Reinventing Schools

A division of Marzano Research


Shared Vision
Personalized Learning
One Thousand Districts Realizing Their Unique Vision of Excellence
Leadership
Continuous Improvement

- **Students are placed in developmentally appropriate content levels.**

Personalized Competency-Based Classrooms

- Present learning targets as learning progressions
- Classroom set-up
- Transparency and clarity of learning progressions
- Student self-monitoring
- Managing a competency-based classroom
- Competency-based instructional strategies

Learning Targets as Learning Progressions

Organizing Content by Measurement Topics

Reporting Topics for Mathematics

- Number sense and number systems
- Operations and estimation
- Addition and subtractions
- Multiplication and division
- Patterns, relations, and functions
- Algebraic representation
- Lines, angles, and geometric objects
- Transformation, congruency, and similarity
- Measurement systems
- Perimeter, area, and volume
- Data organization
- Probability

How Topics Are Articulated and Assessed

- Topics may be articulated as proficiency scales (i.e. learning progressions within a level) and assessed using multiple forms of assessment

Sample Proficiency Scale		
Content Area: Math		
Measurement Topic: Two Digit Numbers		
4.0		*In addition to Score 3.0 performance, in-depth inferences and application that go beyond what was taught.*
	3.5	*In addition to score 3.0 performance, partial success at 4.0 content.*
3.0		**The student will:** ❑ (3.1) Understand that the two digits of a two-digit number represent amount of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones- called a "ten." b. The numbers from 11-19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones.) d. Decompose two-digit numbers in multiple ways (e.g., 64 can be decomposed into 6 tens and 4 ones or into 5 tens and 14 ones.
	2.5	*No major errors or omissions regarding score 3.0 content and partial success at score 3.0 content.*
2.0		**The student will:** ❑ (2.6) Identify key vocabulary: tens, ones, place value, model, ten tower, bundle, cubes, hundred, base ten blocks, ten frame ❑ (2.5) Use models and write to represent equivalent forms of tens and ones. ❑ (2.4) Use objects, pictures of numbers to represent tens. ❑ (2.3) Group objects to show numbers to 120 and to show numbers to 99 as tens and ones ❑ (2.2) Recognize and represent the number of groups of tens and ones in a given number. ❑ (2.1) Use base-ten blocks to model a number allows students to connect the value of each digit with its place in the number.
	1.5	*Partial success at score 2.0 content but major errors or omissions regarding score 3.0 content.*
1.0		*With help, partial success at score 2.0 content and score 3.0 content.*
	0.5	*With help, partial success at score 2.0 content but not at score 3.0 content.*
0.0		*Even with help, no success.*

At a very basic level, a proficiency scale is thinking about the content for an important topic in terms of three levels of difficulty.

4	More complex learning goal
3	Target learning goal (standard—often broken down into parts)
2	Simpler learning goal (what are the simpler parts or prerequisite knowledge)
1	Demonstration of partial competence with help
0	Even with help no demonstrated competence

Topic: Atmospheric Processes and Water Cycle

4	Describe and defend what might occur to climatic patterns in a specific location given a dramatic change in one specific process of the water cycle.
3	An understanding of: • How the water cycle processes (condensation, precipitation, surface run-off, percolation, evaporation) impact climate changes • The effects of temperature and pressure in different layers of Earth's atmosphere

2	• Recognize and recall basic terms such as: climatic patterns, atmospheric layers, stratosphere, troposphere.
	• Recognize or recall isolated details such as:
	  • Precipitation is one of the processes of the water cycle.
	  • The troposphere is one of the lowest portions of the Earth's atmosphere.

You Try It

3	Target learning goal (standard—often broken down into parts)
2	**Simpler learning goal (what are the simpler parts or prerequisite knowledge)**

You Try It

Using the content area and topic, complete the level 2 section on the scale

Writing/Edit and Revise/Level 5

3	**The student will develop and strengthen grade-appropriate writing by (W.5.5):** • Planning • Revising • Editing • Rewriting • Trying a new approach
2	**The student will recognize or recall specific vocabulary, such as:** **The student will perform basic processes, such as:**

Sample Proficiency Scale

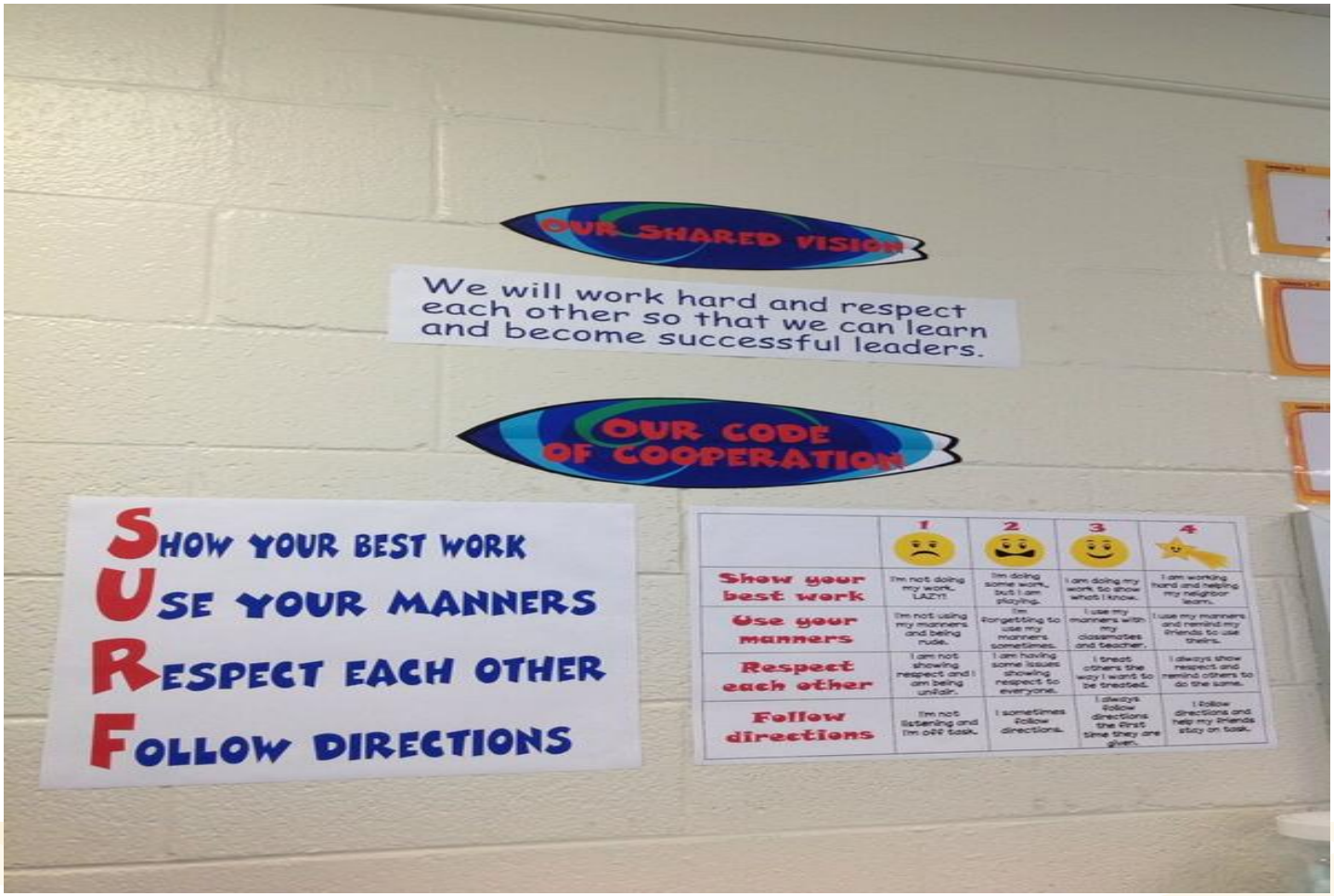
Writing/Edit and Revise/Level 5

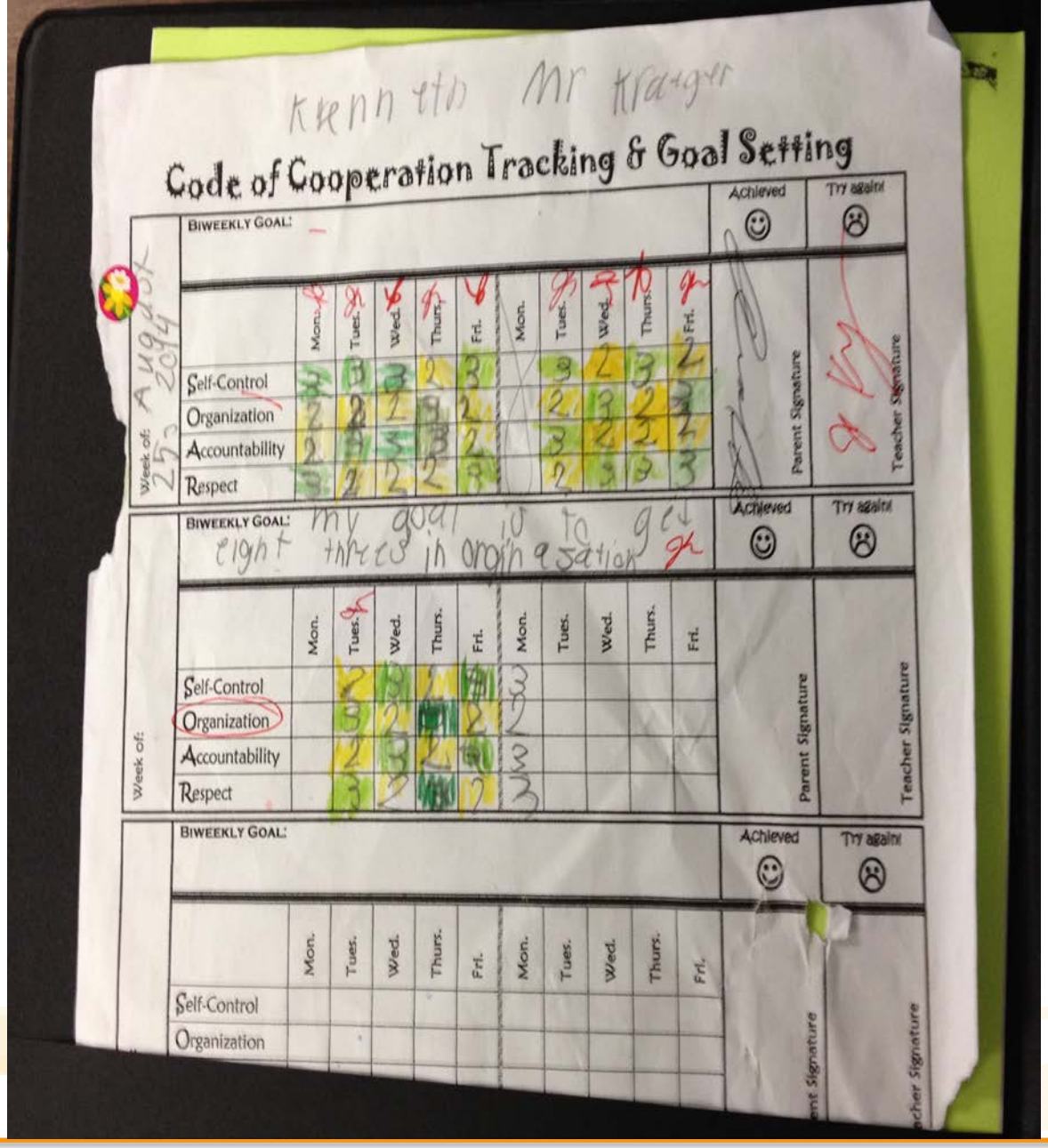
3	The student will use technology, including the internet to: • Produce and publish grade appropriate writing (W 5.6) • Interact and collaborate with others (W 5.6) • Type a minimum of two pages in a single setting (W 5.6)
2	**The student will recognize or recall specific vocabulary, such as:** • Edit, plan, revise, rewrite **The student will perform basic processes, such as:** • Plan writing using a teacher-provided planning template or graphic organizer • Revise and edit writing based on teacher and peer feedback

Setting up the Classroom

- Classroom shared vision (establish and monitor)
- Use tools to facilitate voice and choice
- Stations and resources to support learning progressions
- Areas for whole class instruction and performance
- Small group work
- Individual work

Classroom Shared Vision




Code of Cooperation Tracking & Goal Setting
BIWEEKLY GOAL:
Achieved
Try again
Week of:
Mon.
Tues.
Wed.
Thurs.
Fri.
Self-Control
Organization
Accountability
Respect
Parent Signature
Teacher Signature
BIWEEKLY GOAL:
my goal is to get eight threes in organization
Achieved
Try again
Week of:
Parent Signature
Teacher Signature
BIWEEKLY GOAL:
Achieved
Try again
Week of:
Self-Control
Organization

Tools to Facilitate Voice and Choice

Transparency of Learning Progressions – Capacity Matrices

What is a capacity matrix?

A capacity matrix is a tool that is a staple of instruction in a CBE classroom that helps students:

- understand and navigate the learning expectations of a standard or topic.
- measure their progress along a continuum of knowledge.

Why use them?

A capacity matrix helps students:

- understand and independently navigate the learning expectations of a standard or standards.
- monitor their progress along learning progressions.
- celebrate their learning.

What do they include?

There are several “must haves” that all capacity matrices cover such as:

- The standard(s) or measurement topics that are being covered.
- The indicators of proficiency.
- A place to indicate what level of proficiency was achieved.

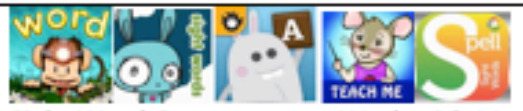
An example of a capacity matrix for a standard that has been unpacked as self-contained learning targets.

Name:	Date Started	Date Proficient
Standard F.K.3 Know and apply grade-level phonics and word analysis skills in decoding words		
Learning Target: I can use my letter sounds and strategies to figure out words		

Indicators	I'm just starting	I need some help	I got this	Evidence	Teacher Sign-off
I can tell the difference between words that look alike by finding the letters that are different and sounding out the words					
I can read some sight words that can't be sounded out like most words (the, do, of, my, you)					
I know both sounds each vowel can make					
I can show which letter makes which sound in words					
I know my consonant letter sounds					

Name: _____ **Date Started:**_____ **Date Completed:**_____

- **F.K.3** Know and apply grade-level phonics and word analysis skills in decoding words.

Kid-friendly: I can use my letter sounds and strategies to figure out words.	**1: I'm stuck!** 	**2: I know some but need help!** 	**3: I got this!** 	**4: I know even more than expected!** 	Resources I can use to practice this/my evidence of mastery:	Teacher Sign off/Date
I know my letter sounds					 Letter Sound Center Work with Mrs. C. Partner Letter Sound Game	
I can show which letter makes which sound in words.					 Letter Sound Center Work with Mrs. C. Partner Letter Sound Game	
I know both vowel sounds each letter can make: a, e, i, o, u					 Letter Sound Center Work with Mrs. C. Partner Letter Sound Game	
I can read some sight words that can't be sounded out like most words (e.g., the, do, of, my, you)					 Sight Word Center Work with Mrs. C. Sight Word Game with friends	
I can tell the difference between words that look alike by finding the letters that are different and sounding out the words					 Word Center Work with Mrs. C. Word Match Game with friends	

Name: _____ Date Started: _____ Date Completed: _____

Class/Course: _____ Teacher: _____ Level: _____

Learning Target: Create a learner-centered culture by developing a shared vision, code of conduct and systems to monitor both.	Emerging I can show what I learned with help	Partially Proficient I learned the simple parts	Proficient I learned the simple and complex parts and can demonstrate them	Advanced I can use what I learned in a new way. (e.g. Explain or go beyond)		
I understand the importance of a shared vision/code of conduct.						
I know how to use the affinity diagram process						
I can craft questions for the affinity diagram process to create a link to the school or district shared vision.						
I can explain the difference between the shared vision and a code of conduct.						
I know how to use the PDCA process to monitor the classroom culture.						
My classroom has a shared vision and/or code of conduct.						
We set goals and monitor the shared vision and code of conduct.						
Students monitor the implementation of the code of conduct and hold each other accountable.						

Turn to a Neighbor

- Can you think of a capacity matrix that could help your students in a particular content area and topic?

Managing a Personalized Competency-Based Classroom

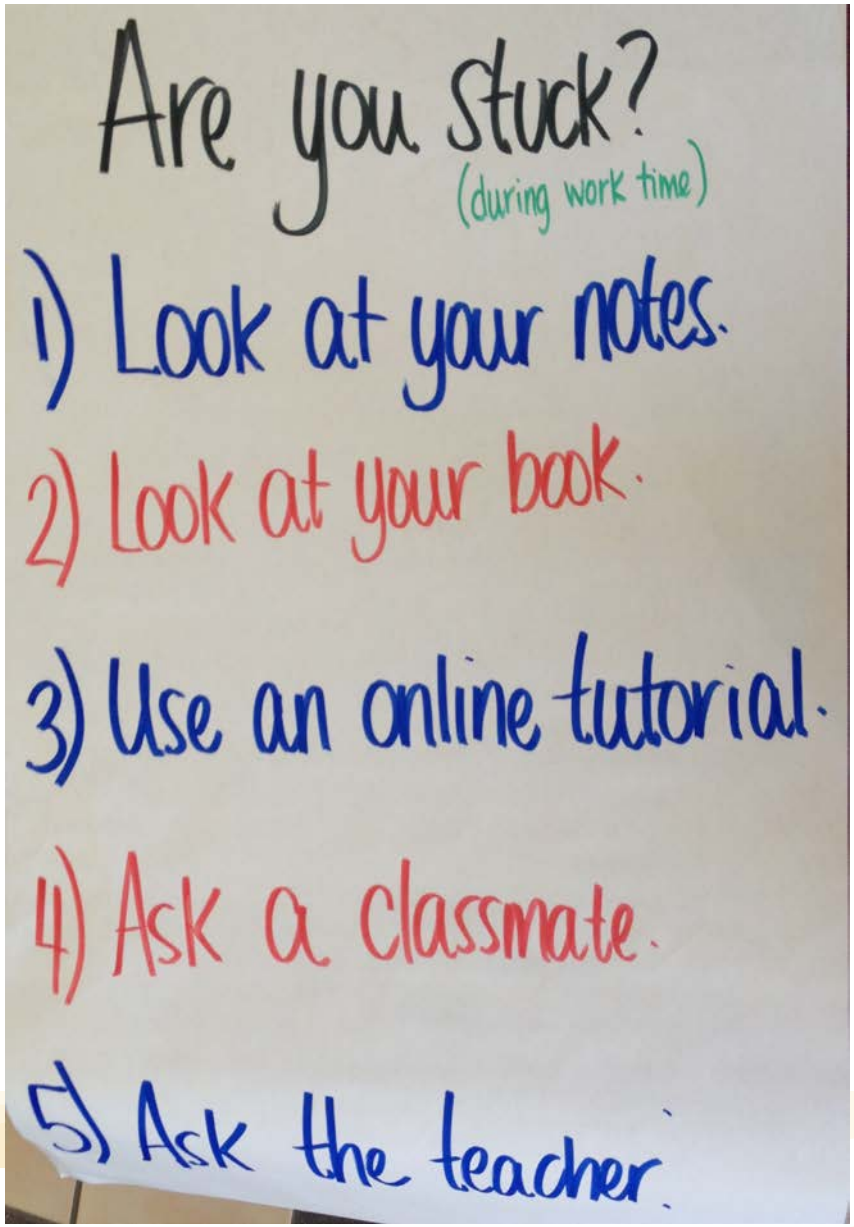
- Standard Operating Procedures are developed to support a student centered environment
  - Move the responsibility of the teacher from controlling the entire class to students owning their actions and behaviors
  - Through creating common norms of behavior

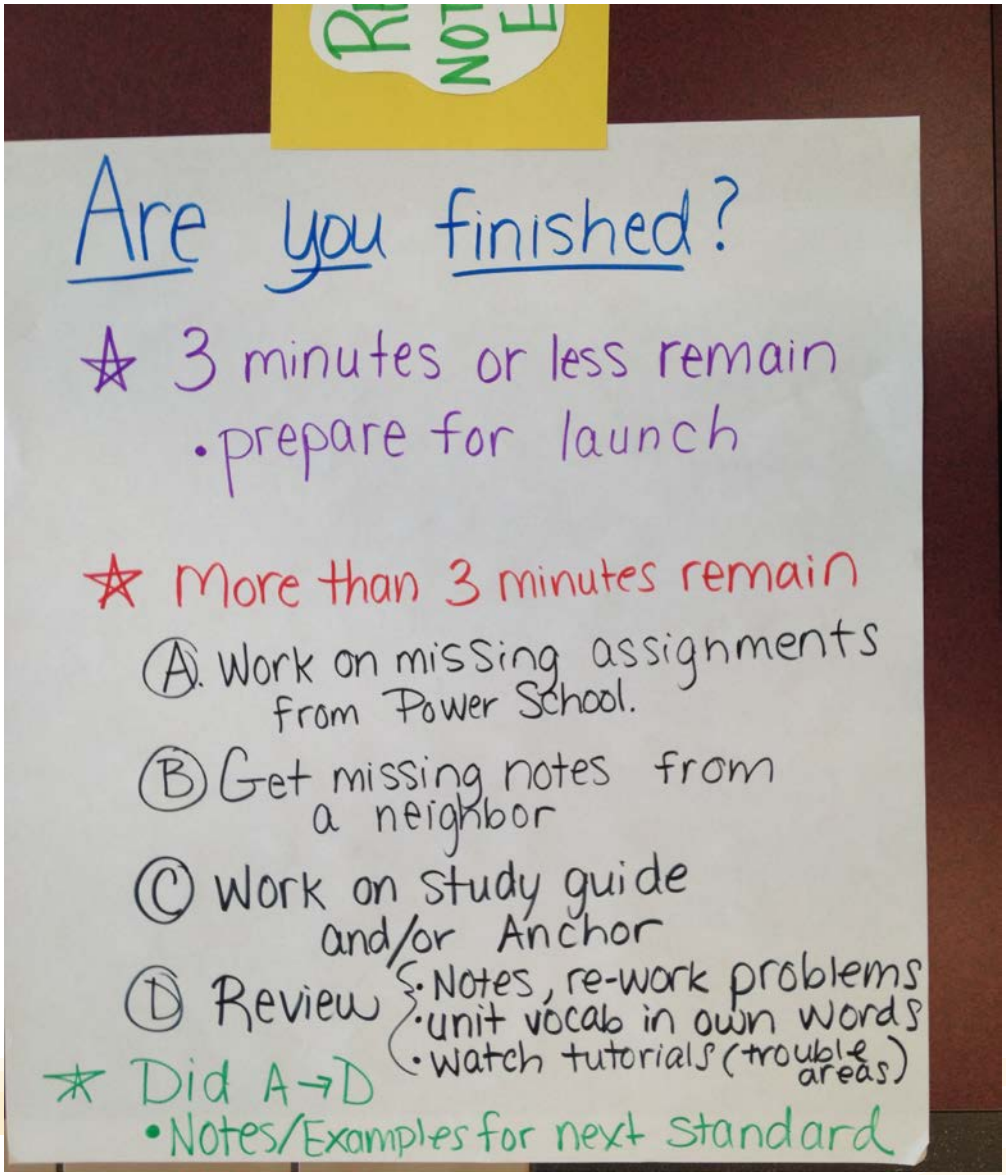
What are SOPs?

- Standard Operating Procedures (SOPs) are step-by-step instructions to achieve desired results on a consistent basis.
- Standardization creates clear expectations and predictable outcomes.
- Commonly used throughout the military, healthcare, and business sectors.
- Two types: procedural lists and flow charts

Procedural List

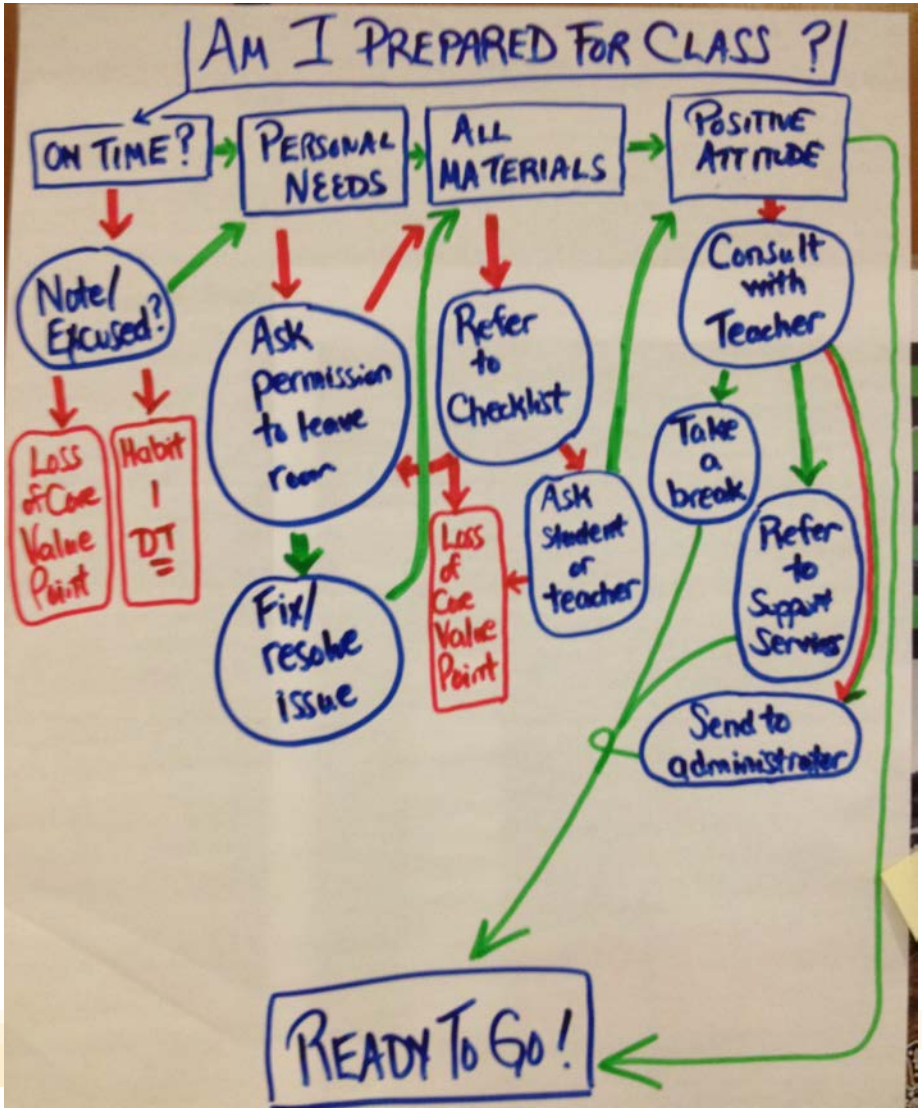
- Often to ensure safety or “compliance”
  - Non-negotiables, like bus routines
- When multiple solutions aren’t necessary
  - Hand washing or walking in the hall
- A list of actionable items
  - What to bring to class
- Students need a reminder of academic steps

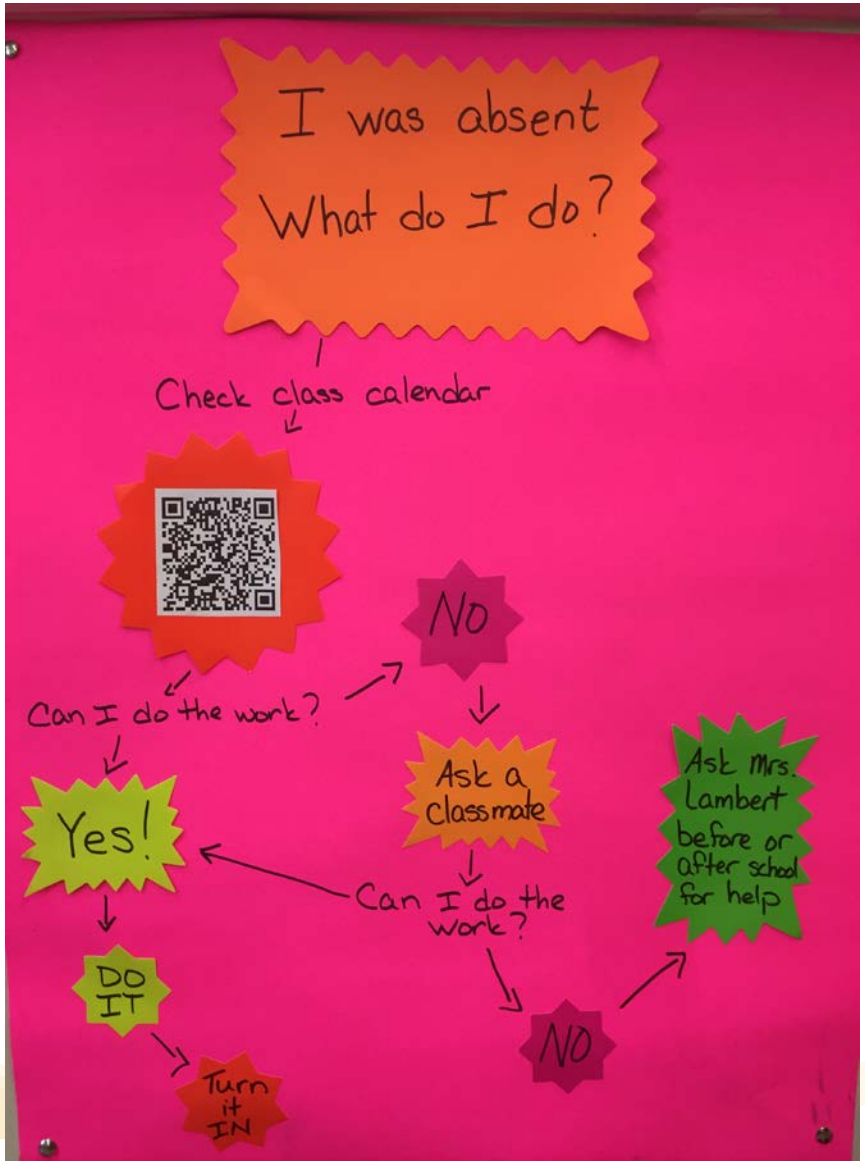

Are you stuck?
(during work time)
1) Look at your notes.
2) Look at your book.
3) Use an online tutorial.
4) Ask a classmate.
5) Ask the teacher.

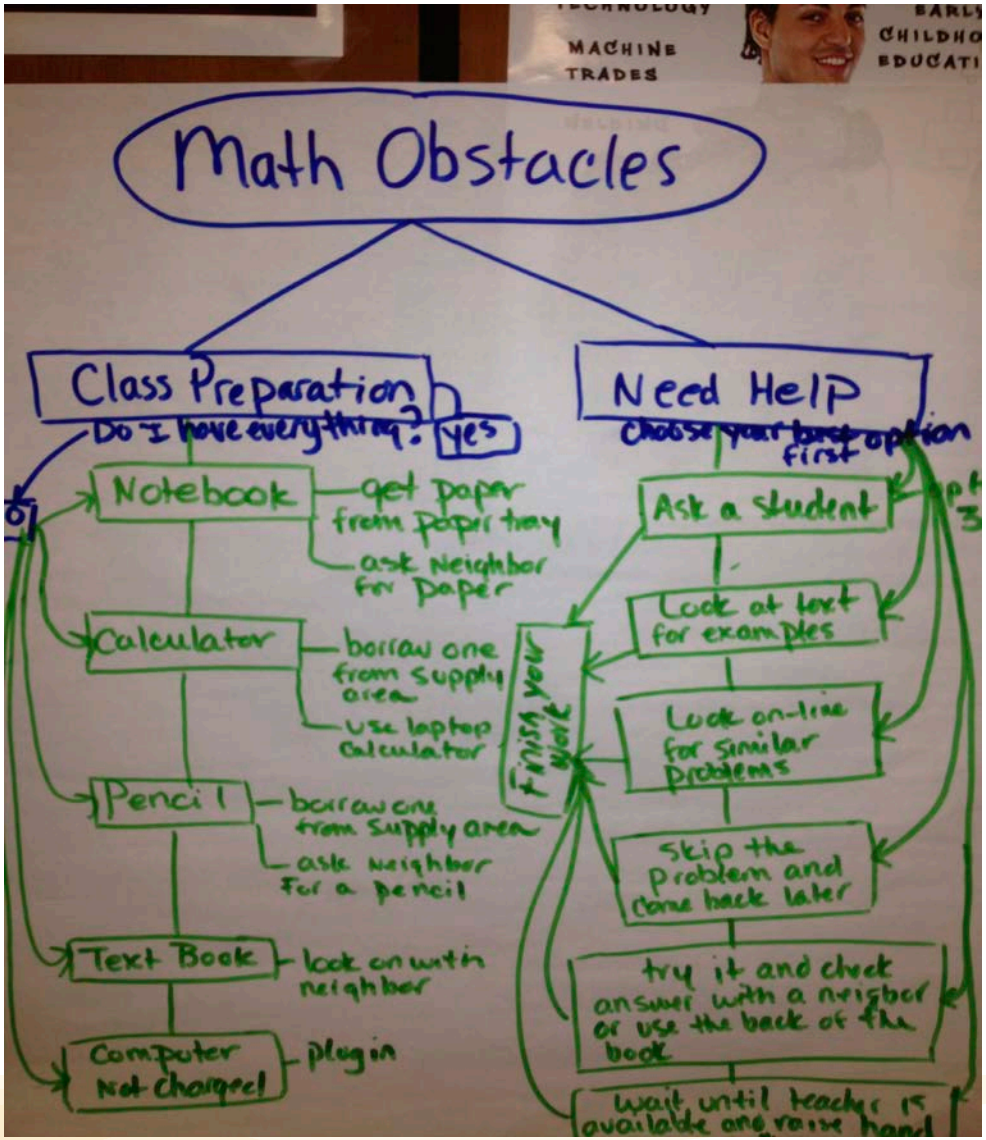

Are you finished?
★ 3 minutes or less remain
• prepare for launch
★ More than 3 minutes remain
(A) Work on missing assignments from Power School.
(B) Get missing notes from a neighbor
(C) Work on study guide and/or Anchor
(D) Review
• Notes, re-work problems
• unit vocab in own words
• watch tutorials (trouble areas)
★ Did A→D
• Notes/Examples for next standard

SOP- Flowchart

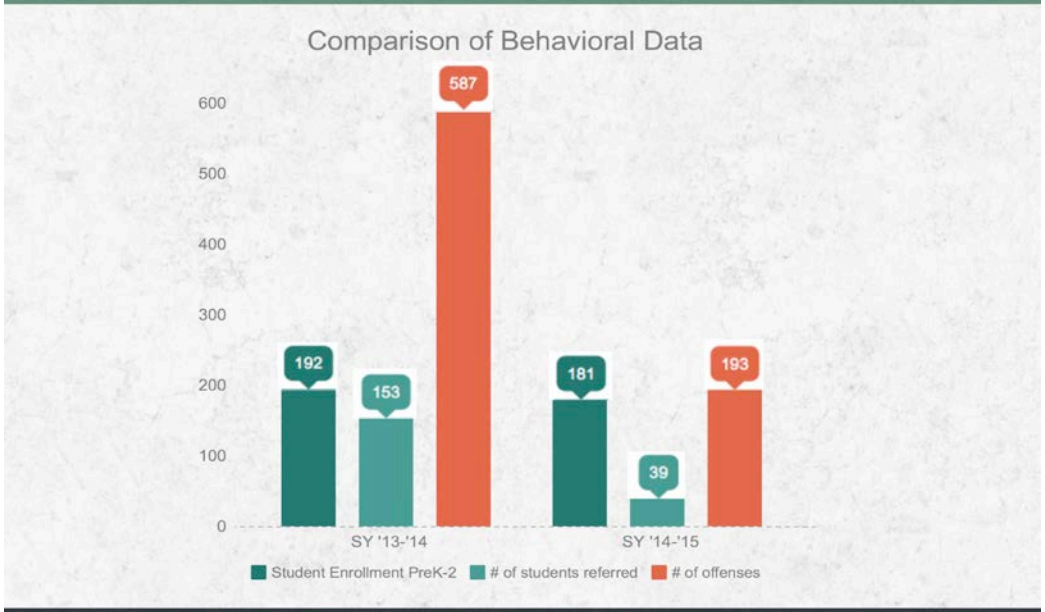
- Helps students to:
  - Self-monitor and correct behaviors before they happen
  - Think independently
  - Build problem solving skills
  - Enhance feelings of self efficacy


AM I PREPARED FOR CLASS ?
ON TIME?
PERSONAL NEEDS
ALL MATERIALS
POSITIVE ATTITUDE
Note/ Excused?
Loss of Core Value Point
Habit 1 DT
Ask permission to leave room
Fix/ resolve issue
Refer to Checklist
Loss of Core Value Point
Ask student or teacher
Consult with Teacher
Take a break
Refer to Support Services
Send to administrator
READY TO GO!


I was absent
What do I do?
Check class calendar
Can I do the work?
No
Yes!
Ask a classmate
Ask Mrs. Lambert before or after school for help
Can I do the work?
DO IT
NO
Turn it IN


MACHINE TRADES
Math Obstacles
Class Preparation
Do I have everything?
yes
Notebook
get paper from paper tray
ask Neighbor for paper
Calculator
borrow one from supply area
use laptop Calculator
Pencil
borrow one from supply area
ask Neighbor for a pencil
Text Book
look on with neighbor
Computer Not charged
plug in
Need Help
Choose your first option
Ask a student
Look at text for examples
Look on-line for similar problems
Skip the problem and come back later
try it and check answer with a neighbor or use the back of the book
Finish your work

Office Referral Data
Libby-Tozier Elementary



After implementing a systemic, student-centered culture, 4x fewer students were involved in office referrals and the number of offenses went down by 1/3.

Turn to a Neighbor

- Think of an area for improvement in your classroom that you could address with the use of a SOP?

Instruction in a CBE System

- Connecting the Art and Science of Teaching
- Originally designed for a traditional system
- Research based strategies

Instructional Framework

- Direct Instruction Lessons
- Practicing and Deepening Lessons
- Knowledge Application Lessons
- General Strategies

Direct Instruction Lessons

- Chunking Content
  - Digestible bites that students can process easily
- Processing Content
  - Engage students in actively processing content (usually in small groups)
- Recording and Representing Content
  - Record understanding of new content in linguistic and nonlinguistic ways
    - Outlines, notes, pictures, graphic organizers, etc.

Practicing and Deeping Lessons

- Structured Practice
  - When content involves a skill, strategy or process
    - modeling, guided practice in groups, close monitoring
- Examining Similarities and Differences
  - When content is informational
    - visual analogies, classification charts, comparison matrices
- Examining Errors in Reasoning
  - When content is informational
    - Identify errors of misinformation, examine supporting claims, statistical limitation

Knowledge Application Lessons

- Cognitive Complex Tasks
  - Engage in tasks that require the generating and testing of a hypothesis
    - Decision making, problem solving, experimentation
- Provide Resources and Guidance
  - Resource provider and guide for engagement in complex task
    - Scoring scales, interviews, feedback
- Generating and Defending Claims
  - Create new ideas and defend them logically
    - Generating claims, provide support for claims, provide backing

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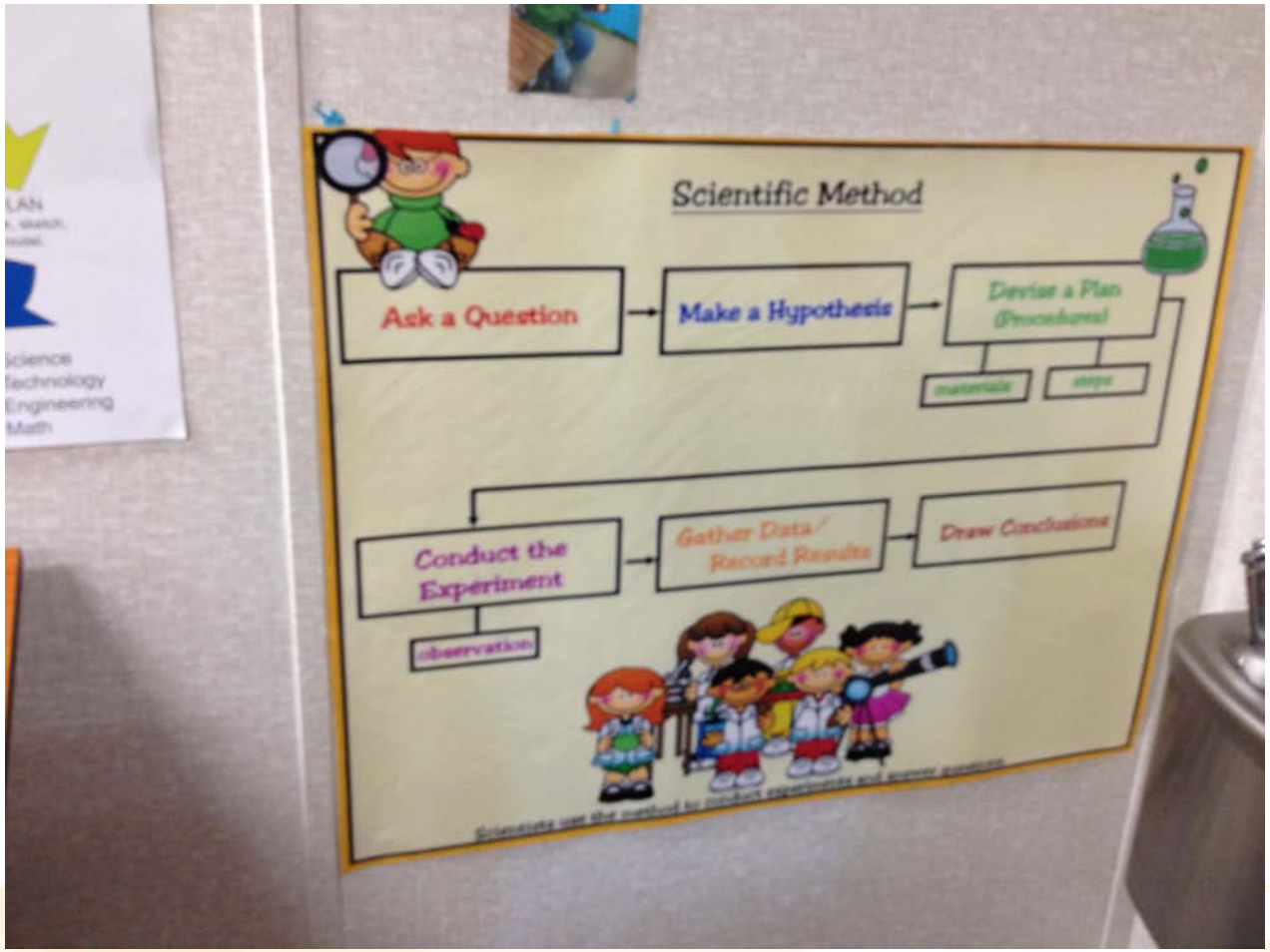
Cognitive Complex Tasks



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Provide Resources and Guidance

Topic: Atmospheric Processes and Water Cycle

4	**Describe and defend what might occur to climatic patterns in a specific location given a dramatic change in one specific process of the water cycle.**
3	An understanding of: • How the water cycle processes (condensation, precipitation, surface run-off, percolation, evaporation) impact climate changes • The effects of temperature and pressure in different layers of Earth's atmosphere

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Generating and Defending Claims

New Idea:

Reason 1 why I think it is true:

What I actually observed:

Reason 2 why I think it is true:

What I actually observed:

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General Strategies

- Used in conjunction with the other three strategies
- Previewing
  - bell-ringers, hooks, pre-assessments, and advanced organizers
- Highlighting Critical Information
  - repeating, focused questions, visual and narrative activities
- Elaborating on Information
  - questioning sequence and elaborating interrogation

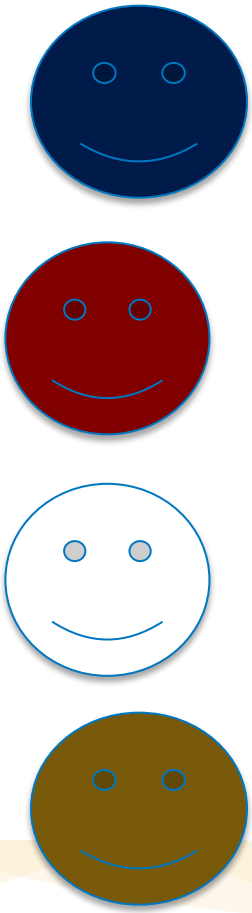
General Strategies

- Reviewing Content
  - cumulative review, presenting problems and demonstrations
- Revising Knowledge
  - peer feedback, notebook entries and assignment revisions
- Reflecting on Learning
  - exit slips, thinking logs and knowledge comparisons
- Organizing Students to Interact
  - Standard operating procedures, peer tutoring and cooperative learning

Dimensions of Instruction

1. **Whole-Class Instruction**
2. Small Group Instruction
3. Individual Instruction
4. Peer-to-Peer Instruction
5. **External Instruction Resources**
6. **Engagement Strategies**
7. Relationship Strategies
8. Strategies to Communicate High Expectations for All Students
9. **Strategies for Classroom Management**

Framework and Dimensions of Instruction



1 Whole-Class
2 Small Group
3 Individual
4 Peer-to-Peer
5 Instruction Resources
6 Engagement
7 Relationships
8 High Expectations
9 Management

General Strategies

Direct Instruction Lessons

Practicing and Deepening Lessons

Knowledge Application Lessons

1. Whole-Class Instruction

- Less whole class instruction
- Introducing new content or topics with the whole class
- Noticing common content opportunities with the whole class

Whole Class Instruction

- What specific topic does the whole class need?
- Will the lesson involve direct instruction, practicing and deepening, or knowledge application?
- What general instructional strategies might you use in conjunction with the instructional framework?

5. External Instruction Resources

- Use multiple resources for instruction
  - Technology
  - Textbooks
  - Secondary resources
  - Teacher and student created items
- Use standard operating procedures for managing resources
- Use capacity matrices for student ownership of resources

6. Engagement Strategies in CBE

In Competency-based systems every child should:

- Understand how he or she learns best
- Have a strong *voice and choice* in their learning
- Be able to navigate and monitor their learning
- Have access to activities that will help them reach their next level of proficiency

Student Voice & Choice = Ownership

Ownership = Value

Value = Engagement

Engagement = Learning

Engagement Strategies

Voice honors the unique perspectives, passions, interests and values of individuals in shaping their own experiences.

Choice offers individuals options to leverage their unique strengths regarding how they meet educational objectives by giving organizational, procedural, and cognitive choices, such as personal goals.

Table Time

- Consider a familiar lesson you have taught
- List the key elements of the lesson:

  standards, tasks, materials, and assessments
- Given what we covered today;

  instructional framework and strategies,

  SOPs, capacity matrices…
- What are you already doing and what would you like to employ?

Share Out

Summarizing our Learning

- Learning Progressions, Transparency, and Monitoring
- Setting up and Managing the Classroom
- Instructional Strategies

Thank you!