The Importance of Quality Curriculum

"In the array of factors that define high-performing schools, curriculum alignment enjoys a position of exceptional prominence" (Murphy, 2007, p. 75).

Both research and expert opinion state that a rigorous, standards-based, grade- and content-level-aligned curriculum is one of the key components of high-performing schools.
The importance of curriculum emerged in a 2006 report of 70 districts that applied for the Broad Prize, an award given to school districts that "significantly improve student achievement while reducing achievement gaps among ethnic groups and between low- and high-income students" (Zavadsky, 2006, p. 69–70).

All five finalists (as well as finalists in succeeding years, McFadden, 2009) indicated that their success in part belonged to developing and implementing curricula that were detailed and properly sequenced, aligned between grades and across all schools, developed by classroom teachers and curriculum specialists from schools and district offices, and which often included higher expectations than the state standards.
Further, a guaranteed and viable curriculum receives a ranking of first of 15 school-level factors that impact student achievement in Marzano’s (2003) review of the research.

Educational scholar Herbert J. Walberg (2007) encourages those in charge of restructuring schools "to align instruction with state standards" (p. 87; emphasis added) as the first in a list of 10 principles to improve achievement.

Curriculum mapping provides the process through which this alignment and analysis of curriculum takes place.
What is a curriculum map?

Curriculum maps cover a wide range of important curricular activities. Typically, they attempt to:

- address the total education of the students in a building
- create a "word snapshot" of the educational activities of every classroom within a building or district
- capture the content, skills, and assessments taught or administered by every teacher within a school building or district
- organize this information into an easily accessed visual that presents a timeline of instruction by teacher and course.
<table>
<thead>
<tr>
<th>Sept</th>
<th>Content/Essential Questions</th>
<th>Skills</th>
<th>Assessments</th>
<th>Resources</th>
<th>Activities</th>
</tr>
</thead>
</table>
| **Algebra and Functions** **How can I represent, investigate, interpret, evaluate and solve problems using expressions, equations, inequalities, and graphs?** | **Evaluate expressions using order of operations**  
**Evaluate algebraic expressions**  
**Use mental math to solve equations**  
**Find the area of rectangles** | **Chapter 1 Number Patterns and Algebra** Unit test open-ended | **Cups**  
**Counters**  
**Balance scale**  
**Paper cup**  
**Centimeter cubes** | **Hands-on Mini Lab Lesson 1-6**  
**Hands-on Mini Lab Lesson 1-7** |
| **Data Analysis and Probability** **How can I calculate and analyze data and probabilities to make predictions?** | **Create and interpret frequency tables**  
**Create and interpret bar, line, and circle graphs**  
**Construct and interpret stem-and-leaf plots**  
**Find the mean, median, mode, and range of a set of data and determine which measure best represents the data** | **Chapter 2 Statistics and Graphs** Unit test open-ended | **Tape measure**  
**Adding machine tape**  
**String**  
**40 pennies**  
**5 plastic cups**  
**ISTEP+ Applied Skills 2007**  
**ISTEP+ Applied Skills 2008** | **Hands-on Mini Lab Lesson 2-3**  
**Hands-on Mini Lab Lesson 2-6**  
**Problem Solving Strategies:**  
**Guess and Check**  
**Use a Graph** |
<table>
<thead>
<tr>
<th>BEST MAP CRITERION</th>
<th>Content</th>
<th>Skills &amp; Understandings</th>
<th>Assessment</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging and insightful</td>
<td>Declarative knowledge</td>
<td>Procedural knowledge</td>
<td>Evidence of students' level of knowledge, skills, &amp; understandings</td>
<td>STYLE GUIDE: FOR EASE OF READING!</td>
</tr>
<tr>
<td>Open-ended and few in number</td>
<td>What we want students to know &amp; understand</td>
<td>Includes processes, procedures &amp; skills</td>
<td>Appropriate to learner's age &amp; development</td>
<td>USE BULLETS BEFORE EACH ITEM</td>
</tr>
<tr>
<td>The essence, core of the curriculum</td>
<td>Consciously understood factual information</td>
<td>Starts with an action verb</td>
<td>Explicit enough to see connection to skills, knowledge</td>
<td>CAPITALIZE FIRST WORD IN EACH ITEM</td>
</tr>
<tr>
<td>The frame and focus of the unit</td>
<td>Facts, concepts, generalizations, principles</td>
<td>Specific enough to be meaningful</td>
<td>Clear, well-defined</td>
<td></td>
</tr>
<tr>
<td>Understood by the learner</td>
<td>Subject matter clearly defined</td>
<td>Understandings = what the student will know</td>
<td>Many and varied</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>WHAT TO AVOID</th>
<th></th>
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<tbody>
<tr>
<td>Yes/no questions</td>
<td>Vague or generic descriptions</td>
</tr>
<tr>
<td>Unrelated to content</td>
<td>‘Will know’ or ‘will understand’</td>
</tr>
<tr>
<td>Unrelated to assessment</td>
<td>Not related to essential question</td>
</tr>
<tr>
<td>Education-ese</td>
<td></td>
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</tbody>
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<table>
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<tr>
<th>CONSIDERATIONS</th>
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<tr>
<td>Make public to students</td>
<td>Take into account learners' current skills &amp; understandings</td>
</tr>
<tr>
<td>Use ‘what’ or ‘how’</td>
<td>Determine level or degree of mastery</td>
</tr>
<tr>
<td>Be realistic given allotted timeframe</td>
<td>Use multiple sources of evidence to determine what students understand</td>
</tr>
<tr>
<td>Too many questions can overwhelm</td>
<td>Authentic assessments show relationship between what students are learning to the real world</td>
</tr>
<tr>
<td>Can connect a range of disciplines</td>
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</tbody>
</table>
Curriculum map data is often entered into a purchased software package that organizes the data and provides keyword searches to locate specific curricular information.

Regardless of the organization method, curriculum maps address the major ideas, concepts, skills, and processes that drive a class, as opposed to attempting to map every topic of discussion in classrooms, which would unnecessarily consume time and energy.

One of the most important features of curriculum maps is that they are geared to the school calendar, and each teacher's time line is precisely displayed on the teacher’s map.
Why create a curriculum map?

Curriculum maps lead educators and their community to ask and answer the provoking questions that improve instruction and promote achievement.

– For example, parents of students in the same grade might ask, "Why is my friend's son studying decimals in Mrs. Titus’ class and my own son is not studying decimals in Mr. Clark's class?"

– Teachers might inquire, "Why do some of my students know how to paraphrase and cite research while others are totally lost?"
• Members of an educational community can look at the school's curriculum map to discover when and if specific content is covered.
• This helps to reassure interested parents when specific information will be taught.
• It can also serve as the impetus to align courses horizontally.
• A curriculum map provides insight into the big picture, and responsible use of the information contained in a curriculum map can strengthen instruction school wide.
Most teachers, department chairs, and supervisors for curriculum agree that the creation of pacing guides and course outlines is easy; convincing skeptics to accomplish the goals established by such documents often requires proof that following planned curricula best serves the students.
There are two approaches to beginning the curriculum mapping process.

**District Essential Map:**
Created by groups of teachers and administrators to determine the essential content and skills of the standards to be taught, learned, and assessed. From these, the schools develop their consensus maps.

**School Consensus Maps:**
Created by groups of teachers as they unpack the standards. Initially meet in grade-level or content-area groups; later share and improve maps in cross-grade-level and cross-content-area teams. Describes the agreed upon skills to be taught, learned, and assessed.
Depending upon the needs of the school, either approach can be taken. When teachers begin by diary mapping, what is actually being taught is captured. It often reveals a lack of alignment and documents the need for further curriculum conversations.
Skeptics of curriculum mapping are usually convinced when reviews of teacher diary maps clearly magnify problem areas in instruction, such as redundancy, inconsistencies, and misalignment.

A faculty or department review of curriculum maps is designed to motivate teachers to correct such problems, bringing their instruction into line with a planned curricula, thus guaranteeing what students are taught.
What happens to the completed teacher curriculum maps?

Once teacher data is organized, the labor-intensive portion of curriculum mapping is complete and the review process begins. Once the review is complete, the benefits of curriculum mapping are apparent: issues in sequencing of instruction and discrepancies in levels of cognitive demand become obvious and easily correctable.
While review teams should be comprised of any combination of administrators and educators, subject review by department is a logical beginning point. Departments can investigate the map to identify gaps in the vertical and horizontal alignment of courses. Courses that are correctly aligned permit teachers to quickly assess what students mastered in the preceding grade and to focus on building skills and knowledge, as opposed to consuming valuable time with unnecessary reviewing and re-teaching.
Horizontal alignment assures that all teachers of a common grade level address specific subject matter following the same time line. Such alignment is crucial for school systems to be successful with state accountability, standards-based assessments.

Initial review of the completed map by each department assures vertical and horizontal alignment and segues into a broader review of the map.
After vertical and horizontal corrections have been made, a different review team comprised of instructional leaders from throughout the school reviews the map in search of common points of instruction. This team of reviewers informs teachers of overlaps in content or major assignments to promote interdisciplinary connections.
As teachers begin to build on interdisciplinary connections, students naturally begin to link information between and among courses, increasing the relevancy of skills and content in such courses.

Additionally, teachers can verify skills or content addressed in other courses and alter their unit plans to a higher level, making learning more relevant.
Curriculum mapping also allows teams of teachers to study their student achievement data along with their curriculum map data and make adjustments to their instruction.
When is curriculum mapping finished?

• The addition of new teachers, alterations to the program of studies, changes to state standards—the factors that affect instruction within a building are manifest.

• A curriculum map is a work in progress and schools that view it as such create and recreate review teams for it, always looking for ways to build bridges among curricula.

• Schools with established review teams are keenly aware of the changes within the building that impact instruction and assure that such changes are reflected on the curriculum map in use.
• Review teams work regularly to maintain an up-to-date curriculum map that can be reviewed quickly and efficiently by novice and veteran teachers alike.

• These regularly scheduled reviews preserve an on-the-same-page mindset among educators, asking and answering the questions that drive effective instruction.

• However, curriculum mapping is an intense and time-consuming undertaking.
While the value of curriculum mapping comes from the conversations about instruction within the school, the state or district can play a strong role in ensuring alignment is in place through the development of the first step in the curriculum mapping process.

A state or district curriculum map gives teams of teachers a starting point to plan their units of instruction with the knowledge that the scope and sequence has already been built to avoid gaps and redundancies saving them time and ensuring a common starting point.