



# Learning Environments

Rigor • Relevance • Relationships

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**Participant Guide**



References:

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# Agenda

15 minutes	<b>Welcome and Introductions</b>
45 minutes	<b>A Systemwide Approach to Creating a Rigorous and Relevant Learning Environment</b>
45 minutes	<b>Reflect on the Question: “Why Change?”</b>
	<i>Break</i>
30 minutes	<b>Defining Relationships</b>
30 minutes	<b>Defining Rigor</b>
30 minutes	<b>Defining Relevance</b>
	<i>Lunch</i>
50 minutes	<b>Tools to Support a Rigorous and Relevant Learning Environment</b>
	<i>Break</i>
40 minutes	<b>Applying Tools to Create a Rigorous and Relevant Activity</b>
30 minutes	<b>Planning for a Rigorous and Relevant Learning Environment</b>
15 minutes	<b>Reflection, Closing, and Evaluation</b>

# Learning Outcomes

*After training, participants will be able to:*

- Understand and build knowledge of the importance of the Daggett System for Effective Instruction
- Understand how rigor, relevance, and relationships support the foundations of effective instruction
- Establish common definitions and vocabulary for effective instruction
- Begin applying the tools aligned with rigor and relevance to create a more engaging learning environment
- Develop action items for creating an engaging learning environment

## Websites of Interest

The following websites may provide further information to help deepen understanding of topics discussed in today's course.

### **International Center for Leadership in Education**

[www.leadered.com](http://www.leadered.com)

### **Scholastic Achievement Partners**

[www.scholasticachievementpartners.com](http://www.scholasticachievementpartners.com)

### **Common Core State Standards**

[www.corestandards.org](http://www.corestandards.org)

### **Smarter Balanced**

[www.smarterbalanced.org](http://www.smarterbalanced.org)

### **Partnership for Assessment of Readiness for College and Careers**

[www.parcconline.org/parcc-assessment](http://www.parcconline.org/parcc-assessment)

### **Achieve the Core**

<http://achievethecore.org>

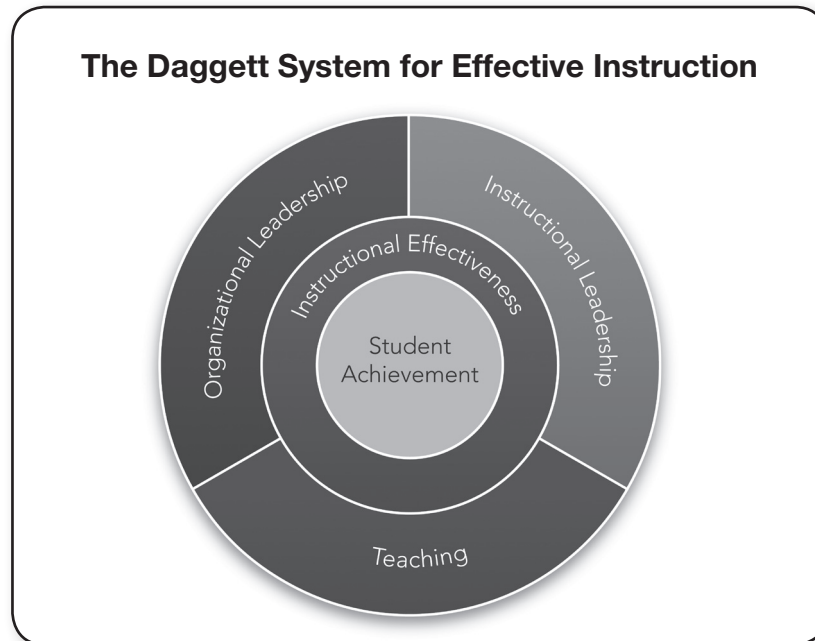
# Capturing Today's Learning

Use the following graphic organizer to take notes on the strategies modeled today that can help you create an engaging learning environment. You can create a similar foldable with your students to help guide their reflection and process learning.

Instructional Strategies	Relationship Building
Tomorrow	Future

# A Systemwide Approach

The Daggett System for Effective Instruction (DSEI) is student-focused and considers what the entire educational system should do to support instructional effectiveness and improve student achievement.



## Elements of Organizational Leadership

- Create a culture of high academic expectations and positive relationships
- Establish a shared vision and communicate to all constituent groups
- Align organizational structures and systems to the vision
- Build leadership capacity through an empowerment model
- Align teacher/leader selection, support, and evaluation
- Support decision making with relevant data systems

## Elements of Instructional Leadership

- Use research and establish the urgent need for change to promote higher academic expectations and positive relationships
- Develop, implement, and monitor standards-aligned curriculum and assessments
- Integrate literacy and math across all disciplines
- Facilitate data-driven decision making to inform instruction
- Provide opportunities for professional learning, collaboration, and growth focused on high-quality instruction and increased student learning

## Elements of Teaching

- Build effective instruction based on rigorous and relevant expectations
- Possess and continue to develop content area knowledge and make it relevant to the learner
- Create and implement an effective learner environment that is engaging and aligned to learner needs
- Plan and provide learning experiences using effective research-based strategies that are embedded with best practices, including the use of technology
- Use assessment and data to guide and scaffold instruction
- Further content and instructional knowledge through continuous professional learning that is both enriching and collaborative

When all parts of the system are working together efficiently, teachers receive the support they need, and students are successfully prepared for college, careers, and citizenship.

## Comparing Models

Traditional frameworks are more teacher-focused than the Daggett System for Effective Instruction. Use the chart below to notice other differences.

<b>Traditional Teaching Frameworks</b>	<b>Daggett System for Effective Instruction</b>
What teachers should do	What the entire system should do
Teacher-focused	Student-focused
Teachers deliver instruction	Teachers facilitate learning
Define vision primarily in terms of academic measures	Define vision in terms of strong academics and personal skills and the ability to apply them
Rigid structures support adult needs	Flexible structures support student needs
Focus on teaching	Focus on learning



# Defining Relationships

A clear taxonomy for relationships can help us understand the classifications of personal relationships in dynamic, real-world conditions and help us maximize the positive impact of these important connections as they relate to learning.

## The Relationship Taxonomy

Levels	Student-Teacher Relationship
0 Isolated	Students feel significant isolation from teachers, peers, or even parents. Students lack any emotional or social connection to peers and teachers.
1 Known	Students are known by others and frequently are called by name. Teachers know students and their families, interests, aspirations, and challenges. Students are known by peers with whom they interact at school.
2 Receptive	Students have contact with peers, parents, and teachers in multiple settings. Teachers exhibit positive behaviors of “being there” that show genuine interest and concern.
3 Reactive	Teachers, parents, and peers provide help to students when requested, but support may be sporadic and inconsistent among support groups.
4 Proactive	Others take an active interest in students’ success. Teachers take initiative to show interest and provide support. Students and others express verbal commitment for ongoing support and validate this commitment with their actions.
5 Sustained	There is extensive, ongoing, pervasive, and balanced support from teachers, parents, and peers that is consistent and sustained over time.
6 Mutually Beneficial	Positive relationships are everywhere and commonplace among the ways that students, teachers, and parents interact with and support students as learners.

## Supports for Positive Relationships

Use the chart below to describe examples of supportive behaviors, initiatives, and structures that can influence learning relationships in a positive way.

Behaviors	Initiatives	Structures

# Defining Rigor

Rigor refers to academic rigor—learning in which students demonstrate a thorough, in-depth mastery of challenging tasks to develop cognitive skills through reflective thought, analysis, problem solving, evaluation, or creativity.

## Identifying Rigor

A versatile way to identify the level of rigor of curriculum objectives, instructional activities, or assessments is through the Verb List by Quadrant (see page 19). You can use the Verb List to either create a desired level of expected student performance or to evaluate the level of existing curriculum, instruction, or assessment.

## Examining the Level of Rigor

Each of these items, numbered 1 to 7, represents a possible classroom activity. Label each one with an **H** for high rigor or an **L** for low rigor, and write a sentence to justify your thinking.

Task	Level of Rigor	Justification
1. Look up the definition of the word of the day.		
2. Write an explanatory essay about your interest in a particular career.		
3. Discuss the role of the media in a democracy.		
4. Make observations of similarities and differences between two search engines.		
5. Order fractions from least to greatest on a number line.		
6. On a model, label the layers of Earth's atmosphere.		
7. Use illustrations along with textual details from a text to describe the key idea.		

# Cross-Reference of Knowledge Taxonomies

Initially proposed in 1956, Bloom's Taxonomy was the first to define levels of cognition. In more recent years, modifications have been made to this original knowledge taxonomy, and new taxonomies based on the original Bloom's have been developed.

## Multiple Knowledge Taxonomies

With several knowledge taxonomies now in use, a natural question is how these new taxonomies align with the original Bloom's Taxonomy. In the 1990s, Bloom's Taxonomy was updated and revised by a group of cognitive psychologists led by Lorin Anderson, a former student of Benjamin Bloom, to reflect the movement toward standards-based curricula and assessment.

Another version of a knowledge taxonomy is Norman L. Webb's Depth of Knowledge, developed in 1997. In 2007 Robert Marzano proposed his New Taxonomy of Educational Objectives.

The chart below shows the alignment of these four taxonomies. Note the levels of low rigor and high rigor.

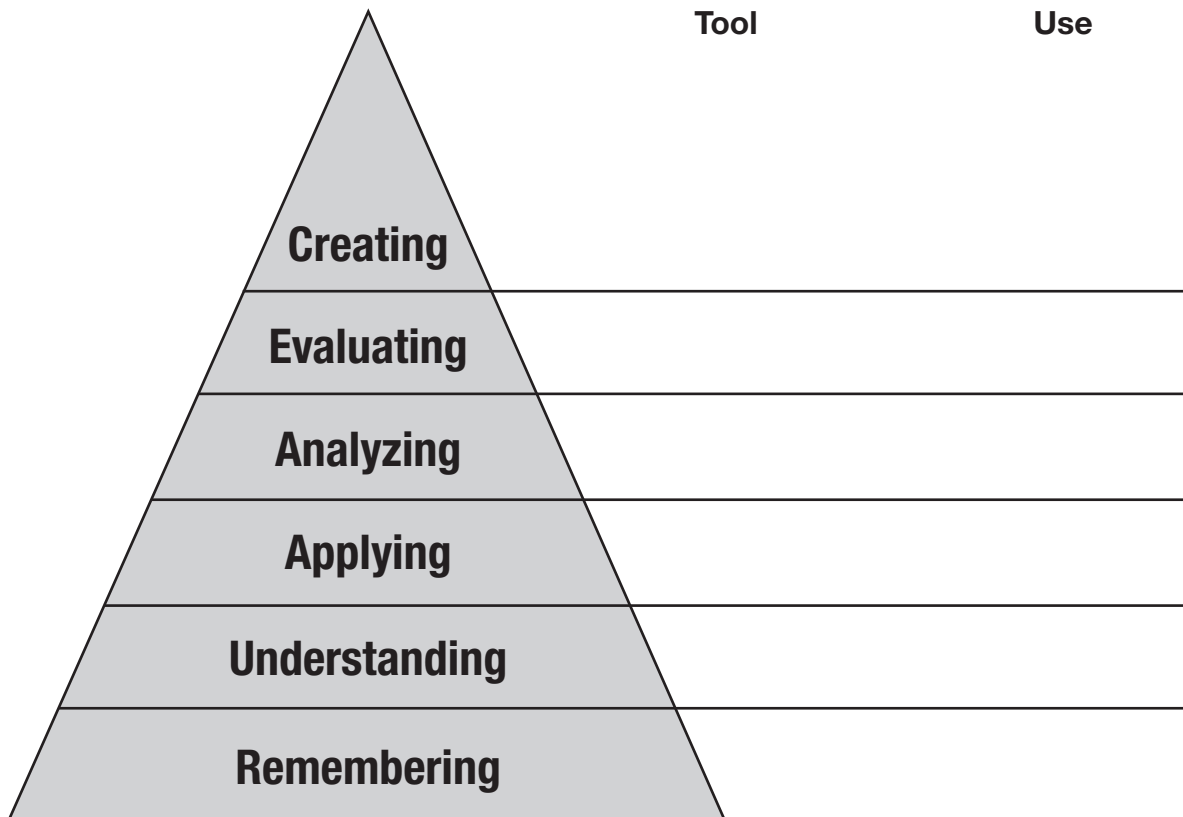
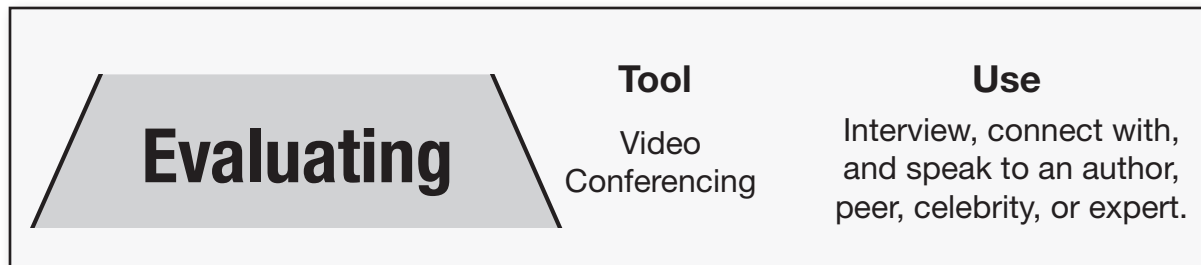
Cross-Reference of Knowledge Taxonomies				
	Bloom's Taxonomy	Revised Bloom's Taxonomy	Webb's Depth of Knowledge	Marzano's New Taxonomy of Educational Objectives
Low Rigor	Knowledge	Remembering	Recall	Knowledge Retrieval
	Comprehension	Understanding		Comprehension
	Application	Applying	Basic Application of Skill/Concept	
High Rigor	Analysis	Analyzing	Strategic Thinking	Analysis
	Synthesis			
	Evaluation	Evaluating	Extended Thinking	Knowledge Utilization
		Creating		

# Raising Rigor By Using Technology

Engaging students in meaningful learning experiences through digital resources can increase opportunities for accessing a wide range of information.

## Bloom's Taxonomy

Use the Bloom's Taxonomy graphic organizer below to describe how you can use a tool (website, app, etc.) aligned to the rigor level. See the example below.



# Defining Relevance

Relevance refers to learning in which students apply core knowledge, concepts, or skills to solve real-world problems.

## Understanding Relevance

Relevant learning is interdisciplinary and contextual. Student work can range from routine to complex at any grade and in any subject. Relevant learning is created, for example, through authentic problems or tasks, simulation, service learning, connecting concepts to current issues, and teaching others.

## Identifying the Level of Relevance

Review the tasks below. Identify the level of relevance using the Application Model Decision Tree (see page 20); then write a sentence to justify your thinking.

1. Knowledge in one discipline
2. Apply in discipline
3. Apply across disciplines
4. Apply to real-world predictable situations
5. Apply to real-world unpredictable situations

Task	Level	Justification
Develop a nutritional plan for a person with diabetes.		
Label food by nutritional groups.		
Cite supportive evidence for a sound nutritional plan for a group of 3 year olds who are picky eaters.		
Make a table with cost comparisons of different foods considering nutritional value.		
List foods by nutritional value.		

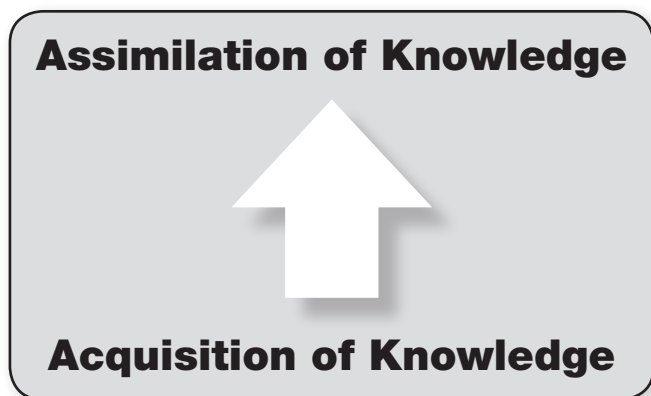
# Understanding the Rigor/Relevance Framework®

The Rigor/Relevance Framework is a tool developed by the International Center for Leadership in Education to examine curriculum, instruction, and assessment, and is based on the two dimensions of the Knowledge Taxonomy and the Application Model.

## The Knowledge Taxonomy

First, a continuum of knowledge describes the increasingly complex ways in which we think. This Knowledge Taxonomy is based on the six original levels of Bloom's Taxonomy:

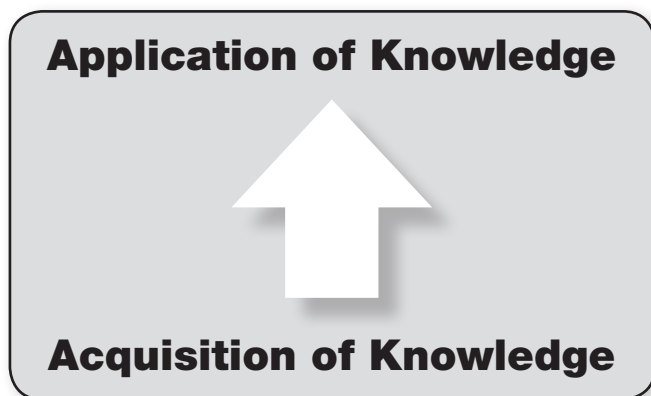
6. Evaluation
5. Synthesis
4. Analysis
3. Application
2. Comprehension
1. Knowledge/Awareness



## The Application Model

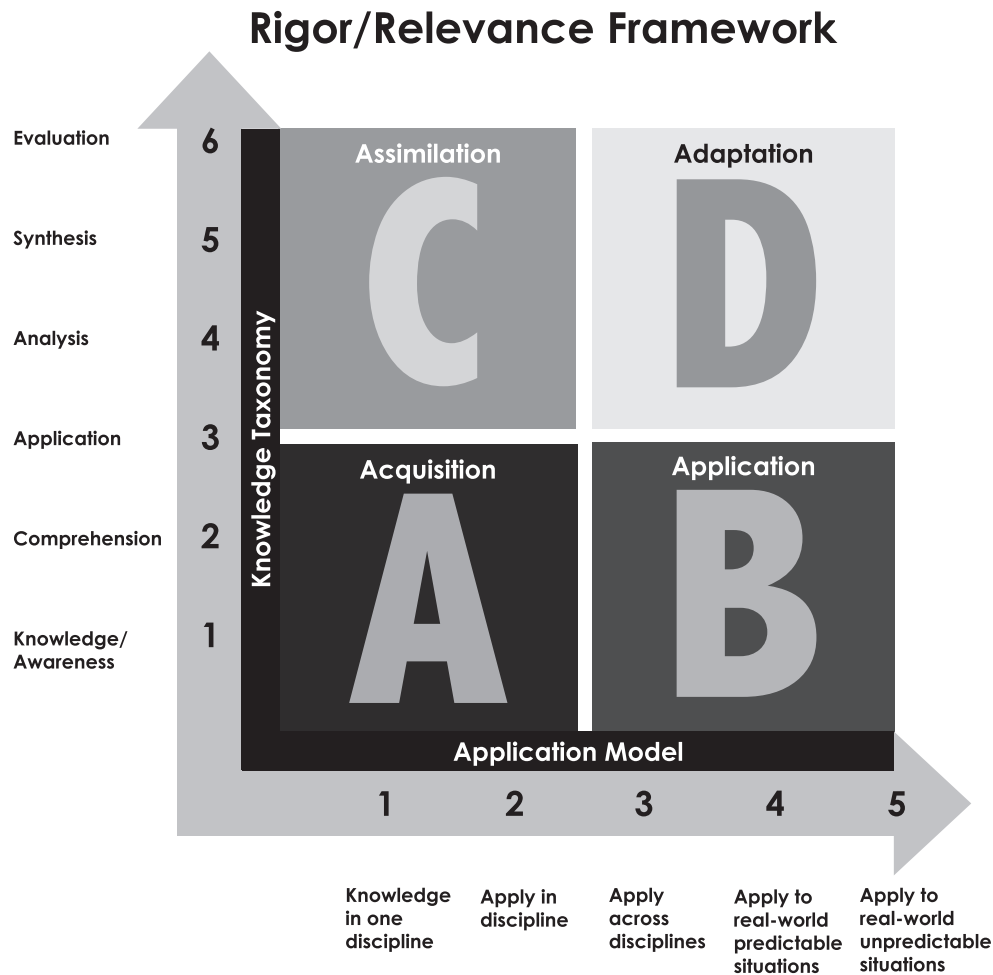
The second continuum, created by Dr. Bill Daggett, Founder and Chairman of International Center for Leadership in Education, is known as the Application Model, which describes putting knowledge to use. The five levels of this continuum are:

5. Apply to real-world unpredictable situations
4. Apply to real-world predictable situations
3. Apply across disciplines
2. Apply in discipline
1. Knowledge in one discipline



# The Rigor/Relevance Framework

The Rigor/Relevance Framework has four quadrants. Each of these four quadrants can be labeled with a term that characterizes learning or student performance.



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## Characteristics of Student Performance

The following chart describes characteristics of student performance for each of the four quadrants of the Rigor/Relevance Framework.

A	B	C	D
Students gather and store bits of knowledge and information. Students are primarily expected to remember or understand this knowledge.	Students use acquired knowledge to solve problems, design solutions, and complete work. The highest level of application is to apply knowledge to new and unpredictable situations.	Students extend and refine their acquired knowledge to be able to use that knowledge automatically and routinely to analyze and solve problems and create solutions.	Students think in complex ways and can apply their knowledge and skills. Even when confronted with perplexing unknowns, students can create solutions and take action that further develops their skills and knowledge.

# Learning Experiences by Quadrant

The following chart provides samples of learning experiences to help you further understand the types of learning that can take place in each of the four quadrants of the Rigor/Relevance Framework.

## Quadrant C Assimilation

- Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
- Create analogies to explain an idea.
- Analyze TV commercials for fact and opinion.
- Estimate sums of complex fractions.
- Conduct experiments to show photosynthesis.

## Quadrant D Adaptation

- Make a table to show the different types of bacteria and how they can be harmful to humans.
- Collect data and make recommendations to address a community environmental problem.
- Use information from multiple resources to write an argument for why someone would want to BASE jump.
- Write an article that describes how climate change might affect the nation's ski areas.

## Quadrant A Acquisition

- Give oral directions.
- Write an essay on a historical topic.
- Sort and classify objects.
- Memorize multiplication facts.
- Plot the coordinates for quadrilaterals on a graph.
- Illustrate parts of a cell.
- Demonstrate phases of the moon.

## Quadrant B Application

- Communicate with an e-mail pen pal in another country.
- Write captions for a political cartoon.
- Role-play a scene from a play by Shakespeare.
- Calculate the areas of objects.
- Use rulers to measure objects.
- Play a simulated basketball game and calculate statistics.
- Make a scale drawing of the classroom.
- Take photographs of insects and describe characteristics and behaviors.



# Identifying Rigorous and Relevant Learning Experiences

To further develop your understanding of the four quadrants of the Rigor/Relevance Framework, use the graphic organizer below to record your own examples of the types of learning associated with each quadrant.

Quadrant **C** Assimilation

Quadrant **D** Adaptation

Quadrant **A** Acquisition

Quadrant **B** Application

# Planning for Increasing Rigor and Relevance

Use this guide to set goals and establish next steps for implementing more rigor and relevance into your learning environment every day.

Goals for Implementation:

Actions to Take:	By When:

Questions to Ask:

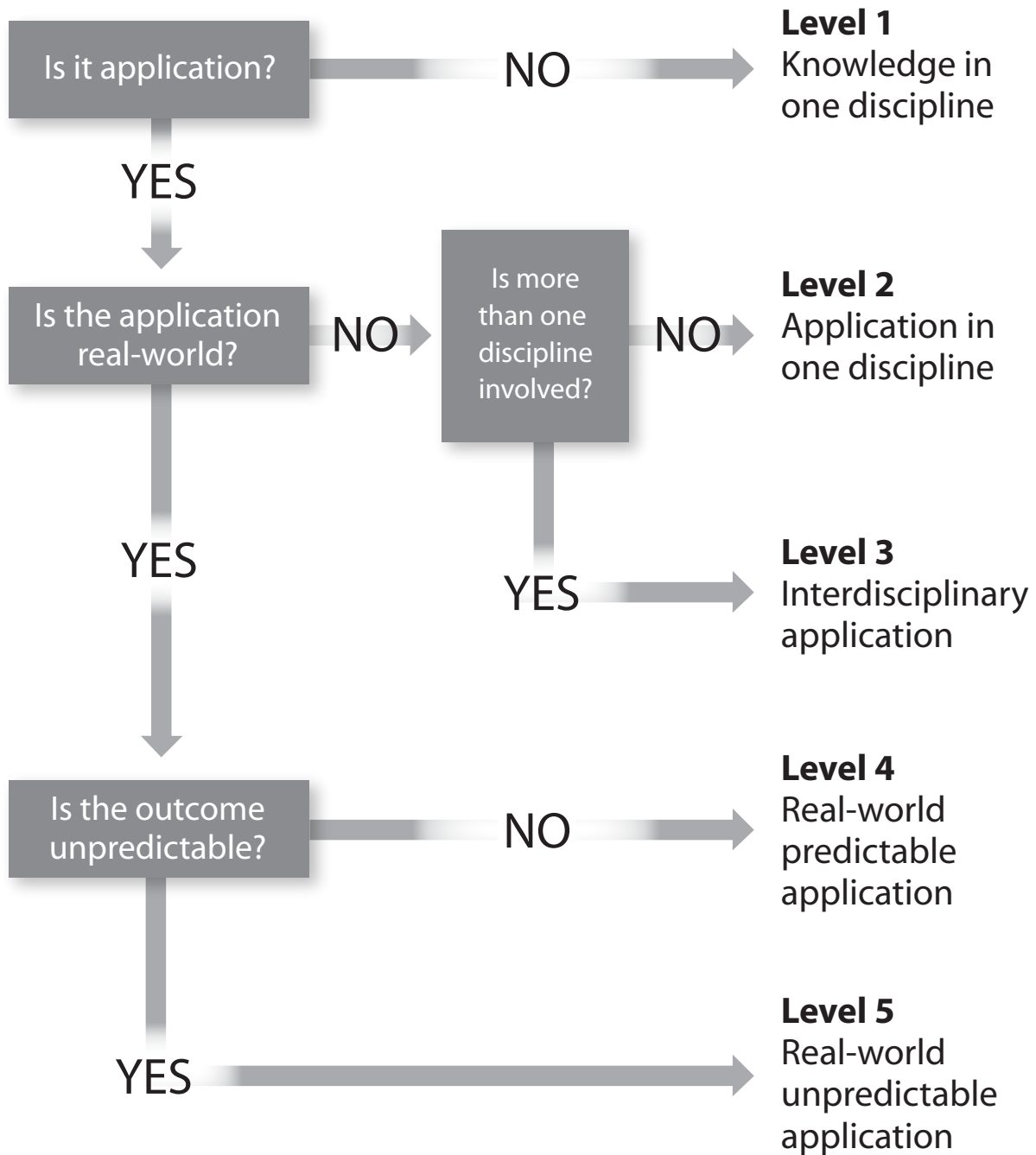
# Verb List by Quadrant

Use the Verb List by Quadrant to define the level of rigor. You can use this list to either create a desired level of expected student performance or to evaluate the level of existing curriculum, instruction, or assessment.

Quadrant A	Quadrant B	Quadrant C	Quadrant D
Calculate	Adjust	Analyze	Adapt
Choose	Apply	Categorize	Argue
Count	Build	Cite	Compose
Define	Collect	Classify	Conclude
Describe	Construct	Compare	Create
Find	Demonstrate	Conclude	Design
Identify	Display	Contrast	Develop
Label	Dramatize	Debate	Discover
List	Draw	Defend	Explore
Locate	Fix	Diagram	Formulate
Match	Follow	Differentiate	Invent
Memorize	Illustrate	Discriminate	Modify
Name	Interpret	Evaluate	Plan
Point to	Interview	Examine	Predict
Recall	Look up	Explain	Prioritize
Recite	Maintain	Express	Propose
Record	Make	Generate	Rate
Say	Measure	Infer	Recommend
Select	Model	Judge	Revise
Spell	Operate	Justify	Teach
View	Play	Prove	
	Practice	Research	
	Produce	Study	
	Relate	Summarize	
	Role-play		
	Sequence		
	Show		
	Solve		

# Application Model Decision Tree

Select a task, application, or activity. To determine the level of relevance, use the Application Model Decision Tree to reflect on it by answering the following questions.



# Student Work Products by Quadrant

Reflecting on the student work through the products that are included in the activity is one way to identify and raise the current levels of rigor and relevance.

## Demonstrating Learning

Consider the context and work that students are engaged in when determining the level of rigor and relevance. The following is a list of student work products linked to each quadrant of the Rigor/Relevance Framework. Your students can use these work products to demonstrate learning in each quadrant.

- Some student work products can be used in multiple quadrants.
- Products are listed where they are most frequently used.

Quadrant C	
Abstract	Exhibit
Annotation	Inventory
Blog	Investigation
Chart	Journal
Classification	Outline
Debate	Plan
Essay	Report
Evaluation	

Quadrant D	
Adaptation	Model
Blueprint	Newspaper
Book	Play
Brochure	Poem
Debate	Song
Device	Trial
Editorial	Video
Estimation	Website
Game	Wiki
Invention	
Lesson	

Quadrant A	
Answer	Reproduction
Definition	Selection
Explanation	True/False
List	Worksheet
Quiz	
Recitation	

Quadrant B	
Collage	Performance
Collection	Service
Data	Skit
Demonstration	Solution
Interpretation	Survey
Notes	Theatre Set
Painting	

# Teacher Question Stems by Quadrant

In your learning environment, try using the following question stems that align to each quadrant. This can help move students toward increased rigor and relevance.

<p><b>C</b></p> <p><b>Ask questions to summarize, analyze, organize, or evaluate:</b></p> <ul style="list-style-type: none"> <li>• How are these similar/different?</li> <li>• How is the main idea supported by key details in the text?</li> <li>• What's another way we could say/explain/express that?</li> <li>• What do you think are some of the reasons/causes that _____ ?</li> <li>• Why did _____ changes occur?</li> <li>• How can you distinguish between _____ ?</li> <li>• What is a better solution to _____ ?</li> <li>• How would you defend your position about _____ ?</li> <li>• What changes to _____ would you recommend?</li> <li>• What evidence from the resources support your thinking?</li> <li>• Where in the text is that explicit?</li> <li>• Which ones do you think belong together?</li> <li>• What things/events lead up to _____ ?</li> <li>• What is the author's purpose?</li> </ul>	<p><b>D</b></p> <p><b>Ask questions to predict, design, or create:</b></p> <ul style="list-style-type: none"> <li>• How would you design a _____ to _____ ?</li> <li>• How would you rewrite the ending to the story?</li> <li>• What would be different today if that event occurred as _____ ?</li> <li>• Can you see a possible solution to _____ ?</li> <li>• How could you teach that to others?</li> <li>• If you had access to all the resources, how would you deal with _____ ?</li> <li>• How would you devise your own way to deal with _____ ?</li> <li>• What new and unusual uses would you create for _____ ?</li> <li>• Can you develop a proposal that would _____ ?</li> <li>• How would you have handled _____ ?</li> <li>• How would you do it differently?</li> <li>• How does the text support your argument?</li> <li>• Can you describe your reasoning?</li> </ul>
<p><b>A</b></p> <p><b>Ask questions to recall facts, make observations, or demonstrate understanding:</b></p> <ul style="list-style-type: none"> <li>• What is/are _____ ?</li> <li>• How many _____ ?</li> <li>• How do/does _____ ?</li> <li>• What did you observe _____ ?</li> <li>• What else can you tell me about _____ ?</li> <li>• What does it mean to _____ ?</li> <li>• What can you recall about _____ ?</li> <li>• Where did you find that _____ ?</li> <li>• Who is/was _____ ?</li> <li>• In what ways _____ ?</li> <li>• How would you define that in your own terms?</li> <li>• What do/did you notice about this _____ ?</li> <li>• What do/did you feel/hear/see/smell _____ ?</li> <li>• What do/did you remember about _____ ?</li> <li>• What did you find out about _____ ?</li> </ul>	<p><b>B</b></p> <p><b>Ask questions to apply or relate:</b></p> <ul style="list-style-type: none"> <li>• How would you do that?</li> <li>• Where will you use that knowledge?</li> <li>• How does that relate to your experience?</li> <li>• How can you demonstrate that?</li> <li>• What observations relate to _____ ?</li> <li>• Where would you locate that information?</li> <li>• Can you calculate that for _____ ?</li> <li>• How would you illustrate that?</li> <li>• How would you interpret that?</li> <li>• Who could you interview?</li> <li>• How would you collect that data?</li> <li>• How do you know it works?</li> <li>• Can you show me?</li> <li>• Can you apply what you know to this real-world problem?</li> <li>• How do you make sure it is done correctly?</li> </ul>

# Instructional Strategies and the Rigor/Relevance Framework

The strategies below are rated for their appropriateness to each quadrant.

Strategy	Quadrant A Acquisition	Quadrant B Application	Quadrant C Assimilation	Quadrant D Adaptation
Analogies	★ ★	★ ★	★ ★ ★	★ ★ ★
Analyzing video stimulus	★ ★	★ ★ ★	★ ★	★ ★
Brainstorming	★ ★	★	★ ★ ★	★ ★ ★
Compare and contrast	★ ★	★	★ ★ ★	★ ★
Cooperative learning	★ ★	★ ★ ★	★ ★	★ ★ ★
Crafting an argument	★ ★	★ ★	★ ★ ★	★ ★ ★
Demonstration	★	★ ★ ★	★	★ ★
Feedback and reflection	★ ★	★ ★	★ ★ ★	★ ★ ★
Guided practice	★ ★ ★	★ ★	★ ★	★
Inquiry	★	★ ★	★ ★ ★	★ ★ ★
Learning centers	★ ★ ★	★ ★ ★	★ ★	★ ★
Lecture	★ ★ ★	★	★ ★	★
Manipulatives and models	★ ★ ★	★ ★ ★	★ ★ ★	★ ★
Memorization	★ ★ ★	★ ★	★ ★	★
Note taking/graphic	★ ★	★ ★	★ ★	★ ★
Physical movement	★ ★	★ ★ ★	★ ★	★ ★
Pinwheel discussion	★ ★	★ ★	★ ★ ★	★ ★ ★
Problem-based learning	★ ★	★ ★ ★	★ ★	★ ★ ★
Semantic feature analysis	★ ★	★ ★	★ ★ ★	★ ★ ★
Simulation/role playing	★ ★	★ ★ ★	★ ★	★ ★ ★
Socratic seminar	★	★	★ ★ ★	★ ★ ★
Storytelling	★ ★	★ ★ ★	★ ★ ★	★ ★ ★
Summarizing	★ ★	★ ★	★ ★ ★	★ ★
Teaching others	★ ★	★ ★ ★	★ ★	★ ★ ★
Using writing frames	★ ★ ★	★ ★ ★	★ ★	★ ★

**Key** ★ Less than ideal    ★ ★ Suitable    ★ ★ ★ Ideal

# NOTES