

Curriculum Mapping: Purpose, Possibilities, and Practices

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Our Essential Questions:

- How can we structure school decision making to support cumulative learning?
- How should we design our curriculum to prepare learners for their future?
- How does curriculum mapping serve as a HUB for all initiatives regarding teaching and learning?



Mapping is a coin with two sides

- One side is the documentation –the maps themselves
- One side is the review process – examining and revising map cumulatively between teachers

What Is Curriculum Mapping?

- ♦ **Calendar-based curriculum mapping is a procedure for collecting and maintaining a data base of the operational curriculum in a school and/or district.**
- ♦ **It provides the basis for authentic examination of the data base.**



Targeting Needs:

Discussions, debates, and decisions will be based on

← **What is in the best interest of our specific clients, the students in our educational setting?**

← **Their ages**

← **Their stages of development**

← **Their learning characteristics**

← **Their communities**

← **Their aspirations**

← **Their needs**

← **The need for cumulative learning**

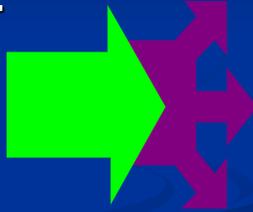


CM solves specific problems

- a communication tool
- a planning tool
- pedagogical tool

What information do we collect initially on a map?

- **CONTENT**
- **SKILLS**
- **ASSESSMENT**



The subject matter itself; key concepts, facts, events, which may be presented with a map in three formats:



Content Formats

Discipline-Based

Focus on subjects: math, science, social studies, literature, arts, physical education, etc.

Should be active: students as "scientists"; as "artists"

Interdisciplinary

Focus on connections between two or more subjects examining common organizing center

Rigorous; avoiding potpourri

Student-Centered

Focus on student-developed interests

Emerges directly from learner

What is a concept? Why are they so critical to learning and to mapping?

- A concept is a relational statement that provides the focus and basis for acquiring knowledge.
- Concept based learning sustains long term recall of facts vs. isolated fact base learning.
- A concept is synonymous with the enduring understanding or big idea.

Examples of concepts:

- A history unit on Ancient Egypt might focus on the concept:
 - The geographical location of a culture largely determines its social, political and economic possibilities.
- A science unit on the Rainforest might focus on the concept:
 - In the natural world there are systems comprised of interdependent component parts.

Skills are displayed on a map as:

- **Precise skills that can be:**
 - ➔ Assessed/measured
 - ➔ Observed
 - ➔ Described in specific terms
- Skills are action verbs...
- Unlike general processes



Precision expectation is crucial to skill development.

- THE COACH DOESN'T SAY:
"We're working on **critical playing skills** today."
- THE COACH DOES SAY:
"We're working on driving **into the basket.**"



Precision Skills within Disciplines:
In Science, there is the general process of INQUIRY ... *Precise Skills* might be:

- **Observe** and **make notations** of an event in the natural world or space
- **Collect** and **display** data
- **Cite** significant variables
- **Pose** explanations
- **Predict** future results



Skills across disciplines *precise skills* might include:

- **Edit** and **revise** [skills] in all disciplines
- **Utilize** organizational skills
- **Read** for decoding
- **Read** for text interaction
- **Speak** in a range of forums
- **Research** using technology for information access
- **Create** a technological production purposes
- **Isolate** and **improve** career habits for personal and group work

On Maps, Assessments are the Major Products and Performances:

- **Assessment** is the demonstration of learning
- **Assessment** is the observable evidence
- They must be listed as defined nouns:
- Tangible Products or
- Observable Performances



SELECTED RESPONSE:
Multiple Choice 50-Q M.C. Quiz

European Exploration Final Exam

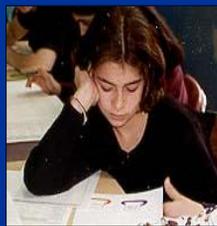
Multiple Choice Section:

1. This is the great Spanish conquistador who, with a couple hundred Spaniards conquered the Aztec Empire in Mexico:
a. Hernan Cortes b. Hernando de Soto c. Francisco Pizarro d. Robert La Salle
2. This spice comes from the bark of a tree, either in sticks or powder, and is rusty-brown in color, found in South Asia and the southeast Asian islands, and is used for a variety of medicinal purposes:
a. pepper b. cloves c. ginger d. cinnamon
3. During the Renaissance period the Europeans began to build bigger and better ships that could sail out into the oceans, tacking into the wind and carrying three masts filled with sails, called:
a. Clipper Ships b. Trireme Galleys c. Spanish Galleons d. Viking Long Ships
4. The Treaty of Tordesillas was an agreement between which two nations that divided the world into their separate spheres of trade and exploration based on their discoveries and explorations?
a. Spain and Italy b. Spain and Portugal c. Portugal and France d. England and Holland
5. One of the great trading centers of Central Asia, a way station on the Great Silk Road out of China, was the city of:
a. Calicut b. Constantinople c. Samarkand d. Baghdad



Constructed-Response Questioning?

10-Q Short-Answer Test



Failures of Exploration

Cause of Death	Percentage of Death
Killed by Native	~40
Killed by Scarcity/Disease	~20
Killed by Military/Pillaging/Overexertion or Fall	~25

9. Being a explorer was a very dangerous profession. According to this bar graph:
a. What percentage of the Europeans could be considered "unwelcome guests" in the countries they explored?

b. Generate two reasons why explorers may have not been welcomed.

Collections of Assessments:

- Portfolios
- Anthologies
- Recordings of observable performances

Performance-Based Assessment?

Mount Vernon
Historical Research:
Individual and Group
Presentations



ASSESSMENT reveals:

- _ Proficiency of targeted skill development
- Knowledge and insight into content

CURRENT TRENDS: MERGING ASSESSMENT DATA INTO MAPS

- New versions in mapping software are linking to assessment data
- Links to assessment data
- Tabs to differentiated curriculum



➤ **DIAGNOSIS-**

➤ finding what our learners need from the assessment data

➤ **PRESCRIPTION-**

➤ revising our maps collaboratively to respond to those targeted needs

Mapping Active Literacy in Every Classroom K-12

Every teacher in every subject
maps necessary strategies

We will inform and revise our maps on two levels:

- The needed areas to be addressed in the **Content and Subject-Area Skills**
- The **Cross-Disciplinary Literacy** strategies needing attention.



Let's remember ...

- **Content** - *is the subject matter; key concepts; facts; topics; important information*
- **Skills** - *are the targeted proficiencies; technical actions and strategies*
- **Assessment** - *is the demonstration of learning; the products and performances used as evidence of skill development and content understanding*

How can we set the stage before launching our CM work?

- Setting up leadership groups (teams) in each building (or district level) to create the conditions for success
- Structuring conditions that will make a difference in your planning and initiating
- Creating meaningful roles for cadre's participants
- Carrying out effective R & D for technology and long-term plans

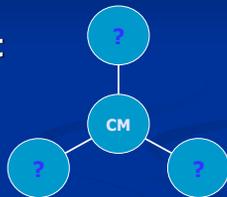


The First Charge for the Lead Mapmakers:

- ✓ Become knowledgeable about, and comfortable with, the mapping "basics"
- ✓ Identify and choose a technology format and template
- ✓ Identify most valuable forms of assessment.
 - ✓ Draft an Action Plan (Timeline) for introducing the mapping process to the faculty.

The Hub Effect

- **Identify initiatives that would be better served through the use of the CM review process, for example...**



In order to motivate and engage staff:

Best Practice:

Introduce CM as a tool to solve a specific teaching and learning problem at the school.

Best Practice:

Introduce CM as a hub for integrating building and district initiatives.

Establishing "Purpose" for Curriculum Mapping

- The Use of the Empty Chair
- Examining Beginning and Future Mapping Tasks

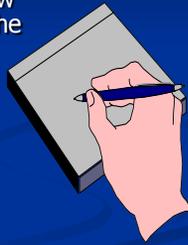


Potential tasks to address school/district/complex problems:

- Gain information
- Avoid repetition
- Identify gaps
- Locate potential areas for integration
- Match with learner standards
- Examine for timeliness
- Edit for coherence

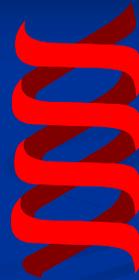
To Gain "Task Information" On Maps...

- ↳ **Underline** something new you have learned about the **operational** curriculum.
- ↳ When sharing with colleagues, this process **expands a teacher's understanding** of the students' experience.



Edit for Repetitions...

- **Recognize the difference between meaningless redundancy and powerful spiraling.**



Edit for Gaps...

- **Examine maps for gaps in:**
- **Content**
- **Skills**
- **Assessments**

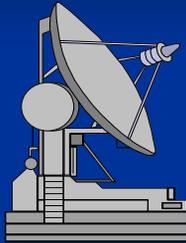


Validate State, District, Site, Power Standards...

- Search the maps for places where students are completing Performance Tasks related to Skills and Content that match your Standards.
- Identify gaps or repetitions of "intensity" of Standards.



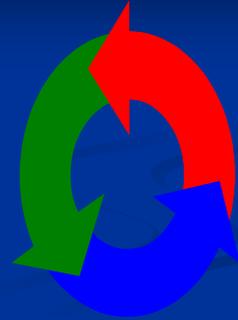
Edit for timeliness...



- Review the maps for timely issues, breakthroughs, methods, materials, and new types of assessments.
- Be vigilant about technology in all aspects of learning.

Edit for Coherence...

- Scrutinize the maps for a solid match between the choice of Content, the featured Skills & Processes, and Assessments.



THE CM REVIEW AND REVISION PROCESS

The procedures for mapping are best presented in a **seven-phase model** for teachers.

The CM Seven-Step Review Process:

- 1. Collecting the Data
 - 2. First Read-Through
 - 3. Small Like/Mixed-Group Review
 - 4. Large Like/Mixed-Group Comparisons
 - 5. Determine Immediate Revision Points
 - 6. Determine Points Requiring Some Research and Planning
 - 7. Plan for Next Review Cycle
- (from *Mapping the Big Picture: Integrating Curriculum and Assessment K-12*; 1997. ASCD, Jacobs, HH.)

Define...

QUALITY



What do exemplary maps look like?

Key Initiative Points for First Experiences:



- Do not **overwhelm** teachers with an initial task entry that is too large!
- **One discipline** in an elementary school; preferably one in need of attention given student performance.
- **One prep** per secondary teacher.

➤ 1. Collecting the Data

- Eventually each teacher in the building completes a **first-draft** of a projected or diary map
- The format is **consistent** for each teacher, but reflects the **individual nature** of each classroom
- **Important Note:** Technology **simplifies** the publishing of data collection



Remember When Collecting The Content Data May Be Listed:

Configuration

- ☑ Discipline-Field Based
- ☑ Interdisciplinary
- ☑ Student-Centered

Type of Focus

- Topics
- Issues
- Works
- Problems
- Themes

Recording and Collecting Skill and Assessment Data:

- Enter the Skills and Assessments fore grounded for each unit of study or course
- Precision is the key
- Enter the Skills and Assessments that are on-going through the course of a year
- Portfolio Checks
- Early Childhood Assessments



Is Honesty an Issue?

FAQ's:

- How will the maps be used?
- Who will see the maps?
- How will my peers react to my map?
- Does my name need to be on my map?



Plausible Time Frames for a **FIRST DRAFT** of projected map with enough initial understanding and training....

- **Elementary:** Approximately 1 hour for Content; 2-3 hours for Skills and Assessment **per course**. (exception is ELA K-2)
- **Secondary:** Approximately 45 minutes for Content; 2 hours for Skills and Assessments **per prep**.

2. First Read-Through

- Each teacher reads the entire grade-level, discipline, or school-wide maps as an **editor** and carried out the prescribed "tasks."
- Places where new information is gained are **noted/recorded** (underlined).
- Places **requiring potential revision** are also **noted/recorded** (circled).



How do we set up our data review teams for the first year of CM ?

- Identifying the **best grouping patterns** for review.
- Using **productive communication** for feedback and decision making.

➤3. Mixed Small-Group Review

- Groups of 5 to 8 faculty members are formed
- Groups should be from diverse configurations (i.e., different grade levels and departments)
- Meetings should run approximately 1-1/2 hours
- The goal is to simply share individual findings
- No revisions are suggested at this time



What are the purposes of the Reviews?

Horizontal & Vertical

- To **identify** the areas or priorities in need of monitoring or changing
- To **examine** maps for gaps, absences, and redundancies
- To **raise** central or extended questions and/or issues concerning on-going mapping discoveries



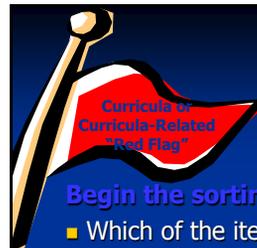
➤4. Large-Group Review

- All faculty members come together and **examine the compilation of findings** (based on recorded notations) from the smaller group meetings
- Session is **facilitated** by principal and/or teacher-leader(s)



➤5. Determine areas for immediate revision

- The **faculty identifies those curricula decisions/areas that can be handled by the site with relative ease.**
- The **specific faculty members involved in those revisions determine a timetable for action.**



Teachers return to original grouping: mixed teams, grade levels...

Begin the sorting process:

- Which of the items/issues appear to be solved with relative ease?
- Who might be the right people on staff to resolve these items/issues?
- Which items/issues will take extensive R & D?

➤6. Determine those areas requiring long-term planning

- Faculty members identify those areas that have implications beyond the site and into/with other sites.
- Faculty members identify those areas where more research is needed.



Using the Maps to Impact Learning (cont.)

- Review maps to determine where and with what frequency skills are taught
- Review timeline to determine when they are taught
- Make needed changes or revisions
- Develop goal plans and timelines
- Develop staff-development plan(s) and timelines

➤7: The Cycle Continues ... As you transition to new decision making structures...

- Once CM is established, the District CM Cabinet meets approximately three to four times annually for review updates.
- Task forces report on their timetables.
- The site-based CM Councils continue with ongoing review.

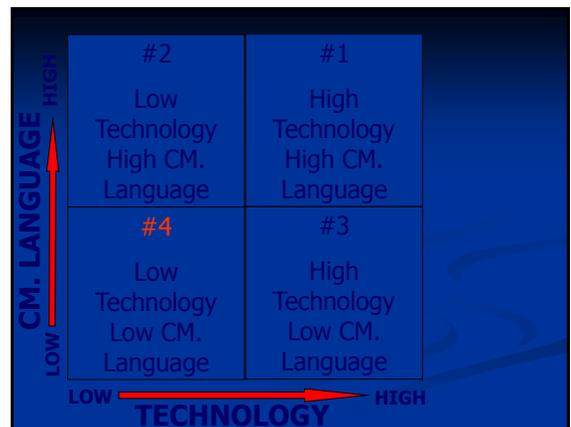


Long-Term Time Frames...

- **Data Collection:** Within 3-5 months of initially learning the mapping elements and process of map recoding
- **First Reviews:** Try to have within 2 months after initial data collection
- **First Minor Revisions:** Immediately after first reviews
- **Major R & D Review:** Planned within first year
- **Begin On-going Review Site Councils:** Second year

Differentiated for Staff...

- According to experience with **curricula** and **technology**
- According to **demonstrated/voiced** competence
- According to what will **best help** the learners



Consider a Range of P.D. Venues...



- **Various** Groupings
- **Hands-On** Labs
- **Small** Workshops
- **Work** Sessions
- **On-line** Courses
- Staff Development **Days** Based On Data
- **Observing** Mentors
- **Peer** Coaching
- **Video** Conferencing

Site-Based Staff Development

- ❖ **Cumulative decision-making patterns**
- ❖ **Targeted groups of teachers building on-going assessment review collectively**
- ❖ **Based on a range of assessment data**

Schools and Districts are developing Master Maps to replace guidelines..

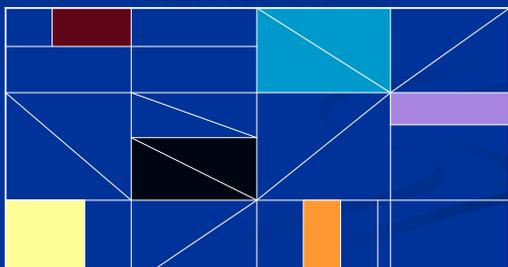


Wrestling with Consensus

All mean the same...you need to determine what terms you will use at your building

- Master Map
- Consensus Map
- Essential Map
- Core Map
- Collaborative

How do we weave our individual maps into a meaningful design that will benefit all students?



CONSENSUS: Creating an Essential Map

- **Developing an essential map that eventually replaces course or grade-level guidelines**
- **Considering each discipline separately**
- **Identifying cross-disciplinary consensus**



Policy concerning...

Where is **consistency** critical for our students' learning?

Where is **flexibility** equally as important?

Two Basic Approaches:

- **One: Using individual diary maps, have grade-level or course teachers develop a subject or course's Essential Map by identifying:**
 - ✓ The core curriculum concepts
 - ✓ The critical focal skills
 - ✓ Benchmark assessments
 - ✓ Common essential questions
 - ✓ Essential learnings/Power standards

Two Basic Approaches:

- **Two: Revising and reacting to an already existing set of guidelines,**
 - **Reviewing an agreed-upon district or school's guidelines and modifying it so that it has a Curriculum Mapping "look" (by months, etc.);**
 - **Instructing in the individual classroom to see how the drafted Essential Map plays out**
 - **Re-visiting the first-draft Essential Map and converting it to an active Essential Map**

Contact us for additional questions and resources:

www.curriculumdesigners.com