTS)*

### Staff Development Focus

Essential skills and practices are articulated, expected, supported and measured for *all* teachers. Adequate funding of at least 30% of technology budget is in place.

# Technology

**W**as technology used?  Yes  No

If yes, please check the type(s) used and the use level.

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## Type(s) of Technology In Use

- Student computer
- Digital camera/multimedia
- Graphing calculator
- Handheld computer
- Internet
- Lab equipment
- Projector
- Teacher workstation
- Interactive whiteboard
- Other \_\_\_\_\_

## Technology Use Level

- Level 1 – Centers on acquiring and practicing technical skills; technology is something to learn.
- Level 2 – Automates traditional teacher and student roles; technology is optional.
- Level 3 – Expands role and/or products; technology is essential.

# Student Engagement

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*“Schools cannot be made great by great teacher performances. They will only be made great by great student performances.”*

--Phillip Schlechty

## **Student Engagement Level**

- High (Above 90%)**
- Moderate (75-89%)**
- Low (50-74%)**
- Disengaged (Below 50%)**

## **Teacher Engagement**

- Yes**  **No**