Acknowledgments

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This handbook is a companion to the professional development resource kit, Using the Rigor/Relevance Framework® for Planning and Instruction, which contains a complete discussion of rigor and relevance, professional development activities, a DVD introducing the Rigor/Relevance Framework, and a CD with tools and handouts.

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Chapter 1
Rigor/Relevance Framework

Introducing 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. The Rigor/Relevance Framework is based on the two dimensions of higher standards and student achievement.

First, a continuum of knowledge describes the increasingly complex ways in which we think. This Knowledge Taxonomy is based on the six levels of Bloom’s Taxonomy: (1) knowledge/awareness, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation.

The low end of this continuum involves acquiring knowledge and being able to recall or locate that knowledge in a simple manner. Just as a computer completes a word search in a word processing program, a competent person at this level can scan thousands of bits of information in the brain to locate that desired knowledge.

The high end of the Knowledge Taxonomy labels more complex ways in which individuals use knowledge. At this level, knowledge is fully integrated into one’s mind, and individuals can do much more than locate information — they can take several pieces of knowledge and combine them in both logical and creative ways. Assimilation of knowledge is a good way to describe this high level of the thinking continuum. Assimilation is often referred to as a higher order thinking skill: at this level, the student can solve multi-step problems, create unique work, and devise solutions.

The second continuum, created by Willard Daggett, is known as the Application Model. The five levels of this continuum are: (1) knowledge in one discipline, (2) apply in discipline, (3) apply across disciplines, (4) apply to real-world predictable situations, and (5) apply to real-world unpredictable situations. The Application Model describes...
Rigor/Relevance Framework®

Application Model
Rigor and Relevance in Curriculum/Instruction/Assessment Checklist

Instructional Activities

Quadrant A – Acquisition (Low Rigor/Low Relevance)
- Yes ☐ No  use verbs synonymous with recall and understanding
- Yes ☐ No  call for the explanation of knowledge or skill and not application
- Yes ☐ No  focus is primarily on the teacher
- Yes ☐ No  require all students to complete the same work, usually at same time and speed

Quadrant B – Application (Low Rigor/High Relevance)
- Yes ☐ No  use verbs synonymous with recall, understanding, or application
- Yes ☐ No  call for the application of knowledge to real-world problems
- Yes ☐ No  allow students to work at independent speed
- Yes ☐ No  require all students to complete the same work

Quadrant C – Assimilation (High Rigor/Low Relevance)
- Yes ☐ No  use verbs synonymous with analysis, synthesis, or evaluation
- Yes ☐ No  call for explanation of knowledge or skill, but not real-world application
- Yes ☐ No  focus primarily on the student
- Yes ☐ No  require original student work

Quadrant D – Adaptation (High Rigor/High Relevance)
- Yes ☐ No  use verbs synonymous with analysis, synthesis, or evaluation
- Yes ☐ No  call for the application of knowledge to real-world problems
- Yes ☐ No  require original student work
- Yes ☐ No  are complex tasks requiring students to work independently of the teacher
Learning Experiences in the Rigor/Relevance Framework

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Language Arts</th>
<th>Elementary Examples</th>
</tr>
</thead>
</table>
| **C** Assimilation | • Give and seek constructive feedback in order to improve writing.  
• Compare similar words to describe objects.  
• Develop a WebQuest on learning language skills.  
• Brainstorm as many words as possible to describe an object.  
• Create and decipher coded messages.  
• Describe mystery objects to partners to strengthen use of descriptions.  
• Create word puzzles. | • Create new words to describe phenomena or objects.  
• Publish a brochure.  
• Design and create objects related to a children’s book.  
• Plan a family vacation.  
• Research an issue and write a letter to the school board, elected official, or local newspaper. |
| **B** Application | • Use job-related tools or clothing to stimulate writing and drawing about a career.  
• Read and share content of local newspaper.  
• Present a story through a computer graphics application.  
• Communicate with e-mail pals in another country.  
• Search newspapers for abbreviations and acronyms.  
• Write factual stories about personal experiences.  
• Role-play stories.  
• Write a poem about yourself. | |
| **A** Acquisition | • Create a drawing, picture, sign, or other graphic to represent a word or concept.  
• Put words together in sentence format.  
• Retell stories.  
• Respond to oral directions.  
• Participate in word games.  
• Develop outlines from a nonfiction presentation.  
• Memorize spelling words.  
• Create a list of commonly misspelled words. | |

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Learning Experiences in the Rigor/Relevance Framework

**Mathematics**

**Quadrant A Acquisition**
- Select computational operation to solve word problems
- Calculate volume of regular solids.
- Measure angles with a protractor.
- Find and measure the sides and angles of a right triangle using the Pythagorean theorem and trigonometric ratios.
- Organize and display collected data, using tables, charts, or graphs.
- Use basic properties of equality to solve equations with one variable.
- Plot the coordinates for quadrilaterals on a grid.

**Quadrant B Application**
- Make a scale drawing of the classroom.
- Calculate percents of daily requirements met through a typical school lunch.
- Calculate potential combinations of a group of variables, such as wardrobe components, and estimate the probability of any one combination being picked at random.
- Calculate percentages of advertising in a newspaper.
- Play a simulated baseball game and calculate statistics.
- Calculate paint needed for a summer business painting houses.

**Quadrant C Assimilation**
- Measure interior angles of polygons and discover the relationship between number of sides and sum of angles.
- Graph the perimeters and areas of squares of different sizes.
- Express probabilities as fractions, percents, or decimals.
- Evaluate equivalency and relationship of decimal and fractions.
- Determine the largest area for a fixed perimeter.
- Fill in missing numbers for ordered pairs for an algebraic function.
- Evaluate objects for similarity and congruence.
- Estimate sums of complex fractions.

**Quadrant D Adaptation**
- Hold a competition to determine when using a calculator or doing mental math is most efficient.
- Obtain historical data about local weather to estimate amount of snow, rain, or sun during a given season of the current year.
- Use graphing calculators and computer spreadsheets to organize and analyze data.
- Test consumer products, such as absorbency of the paper towels, devise a scale, and illustrate data graphically.
- Plan a large school event and calculate resources (food, decorations, etc.) needed and costs.
can increase rigor and relevance is to adapt a Gold Seal Lesson to
their particular instructional setting. Teachers can browse a grade level,
subject, or set of standards to find a lesson idea from another teacher
that will fit their instructional situation. Each Gold Seal Lesson provides
a clear performance task and assessment that can be used to begin the
development of the unit of instruction.

Add a High Rigor and High Relevance Performance Task

Most teachers will modify existing lessons to increase the level of rigor
and relevance. An excellent way to begin raising rigor and relevance is
to consider the instructional outcomes or standards for a particular unit
of instruction and then design a high rigor and high relevance performance
task as the culminating activity for students to demonstrate their learning.
This begins the backwards design approach in which teachers clearly
focus on the high rigor and high relevance conclusion of the lesson. A
carefully constructed performance task will naturally lead teachers to
raise the rigor and relevance of instruction and thus will increase student
achievement.
Change Instructional Strategies

Teachers have many choices among the instructional strategies they use in a particular lesson. Some strategies such as a lecture and a worksheet are highly correlated with low rigor and low relevance, while other strategies such as a project design, problem-based learning, and a student presentation are highly correlated with high rigor and high relevance. As teachers select strategies, they can increase the level of rigor and relevance by using strategies that are more and more correlated with high rigor and high relevance. Correlation of instructional strategies with rigor and relevance are in Chapter 5.

Change Assessments

The type of assessment a teacher chooses to use determines student achievement and influences the level of rigor and relevance. Often a simple way to begin to raise the level of rigor and relevance is to use a more complex form of assessment that does more than simply ask students to recall answers. Rather, the assessment challenges students to think and more fully explain and demonstrate their knowledge.

Make Instruction Interdisciplinary

A natural step on the route toward high rigor and high relevance is for teachers to move beyond the boundaries of one instructional area. Typically, secondary instruction is very focused on one instructional area; even elementary level teachers tend to focus on one instructional strand. As teachers work to increase the relevance of instruction, the boundaries disappear between typical disciplines. Another approach to increasing rigor and relevance is to combine learning standards from several different disciplines into a single learning experience. An excellent strategy for making instruction more interdisciplinary is for teachers in the arts and career and technical education to integrate a number of academic areas within their instruction. This practice is very consistent with increasing the level of rigor and relevance.

Use D-Moment Strategies

Some teachers have the misconception that rigor and relevance include long extended projects that consume considerable instructional time. Once teachers understand the Rigor/Relevance Framework, they can

The D-Moments are further explained in Chapter 5.
Examples of Student Work for Real-World Instruction

- Advertisement
- Audiotape
- Autobiography
- Banner
- Biography
- Brochure
- Business
- Cartoon
- Chart
- Children’s book
- Coat of arms
- Collection
- Community service
- Composition
- Constitution
- Construction
- Contract
- Correspondence
- Crossword puzzle
- Debate
- Defense
- Demonstration
- Design
- Diagram
- Diorama
- Discussion
- Display
- Dramatization
- Drawing
- Editorial
- Essay
- Eulogy
- Evaluation
- Exhibit
- Experiment
- Fable
- Family tree
- Field guide
- Flag
- Game
- Graph
- Icon
- Interview
- Invention
- Joke
- Journal
- Letter
- Log
- Machine
- Magazine
- Manufacturing process
- Map
- Memo
- Memoir
- Mnemonic
- Model
- Mosaic
- Mural
- News report
- Newspaper
- Oral history
- Oral report
- Painting
- Petition
- Photo album
- Play
- Poem
- Poster
- Production process
- Proposal
- Puppets
- Questionnaire
- Questions
- Rap
- Relief map
- Research report
- Resume
- Rules
- Scale model
- Scrapbook
- Script
- Sculpture
- Shadow box
- Sketch
- Skit
- Slide show
- Software application
- Solution
- Song
- Speech
- Story
- Survey
- Taxonomy
- Teach a lesson
- Test
- Theory
- Time capsule
- Totem pole
- Videotape
- Website
Chapter 3
Enhancing Instructional Planning

Data-driven Instructional Planning

Instructional planning is most effective when teachers use both objective data and their own experience. In an era of increased accountability, teachers must use data to drive their decisions. The following chart shows the important data sources for use in each of the steps of the rigor/relevance planning process.

Rigor/Relevance Instructional Planning Steps

Data-Driven Instructional Planning

Data Sources for Step 1

Standards Data

Teachers must focus on the “right” student learning. Schools have become standards-driven over the last two decades, using external standards
### Instructional Strategies and the Rigor/Relevance Framework

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Quadrant A Acquisition</th>
<th>Quadrant B Application</th>
<th>Quadrant C Assimilation</th>
<th>Quadrant D Adaptation</th>
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<td>Compare and contrast</td>
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<td>★</td>
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<td>★★</td>
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<td>Demonstration</td>
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<td>Digital media production</td>
<td>★★</td>
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<td>Feedback and reflection</td>
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<td>Games</td>
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<td>Guided practice</td>
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<td>Inquiry</td>
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<td>★★</td>
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<td>Instructional technology — any time</td>
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<td>★★★</td>
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<td>Instructional technology — real time</td>
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<td>★★</td>
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<tr>
<td>Instructional technology — independent learning</td>
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<td>Logical and independent thinking</td>
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<td>Manipulatives and models</td>
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<td>Note-taking/graphic</td>
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<td>Project design</td>
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<td>Research</td>
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<td>Service learning</td>
<td>★</td>
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<td>Simulation/role playing</td>
<td>★★</td>
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<tr>
<td>Socratic seminar</td>
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<td>★</td>
<td>★</td>
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<tr>
<td>Storytelling</td>
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<td>★★★</td>
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<tr>
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