

Welcome!

PowerED Walkthrough

Workshop

McREL International

Facilitator: Chris Modellmog

Smoky Hill ESC

POWER
WALKTHROUGH[®]

Over 750,000 walkthroughs have been performed using
McREL's Power Walkthrough software



@McREL_PWT

@McREL

www.mcrel.org

District Administration



<http://mcrelpwt.ning.com>

<http://mxweb.media-x.com/home/mcrel>

Please download:

- 1. PDF of the Participant's Manual**
- 2. App on your device**

Power Walkthrough® User's Guide



**You may also want to download
GoodNotes or GoodReader or
another app for taking notes on the
manual.**



GoodNotes
(handwrite & highlight notes)
\$5.99



GoodReader
(type & highlight your notes)
\$4.99

Introductions

- **Name**
- **Role(s)**
- **ES/MS/HS**
- **Goals for PWTs**
- **Questions/concerns to begin**

About McREL International

- **45 Years**
- **Denver, CO**
- **Educational Research
Lab and Professional
Development Provider**
- **www.mcrel.org**





McREL Mission Statement

***Making a difference
in the quality of
education and
learning for all
through excellence
in applied research,
product
development, and
service.***

After this two-day training, participants will understand:

The purpose of informal observations.

The supporting research.

How to observe and record instruction accurately.

Implementation planning.

How to use data.

Agenda, Day 1

Research behind CITW strategies



Lunch



CITW strategies (con't)



Practice walkthroughs on video



Ticket out: ready to conduct a walkthrough on your device

Agenda, Day 2

Practice walkthroughs in a school



Lunch



Upload data

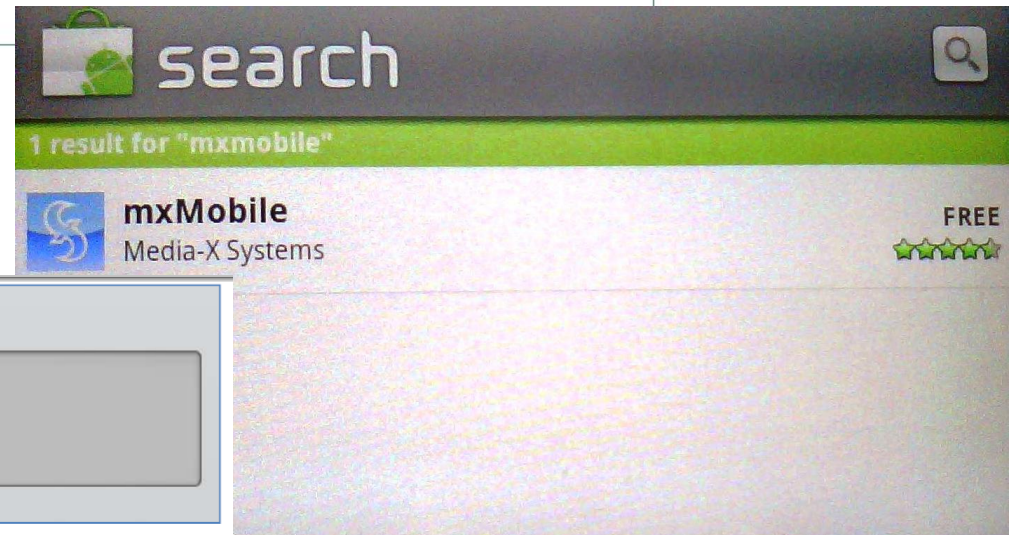
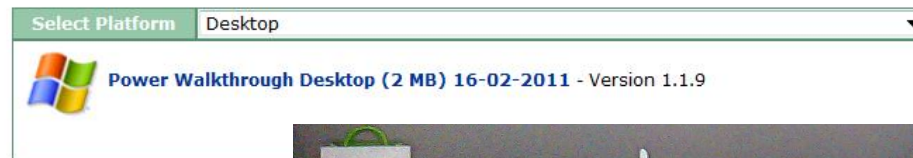


Create reports

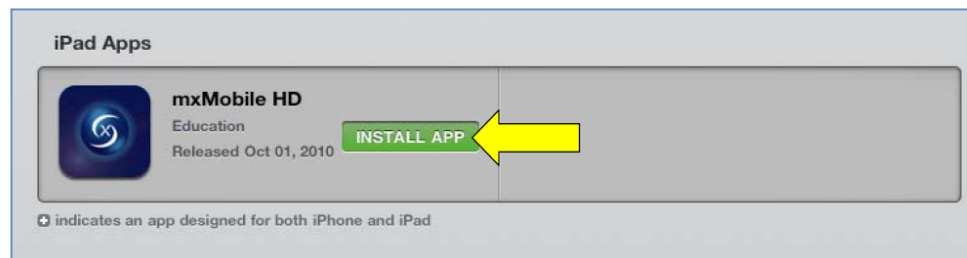


Planning for walkthroughs

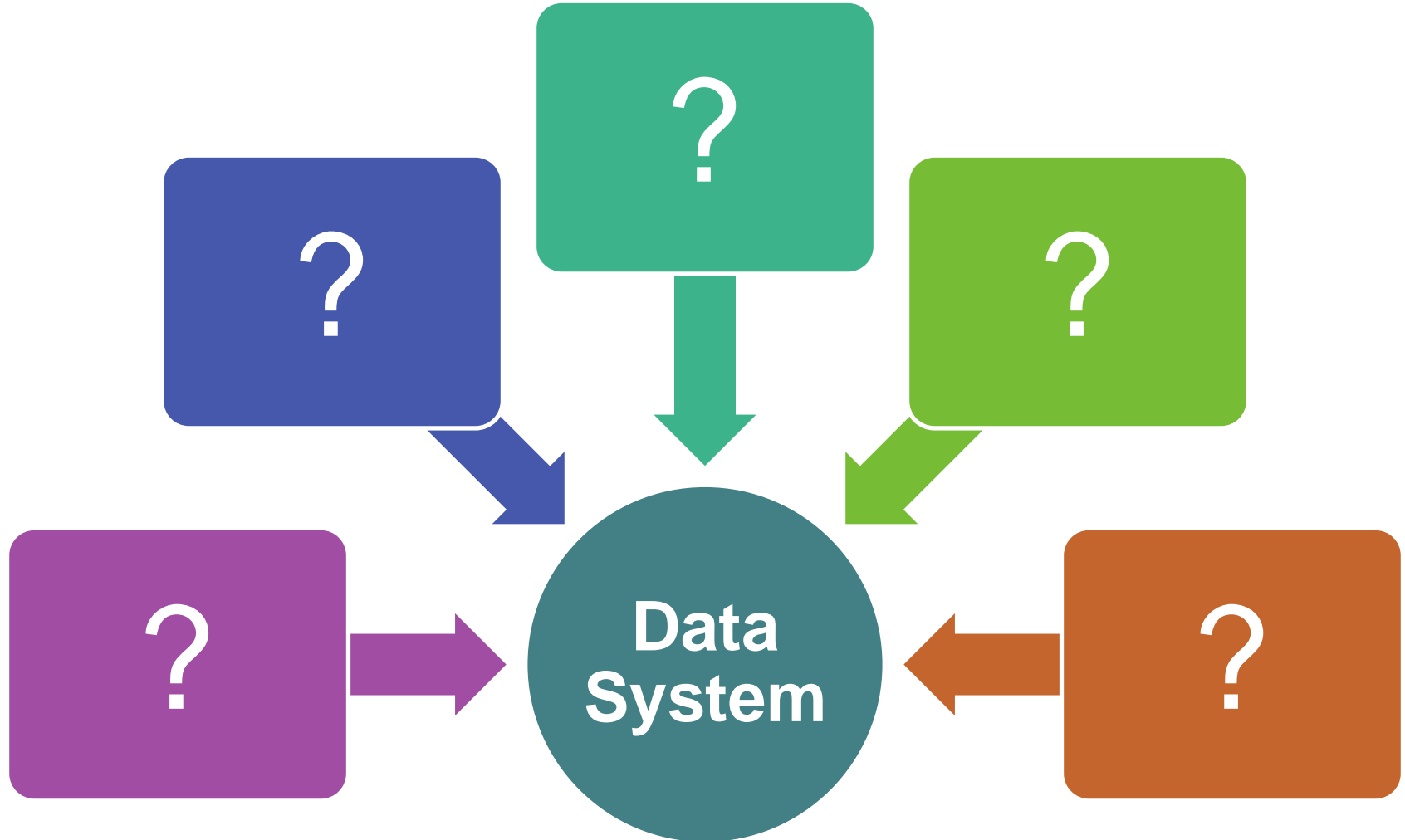
Software installed? User's agreement accepted? Template ready?



Click on **INSTALL APP**



What would you want in a data system for instructional leadership?






Reducing variability EQUALS Increased student achievement



Purpose of Informal Observation

A black tablet with rounded corners is shown at an angle. The screen is black and displays white text. The text is centered and reads: "To provide educational leaders data to maximize student achievement through improved instructional practices." The tablet has a small circular button at the bottom center.

**To provide
educational
leaders data to
maximize student
achievement
through improved
instructional
practices.**

What an Informal Observation is *NOT*

Evaluative

Lengthy

**Hit and
miss**

One-sided

**Short-
term**

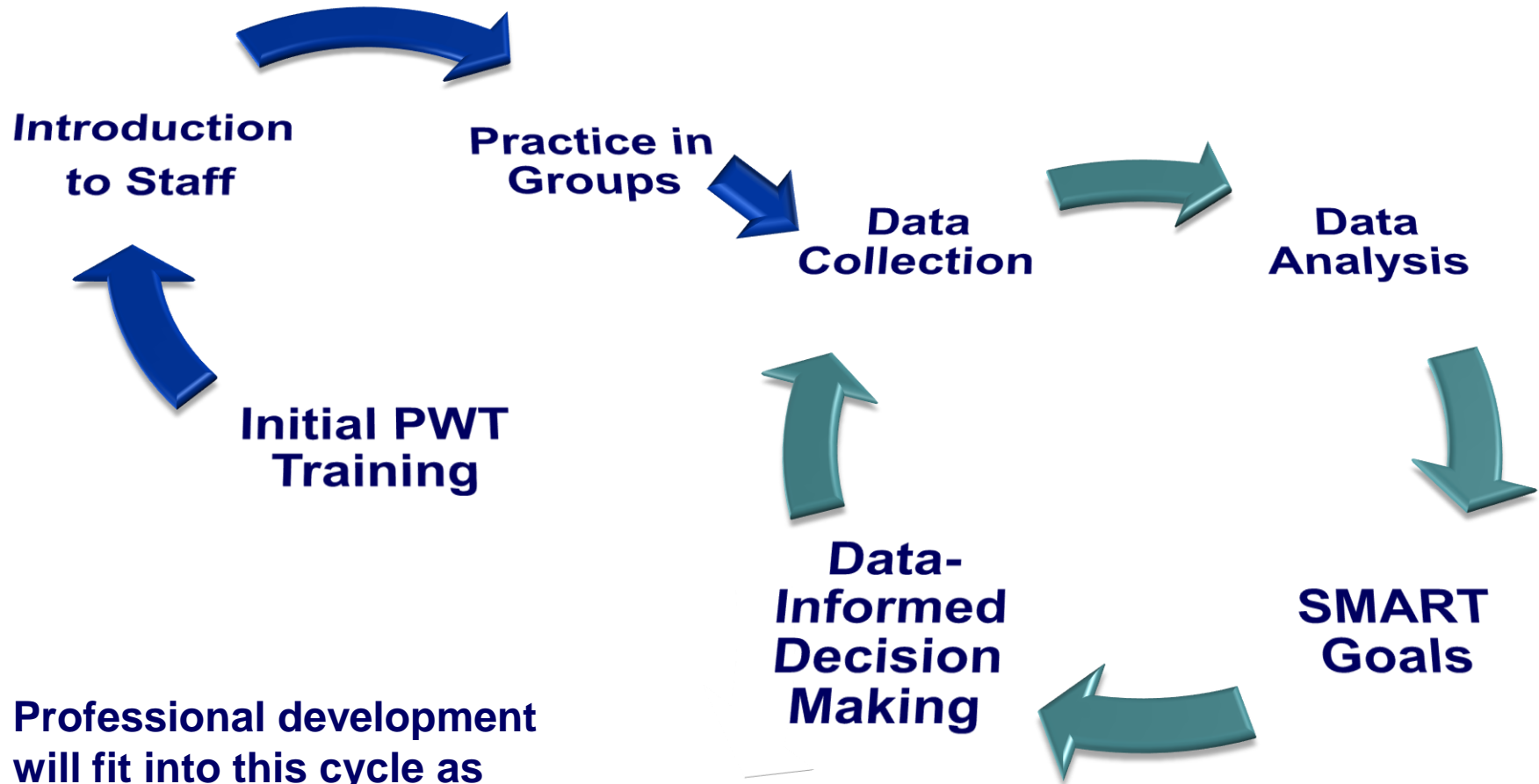
Single PWTs are Tiles in a Mosaic



PWTs are for a “Global” View.



The Overall PWT Process



Professional development
will fit into this cycle as
school leaders see fit.

Walkthrough Name	Template
<i>Walkthrough name</i>	CITW - Webbs 2013
Category	Subject
<i>Category name</i>	<i>Teacher list</i>
Start Date	End Date
<i>Tue Aug 13 2013 05:06 PM</i>	<i>Tue Aug 13 2013 05:16 PM</i>
Grade	Content
<ul style="list-style-type: none"> • Kindergarten • 1st Grade • 2nd Grade • 3rd Grade • 4th Grade • 5th Grade • 6th Grade • 7th Grade • 8th Grade • 9th Grade • 10th Grade • 11th Grade • 12th Grade • Mixed 	<ul style="list-style-type: none"> • Language Arts • Math • Science • Social Studies • World Language • Art • Health / PE • Music • Special Education • Vocational Arts • Other

Observation Template

CITW - Webbs 2013	
1. Segment of Class	<ul style="list-style-type: none"> • Beginning (first 10 minutes) • Middle • End (last 10 minutes)
2. Creating the Environment (Choose ALL that apply) <ul style="list-style-type: none"> • Setting Objectives • Providing Feedback • Effort and Recognition 	<Not applicable> <div style="text-align: right;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div>
3. Primary Instructional Strategy (teacher-intended main strategy): Choose one from the drop down. If checkboxes appear, check the specific strategy within the category.	<ul style="list-style-type: none"> • Environment Strategies Only • Advance Organizers (Developing Understanding) • Cues/Questions (Developing Understanding) • Nonlinguistic Representation (Developing Understanding) • Note Taking (Developing Understanding) • Providing Practice (Developing Understanding) • Summarizing (Developing Understanding) • Generating and Testing Hypotheses

Technology and Indicators of Learning

Teacher Directed Technology Choose ALL that apply		
<input type="checkbox"/> None <input type="checkbox"/> Brainstorming/Idea Mapping Software <input type="checkbox"/> Graphing Calculator <input type="checkbox"/> Student Response System <input type="checkbox"/> Collaboration Application <input type="checkbox"/> Communication Tool	<input type="checkbox"/> Data Collection Tool <input type="checkbox"/> Diagnostic/Prescriptive System or Software <input type="checkbox"/> Display Tool <input type="checkbox"/> Interactive Whiteboard <input type="checkbox"/> Educational Game <input type="checkbox"/> Multimedia (showing)	<input type="checkbox"/> Multimedia (demonstrating) <input type="checkbox"/> Spreadsheet/Database <input type="checkbox"/> Virtual Manipulative or Simulation <input type="checkbox"/> Web-based Research <input type="checkbox"/> Word Processing <input type="checkbox"/> Other (make note)
Student Centered Technology Choose ALL that apply		
<input type="checkbox"/> None <input type="checkbox"/> Brainstorming/Idea Mapping Software <input type="checkbox"/> Graphing Calculator <input type="checkbox"/> Student Response System <input type="checkbox"/> Collaboration Application <input type="checkbox"/> Communication Tool	<input type="checkbox"/> Data Collection Tool <input type="checkbox"/> Diagnostic/Prescriptive System or Software <input type="checkbox"/> Display Tool <input type="checkbox"/> Interactive Whiteboard <input type="checkbox"/> Educational Game <input type="checkbox"/> Multimedia (watching)	<input type="checkbox"/> Multimedia (creating) <input type="checkbox"/> Spreadsheet/Database <input type="checkbox"/> Virtual Manipulative or Simulation <input type="checkbox"/> Web-based Research <input type="checkbox"/> Word Processing <input type="checkbox"/> Other (make note)
Evidence of Learning Choose ALL that apply		
<input type="checkbox"/> Assessment (summative or formative) <input type="checkbox"/> Designing/Planning <input type="checkbox"/> Dramatizing/Simulating/Modeling <input type="checkbox"/> Experimenting/Inventing <input type="checkbox"/> Impromptu Student Interview/Demonstration <input type="checkbox"/> Independent Practice	<input type="checkbox"/> Learning Game <input type="checkbox"/> Oral Reading <input type="checkbox"/> Peer Teaching/Tutoring <input type="checkbox"/> Planned Student Performance/Presentation <input type="checkbox"/> Student Discussion <input type="checkbox"/> Student Drawing/Graphic Organizing <input type="checkbox"/> Student Writing/Journaling	<input type="checkbox"/> Teacher Directed Question/Answer <input type="checkbox"/> Worksheet <input type="checkbox"/> Silent Reading (little evidence) <input type="checkbox"/> Teacher Directed Lecture (little evidence) <input type="checkbox"/> No Evidence

The Differences Between the Observation Element Types

Classroom Environment Strategies

Primary Instructional Strategy

Secondary Instructional Strategy

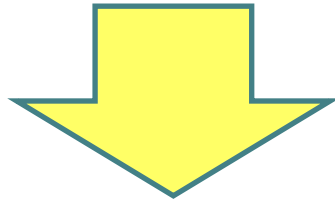
Connecting Bloom's Taxonomy

Creating the Environment for Learning

**Setting Objectives
and Providing
Feedback**

**Reinforcing Effort
and Providing
Recognition**

**Cooperative
Learning**



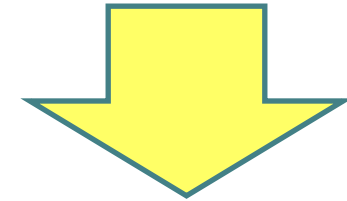
**Developing
Understanding**

**Cues, Questions,
and Advance Organizers**

Nonlinguistic Representation

Summarizing and Notetaking

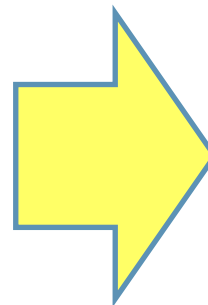
Providing Practice



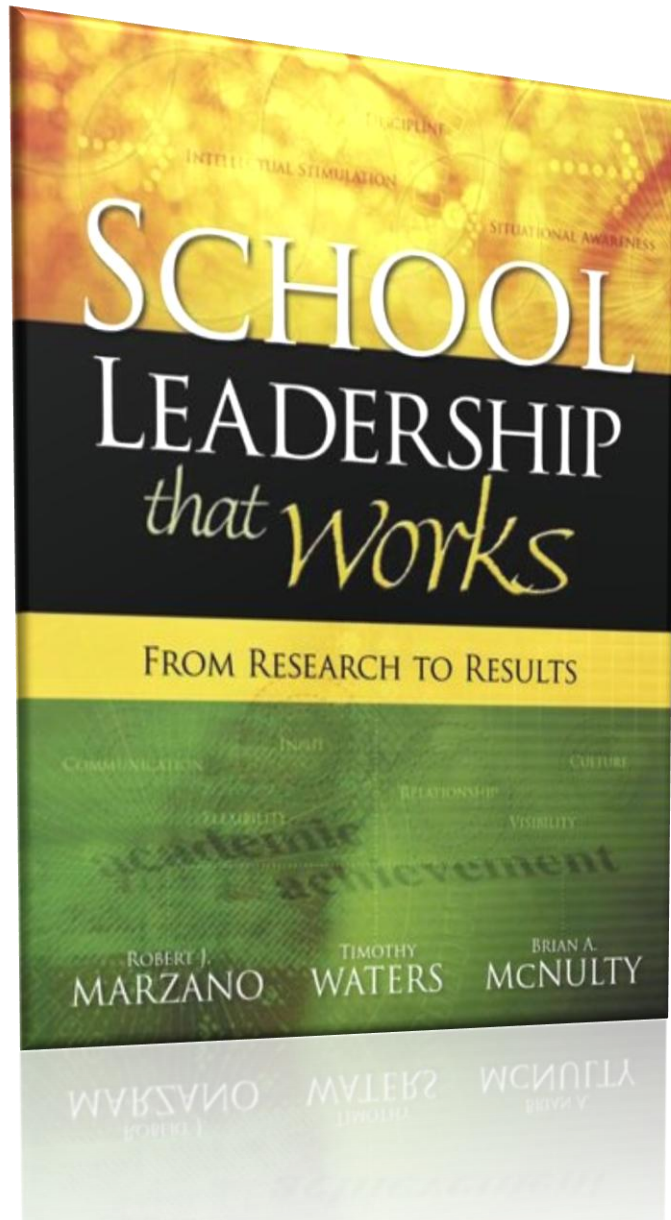
**Extending & Applying
Knowledge**

**Identifying Similarities
and Differences**

**Generating and
Testing Hypotheses**



Leadership Considerations



21 leadership responsibilities linked to higher levels of student performance.

11 of these can be enhanced with the use of a walkthrough system.

21 Leadership Responsibilities

Affirmation

Change agent

Communication

Contingent reward

Culture

Discipline

Flexibility

Focus

Ideals and beliefs

Input

Intellectual stimulation

Involvement with CIA

Knowledge of CIA

Monitor/evaluate

Optimize

Order

Outreach

Relationships

Resources

Situational awareness

Visibility

Primary Instructional Strategy

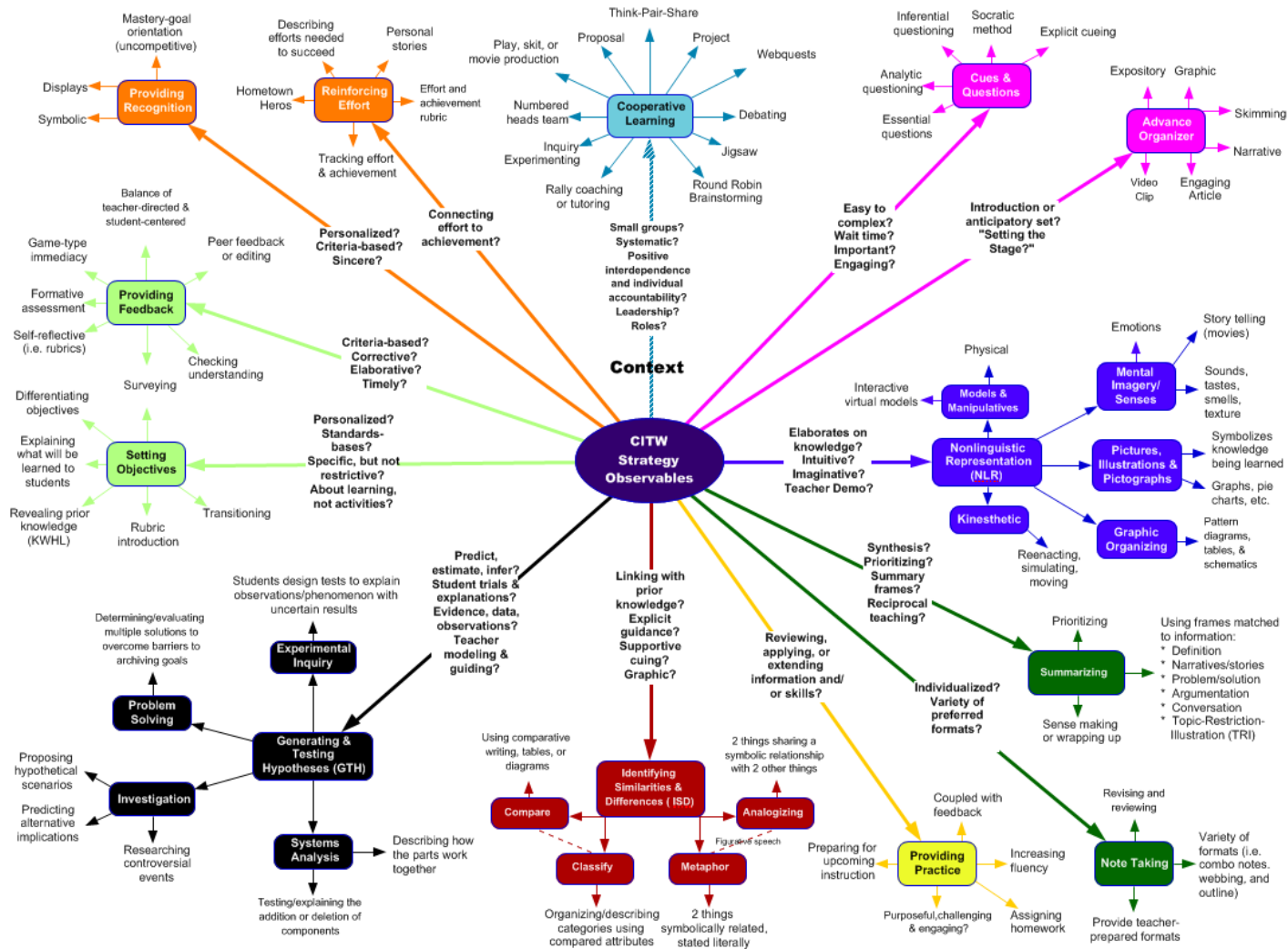
- ▶ The strategy that the teacher intentionally planned
- ▶ Real-time evidence of adequate pedagogy required
- ▶ Usually 1 of 3 **strategies** occurring simultaneously



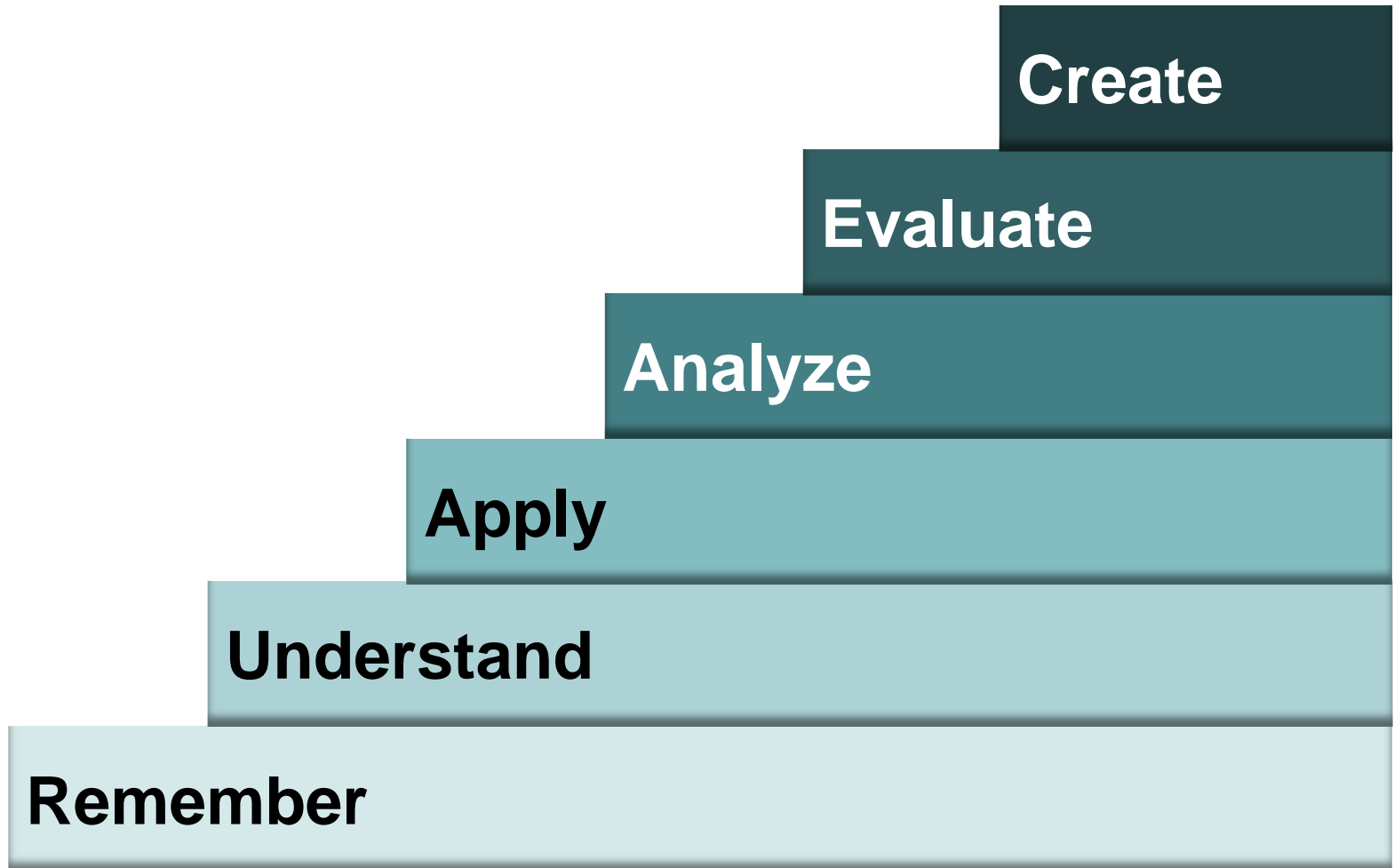
Secondary Instructional Strategy

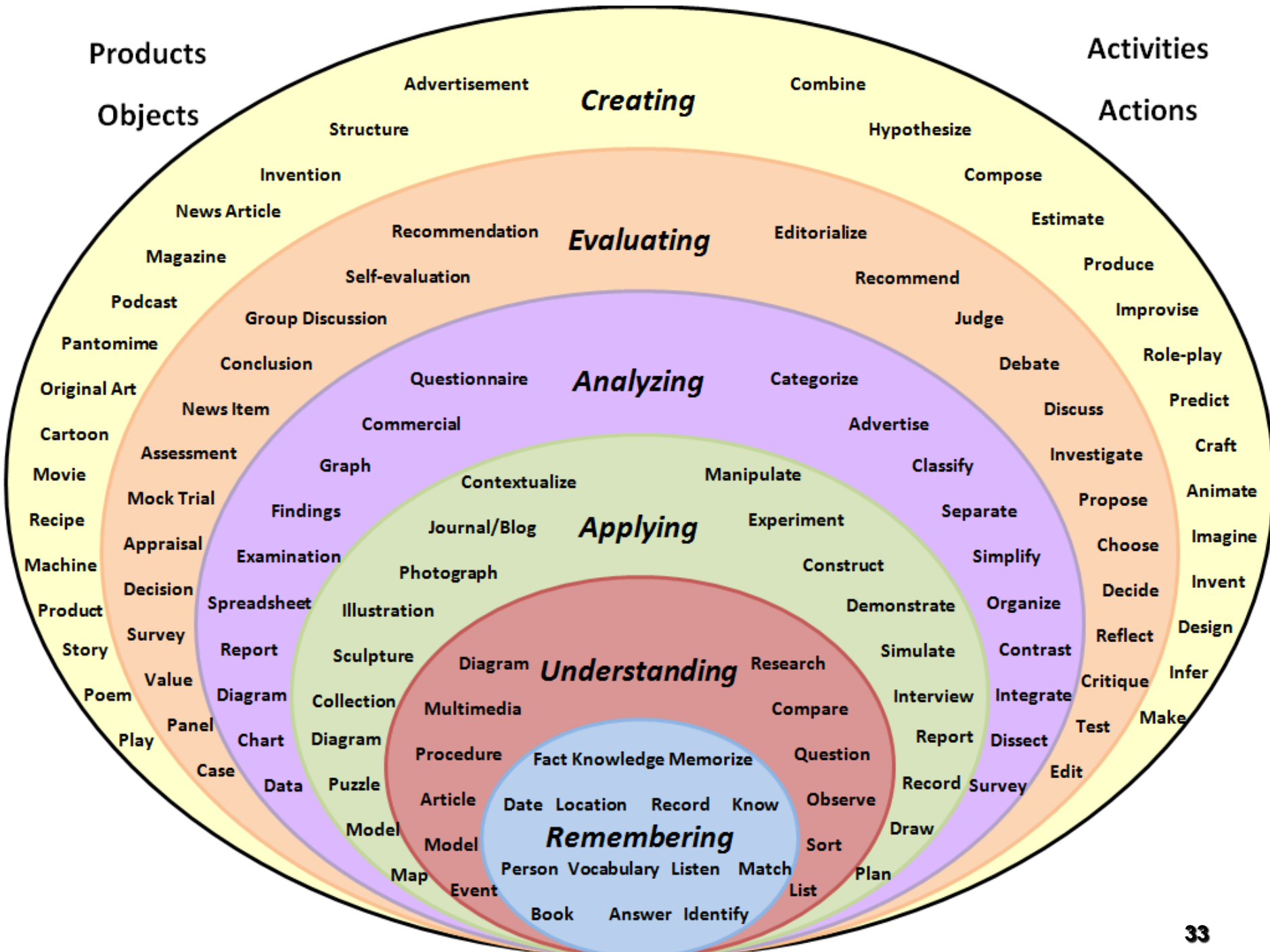
- ▶ The strongest supporting strategy of the primary
- ▶ Real-time evidence of adequate pedagogy required
- ▶ Usually 1 of 3 strategies occurring simultaneously
- ▶ Often NLR, C&Q, P, or PF

Classroom Observables of CITW Strategies and Nested Bloom's Taxonomy



Connecting Bloom's Taxonomy

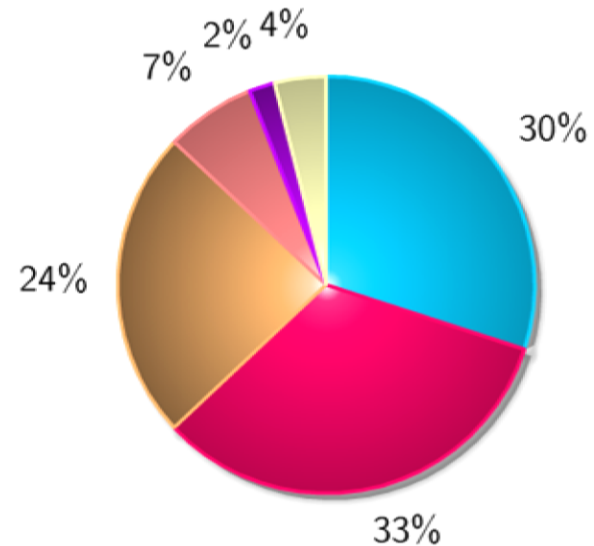




Tour of National PW Data

Item Name	SEL	%
1. Remember	5845	30%
2. Understand	6547	33%
3. Apply	4668	24%
4. Analyze	1385	7%
5. Evaluate	479	2%
6. Create	777	4%
Total	19701	100%

Blooms Taxonomy



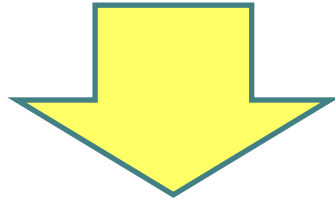
<https://mxweb.media-x.com/home/mcrel>

Creating the Environment for Learning

**Setting Objectives
and Providing
Feedback**

**Reinforcing Effort
and Providing
Recognition**

**Cooperative
Learning**



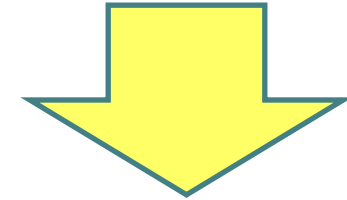
**Developing
Understanding**

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Nonlinguistic Representation

Summarizing and Notetaking

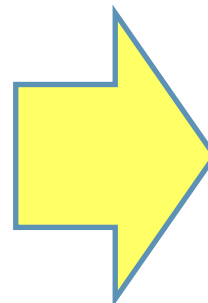
Providing Practice



**Extending & Applying
Knowledge**

**Identifying Similarities
and Differences**

**Generating and
Testing Hypotheses**



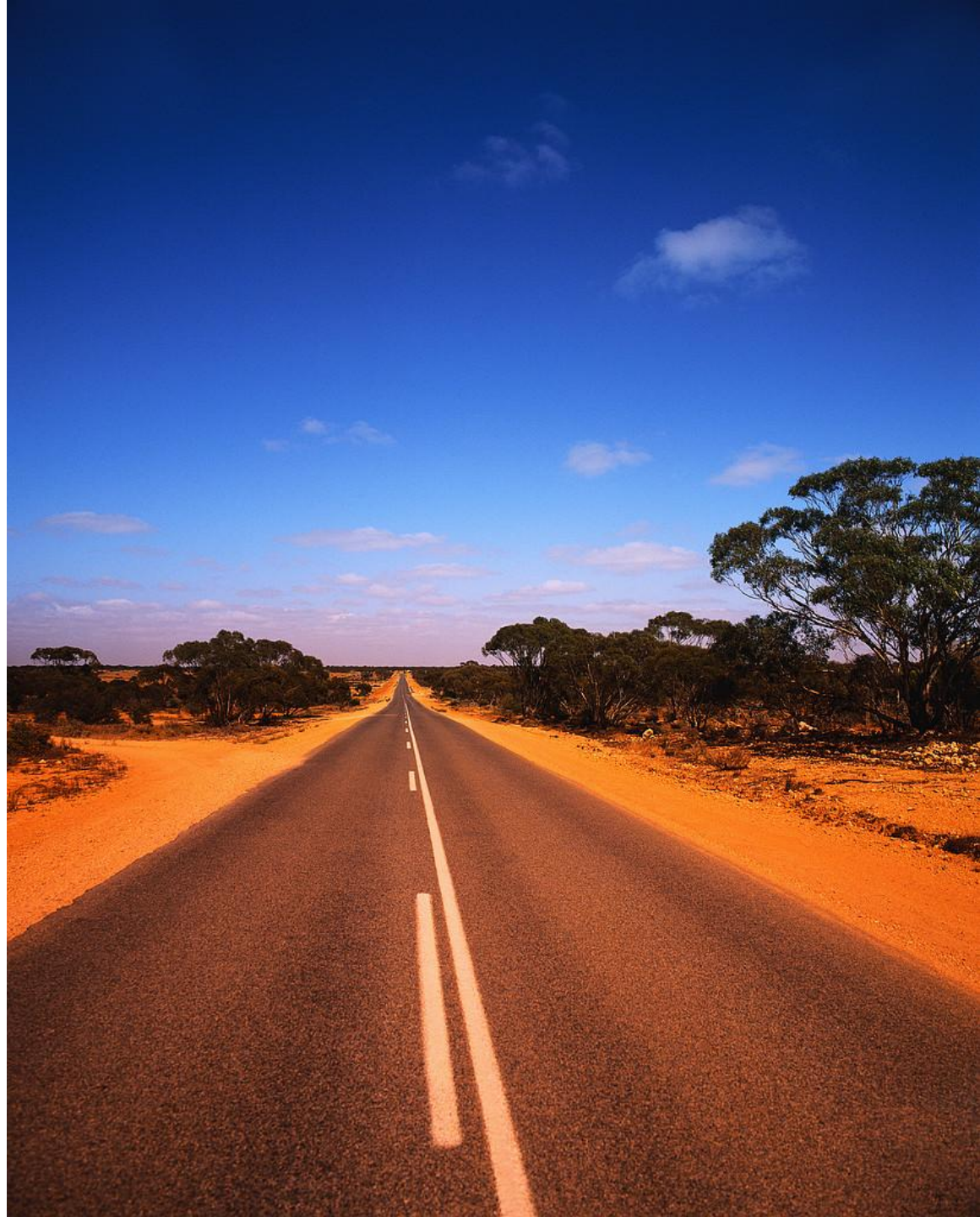
**Setting
Objectives &
Providing
Feedback**

**Reinforcing
Effort &
Providing
Recognition**

**Creating the
Environment
for Learning**

**Cooperative
Learning**
(context)

Setting Objectives



Recommendations for Classroom Practice

Setting Objectives

- 1. Set learning objectives that are specific but not restrictive.**
- 2. Communicate the learning objectives to students and parents.**
- 3. Connect the learning objectives to previous and future learning.**
- 4. Engage students in setting personal learning objectives.**

Agenda or Learning Objectives?

Agenda

8:00 Grade & Discuss Homework
8:15 Microscope Practice
8:30 Prepare Euglena Slides
8:45 Begin Lab 3.2
9:30 Clean up and Check Out
9:45 Complete Blog Posting

Remember your permission slips!

These often change daily. They are not learning objectives.

Learning Objectives

1. Students understand how microorganisms are classified.
2. Students can recognize and evaluate the advantages and disadvantages of different characteristics possessed by the major types of microorganisms.

These are learning objectives. They may last for a day or much longer if project-based.

KWHL Charts for Setting Objectives

What I Know

What I Want
to Know

How I Plan to
Find Out

What I Have
Learned

Things to consider:

Is there consistency in my school in posting the learning objective?

Is there consistency in my school in the “grain size” that is posted?

Is there consistency in my school in where the objective is posted?

Is there consistency in my school expecting teachers to reference the objectives during their lessons?

What might you see if the teacher is intentionally setting objectives with students?

- The process of writing visible learning objectives (not agendas)
- Differentiating learning objectives (i.e. personalization)
- Teacher/student interviews
- Exemplars
- Rubric introduction
- Transitioning
- KWHL process
- Other indicators?



Providing Feedback

A photograph of a long, straight asphalt road stretching into the distance under a clear blue sky. The road has a white dashed line down the center and solid white lines on the edges. The landscape is arid with sparse, low-lying vegetation and a few trees on the sides.

Providing information about how well students are performing relative to a particular learning goal so that they can improve their performance.

Recommendations for Classroom Practice

Providing Feedback

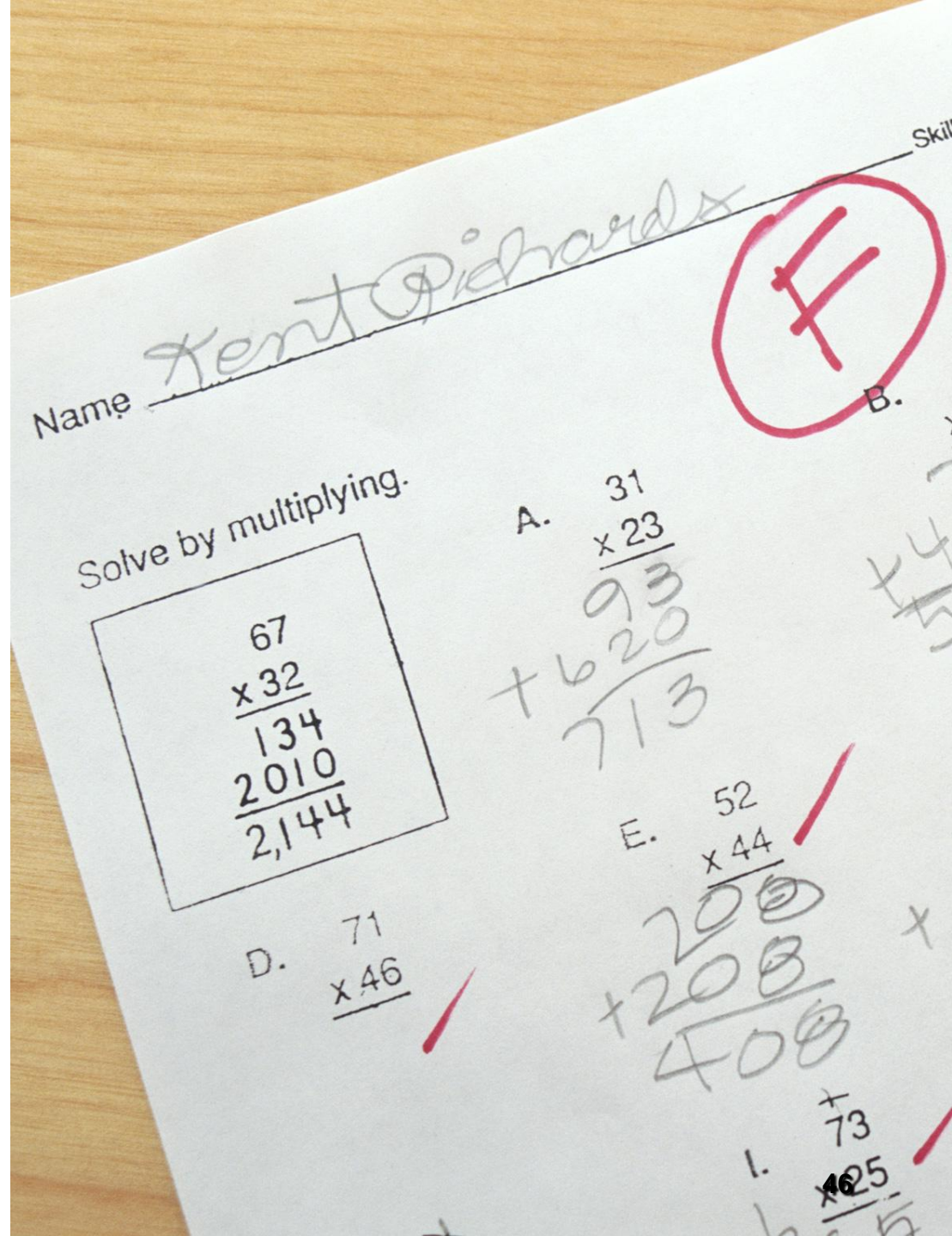
- 1. Provide feedback that addresses what is correct and elaborates on what students need to do next.**
- 2. Provide feedback appropriately in time to meet students' needs.**
- 3. Provide feedback that is criterion-referenced.**
- 4. Engage students in the feedback process.**

Providing Feedback

Simply telling students that their answer on a test is

RIGHT or WRONG

has a *negative effect* on achievement.



Using Rubrics for Providing Feedback

Kindergarten Phonics Rubric

CATEGORY	3	2	1
Single consonants	Demonstrates mastery of all 21 consonant sounds.	Demonstrates mastery of at least 14 consonant sounds.	Demonstrates mastery of at least 7 consonant sounds.
Short vowels	Demonstrates mastery of all 5 short vowel sounds.	Demonstrates mastery of at least 3 short vowel sounds.	Demonstrates mastery of at least 1 short vowel sound.
CVC words	Can read at least 15 CVC words- three words for each short vowel sound in the middle.	Can read at least 10 CVC words- two words for each short vowel sound in the middle.	Can read at least 5 CVC words- one word for each short vowel sound in the middle.
Long Vowels	Demonstrates mastery of all 5 long vowel sounds.	Demonstrates mastery of at least 3 long vowel sounds.	Demonstrates mastery of at least 1 short vowel sound.

What might you see if the teacher is intentionally providing feedback to students?

- Formative assessments
- Students receiving feedback from educational games
- Use of rubrics
- Surveying (i.e. clickers)
- Self and/or peer-assessing
- Discussing and commenting on quizzes or assessments
- Meaningful conferences with the teacher
- Others?



**Setting
Objectives &
Providing
Feedback**

**Reinforcing
Effort &
Providing
Recognition**



**Creating the
Environment
for Learning**



**Cooperative
Learning**
(context)

Reinforcing Effort

...enhances students' understanding of the relationship between effort and achievement by addressing students' attitudes and beliefs about learning.



Some students attribute success in school to luck, ability, or even other people, such as their friends or their teacher.

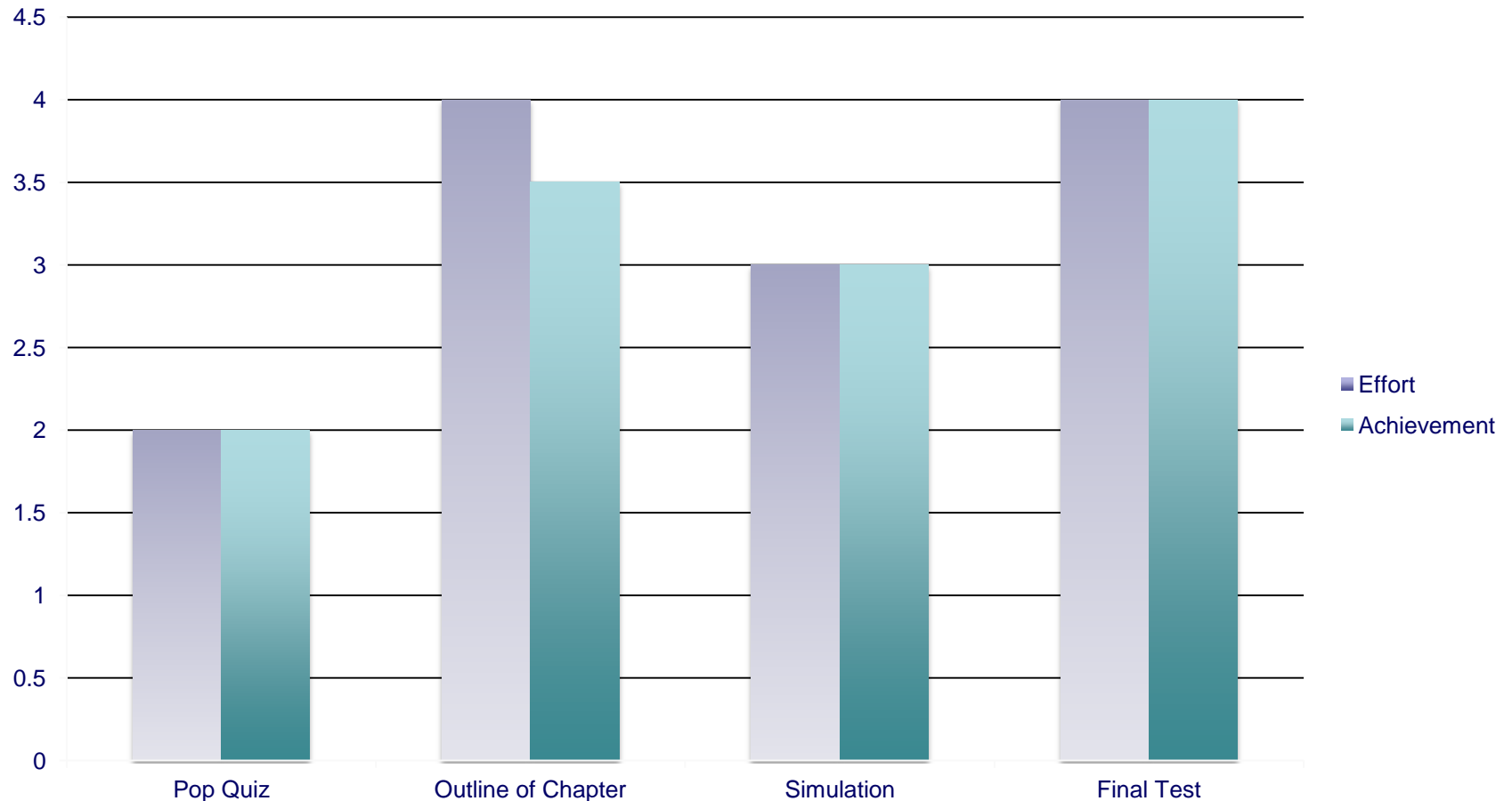
Recommendations for Classroom Practice Reinforcing Effort

- 1. Teach students about the relationship between effort and achievement.**
- 2. Provide students with explicit guidance about what it means to expend effort.**
- 3. Ask students to keep track of their effort and achievement.**

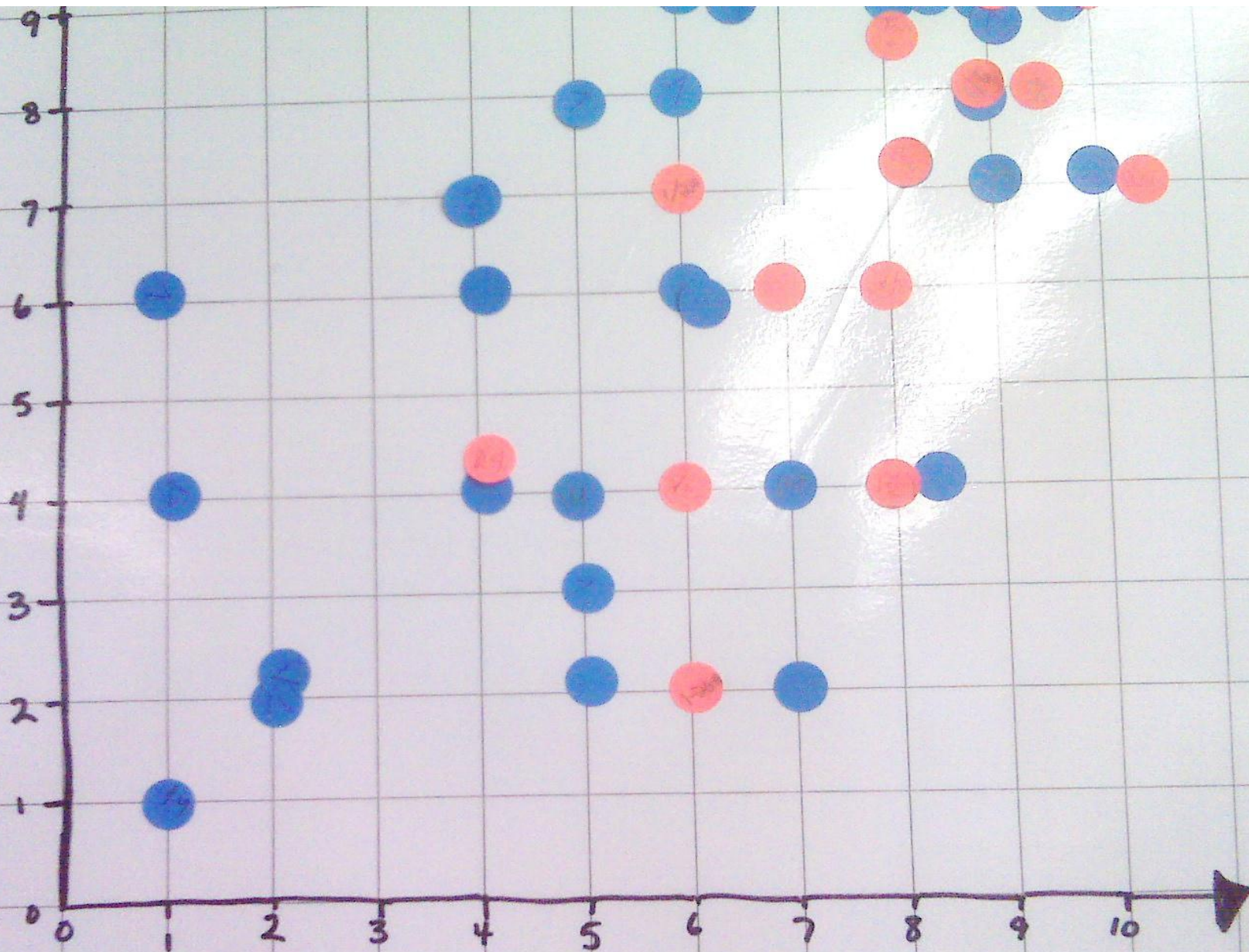


**Wow. You got 8 right.
That's a really good
score. You must have
worked really hard at
this.**

Ask students to keep track of their effort and achievement.



ACHIEVEMENT



EFFORT

What might you see if the teacher is effectively reinforcing effort with students?

- Students talking about effort
- Effort/achievement rubrics
- Charts tracking effort and achievement
- Story examples
- Others?



What might you see if the teacher is intentionally providing recognition?

- Sincere praise is personalized and contingent upon achieving a certain standard of performance
- Showcasing student work
- Displays of certificates or “kudos” walls
- Body language (non-verbal cues)
- Giving symbolic symbols of recognition
- Others?



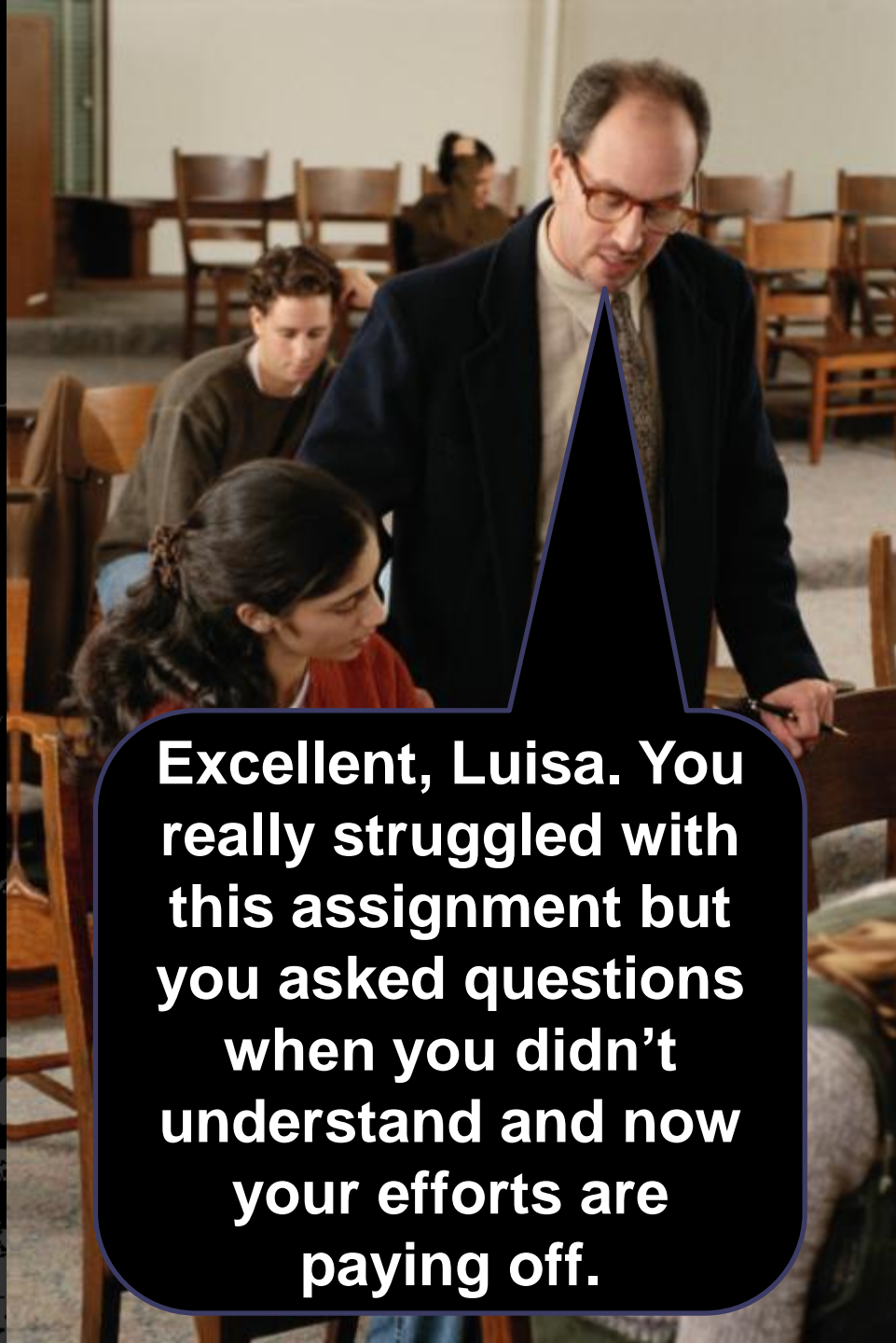
Providing Recognition

***Provide students with
abstract tokens of recognition
or praise for their
accomplishments related to the
attainment of a goal.***

Recommendations for Classroom Practice

Providing Recognition

- 1. Promote a mastery-goal orientation.**
- 2. Provide praise that is specific and aligned with expected performance and behaviors.**
- 3. Use concrete symbols of recognition.**

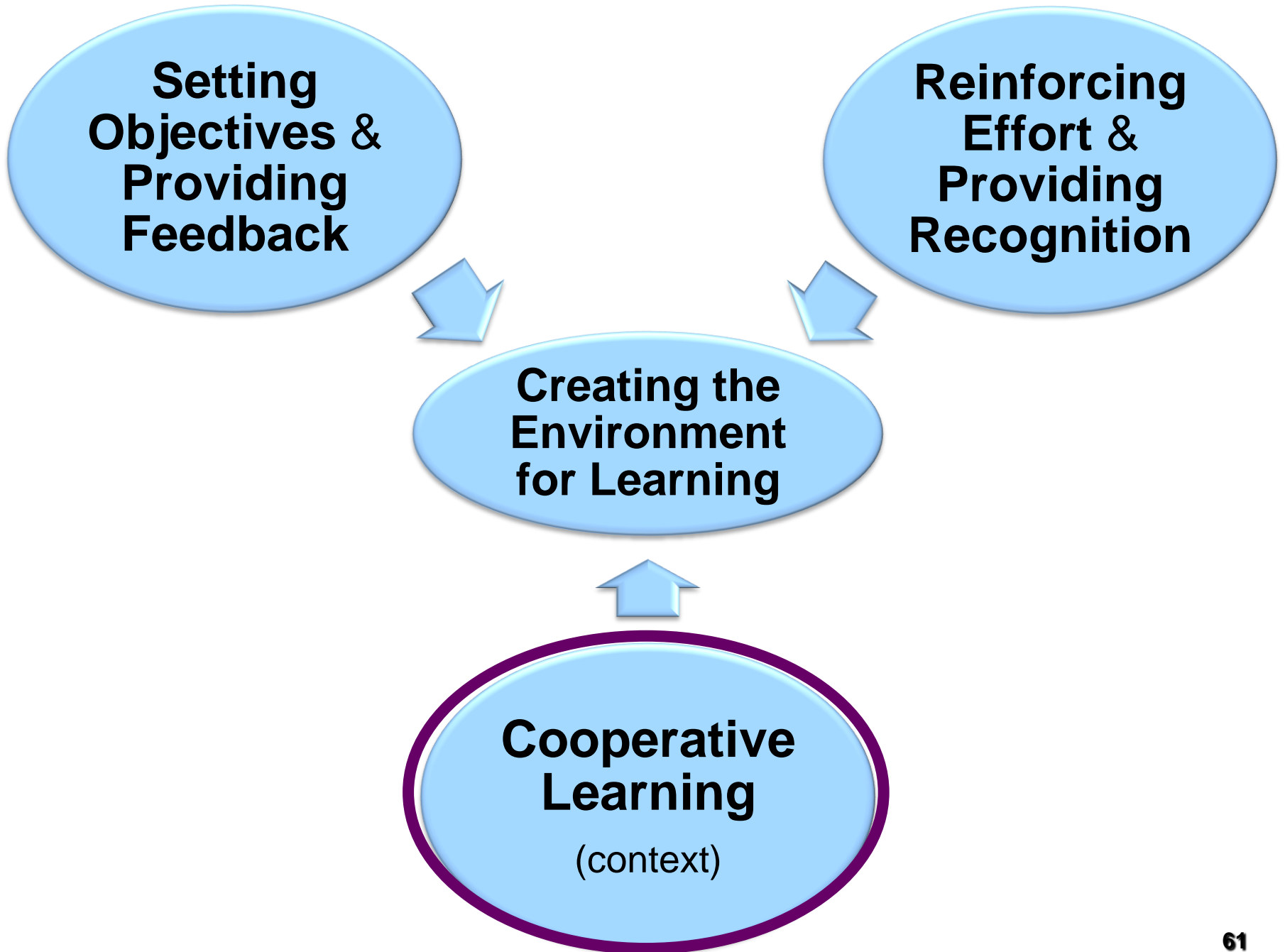


Excellent, Luisa. You really struggled with this assignment but you asked questions when you didn't understand and now your efforts are paying off.

What might you see if the teacher is intentionally providing recognition?

- Sincere praise is personalized and contingent upon achieving a certain standard of performance
- Showcasing student work based upon growth
- Displays of certificates or “kudos” walls based on effort
- Non-verbal cues
- Giving symbolic symbols of recognition
- Others?







Cooperative Learning

...provides students with opportunities to interact with each other in groups, in ways that enhance their learning.



Recommendations for Classroom Practice

Cooperative Learning

- 1. Include elements of positive interdependence and individual accountability.**
- 2. Organize groups of two–five students.**
- 3. Use cooperative learning consistently and systematically.**

Positive Interdependence

Positive interdependence emphasizes that everyone is in the effort together and one person's success does not come at the expense of another's success. Often referred to as, “we sink or swim together.”

Teachers must ensure that each individual's workload is reasonably equal to that of others on the team.

Individual Accountability

Individual accountability refers to each team members' need to receive feedback on how his or her personal efforts contribute toward the achievement of the overall goal.

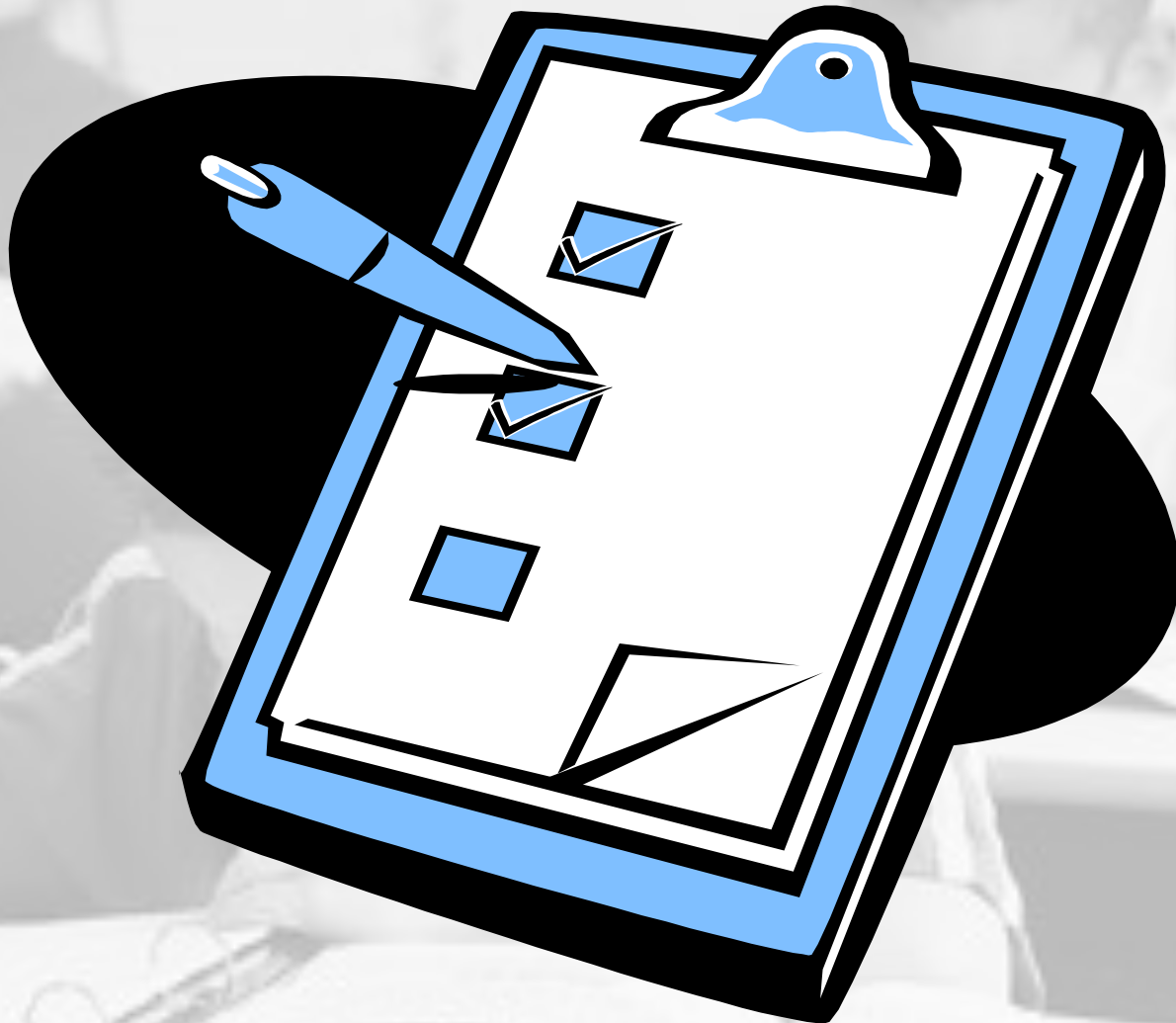
Individual accountability means each member understands the task, what it means to expend effort, and is responsible for his or her own learning and the learning of those in the group.

What might you see if the teacher is intentionally using cooperative learning?

- Structures are in place to guide the group's size, activity, roles, responsibilities, and purpose.
- Formal cooperative groups include individual and group accountability mechanisms.
- Activities require teamwork, social skills, and leadership .



Practicing Classroom Walkthrough (on paper template)







Walkthrough Practice

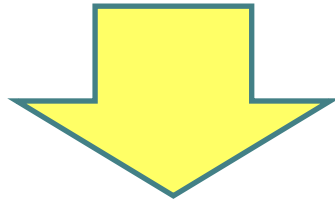
- **What strategies did you see?**
- **What level of Bloom's Taxonomy matches the strategies?**
- **What was the context of the lesson?**

Creating the Environment for Learning

**Setting Objectives
and Providing
Feedback**

**Reinforcing Effort
and Providing
Recognition**

**Cooperative
Learning**



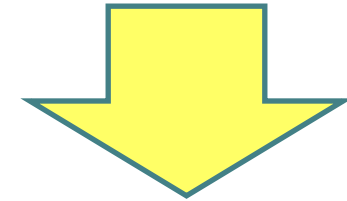
Developing Understanding

**Cues, Questions,
and Advance Organizers**

Nonlinguistic Representation

Summarizing and Notetaking

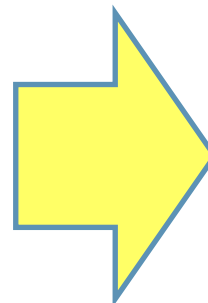
Providing Practice

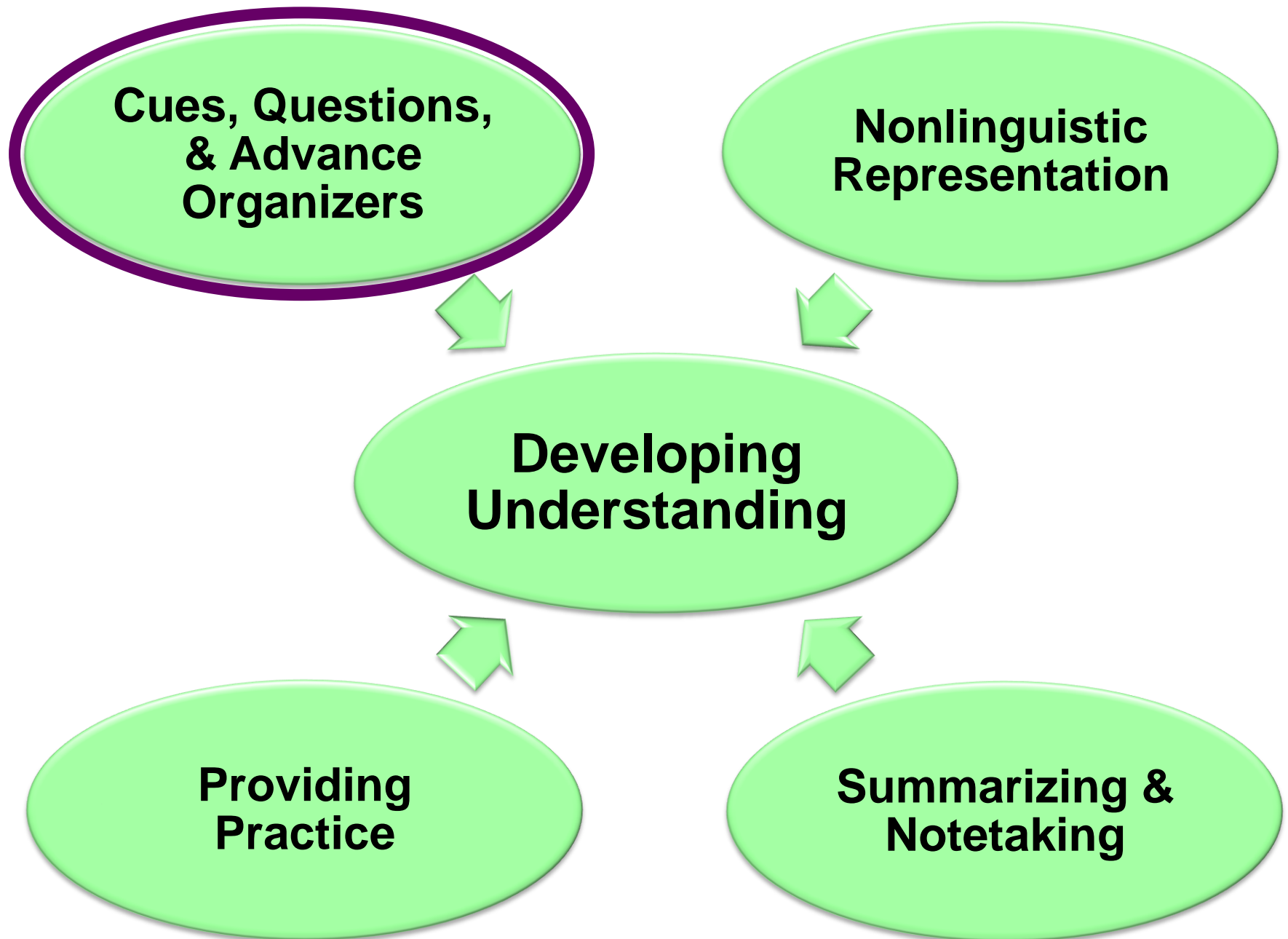


Extending & Applying Knowledge

**Identifying Similarities
and Differences**

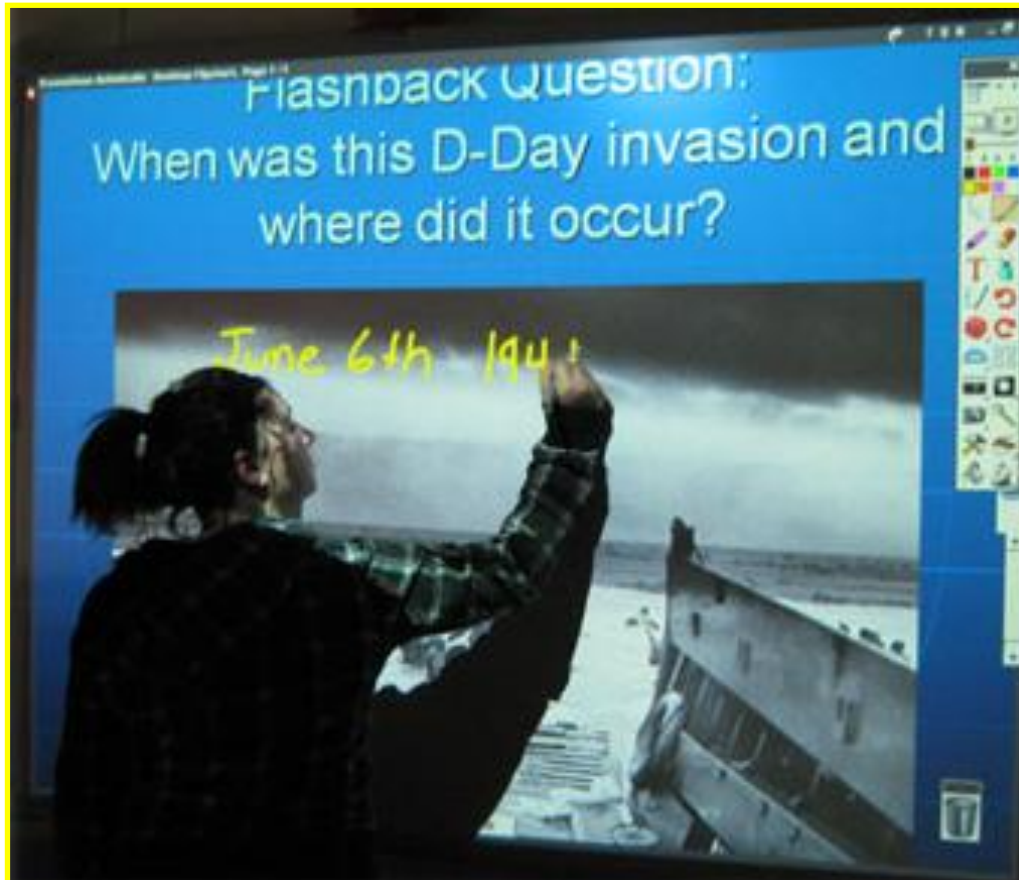
**Generating and
Testing Hypotheses**





Cues, Questions, and Advance Organizers

...enhance students' ability to retrieve, use, and organize what they already know about a topic in order to learn new information.



Recommendations for Classroom Practice Cues and Questions

- 1. Focus on what is important.**
- 2. Use explicit cues.**
- 3. Ask inferential questions.**
- 4. Ask analytic questions.**

What might you see if the teacher is intentionally using cues and questions?

- Enhancing students' ability to retrieve, use, and organize what they already know about a topic.
- Question/answer discussions with and between students grow in rigor.
- You hear a variety of explicit cues and inferential and analytic questions.
- Debating/discussing essential questions.
- Others?



Advance Organizers

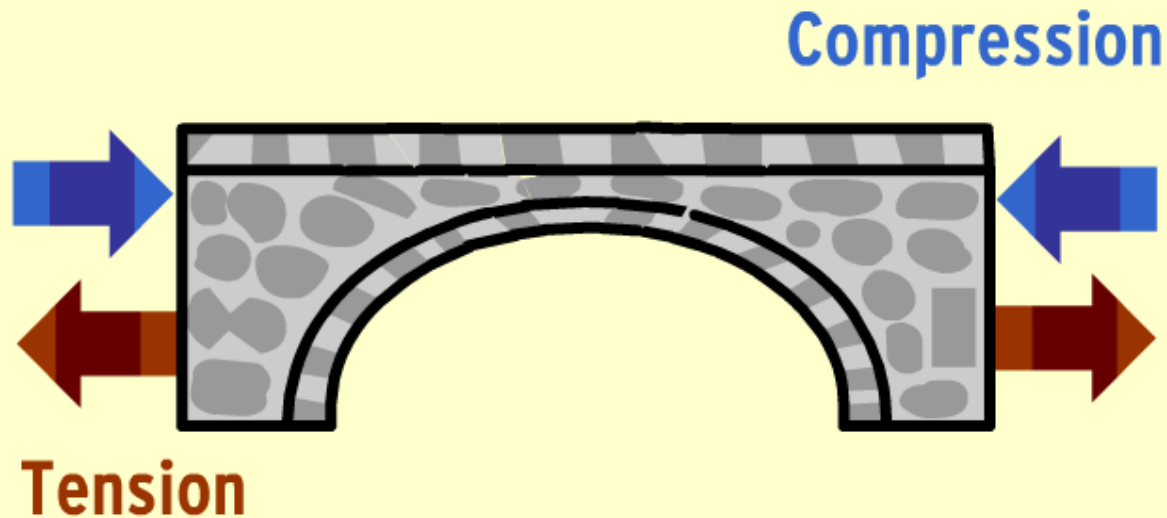
Enhance students' ability to retrieve, use, and organize what they already know about a topic.

Recommendations for Classroom Practice

Advance Organizers

- 1. Use expository advance organizers (giving descriptions of new content in written or oral form).**
- 2. Use narrative advance organizers (presenting information to students in a story format to make personal connections).**
- 3. Use skimming as an advance organizer (quickly reading upcoming information).**
- 4. Use graphic advance organizers (visually representing information).**

Expository Advance Organizers



BRIDGES



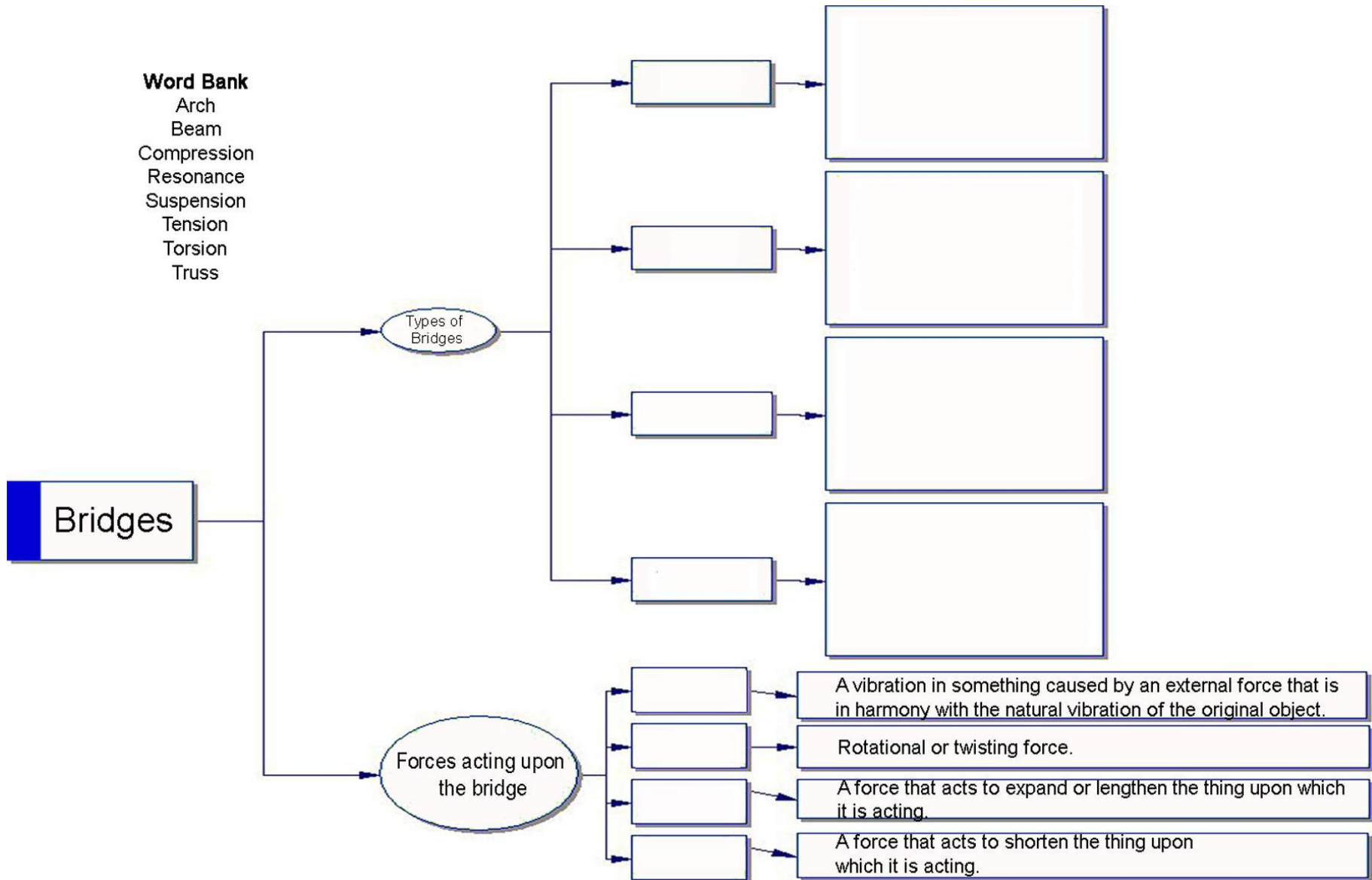
Narrative Advance Organizer



Use skimming as an advance organizer

Survey
Question
Read
Recite
Review

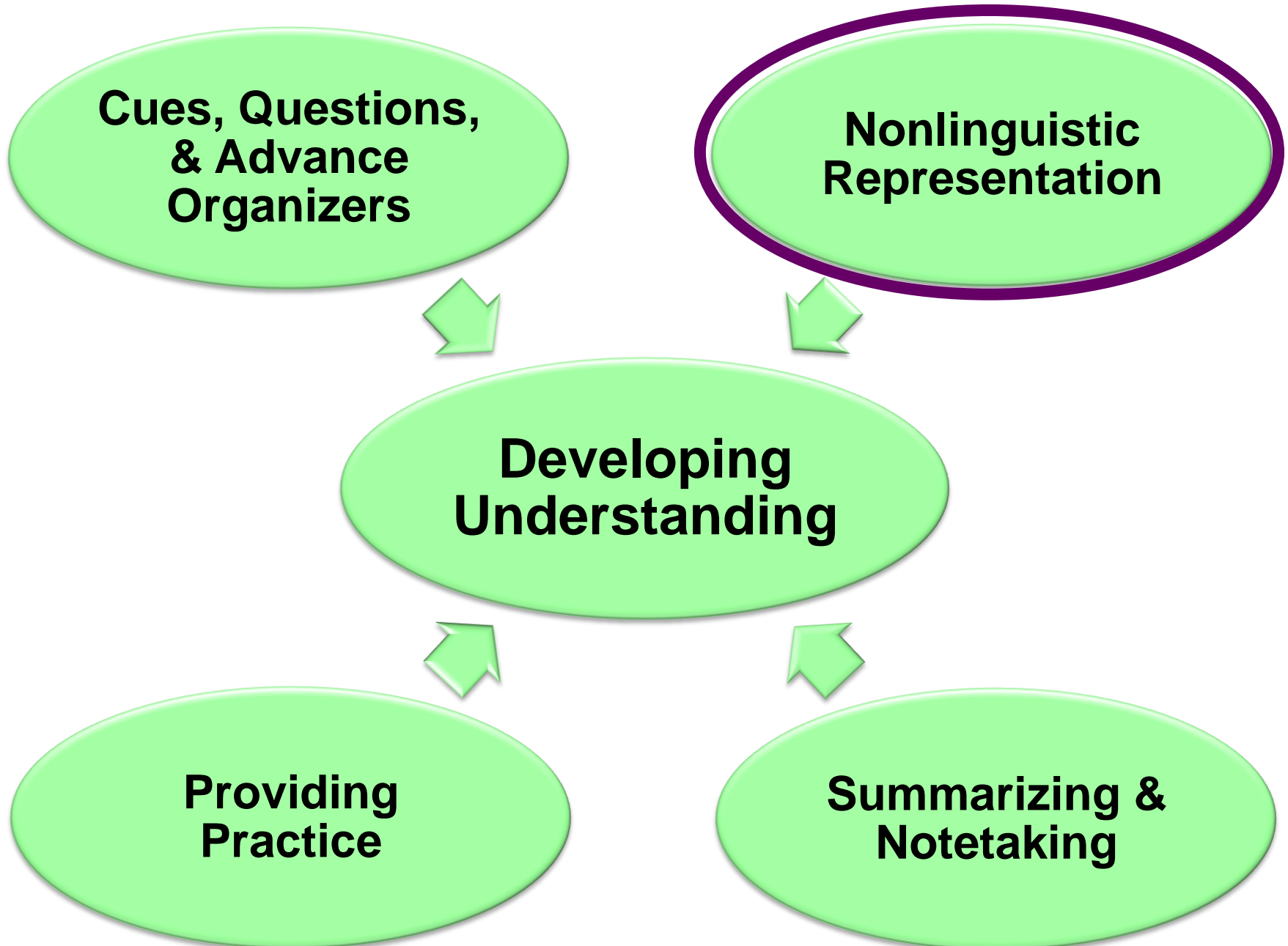
Use graphic advance organizers.



What might you see if the teacher is intentionally using advance organizers?

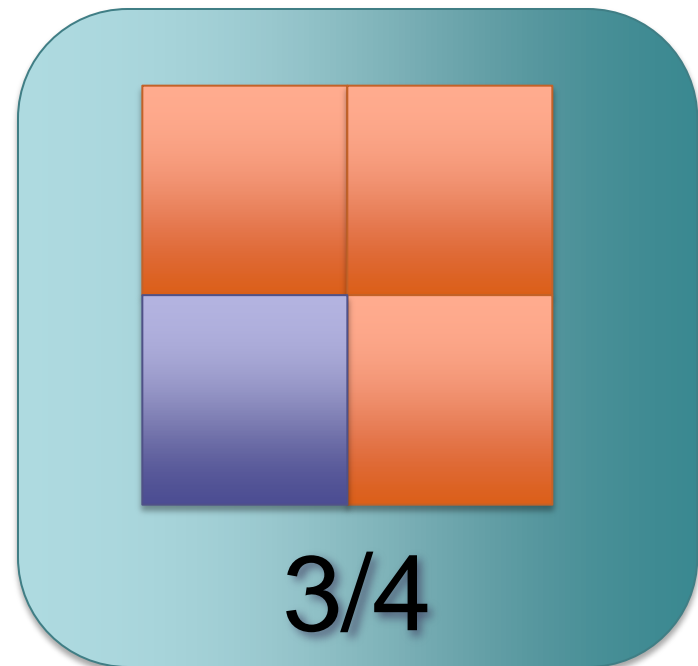
- Enhancing students' ability to retrieve, use, and organize what they already know about a topic.
- Teachers provide organizers (i.e. charts/graphs, multimedia, skimming, narrative, etc.) in advance of the learning.
- The teacher is “setting the stage” for learning by engaging students.
- Others?





Nonlinguistic Representation

Enhances
students' ability
to represent
knowledge as
mental imagery



Recommendations for Classroom Practice

Nonlinguistic Representation

- 1. Use graphic organizers.**
- 2. Use physical models or manipulatives.**
- 3. Generate mental pictures.**
- 4. Use pictures, illustrations, and pictographs.**
- 5. Engage in kinesthetic activities.**

Use graphic organizers

Descriptive

**Process
Cause/Effect**

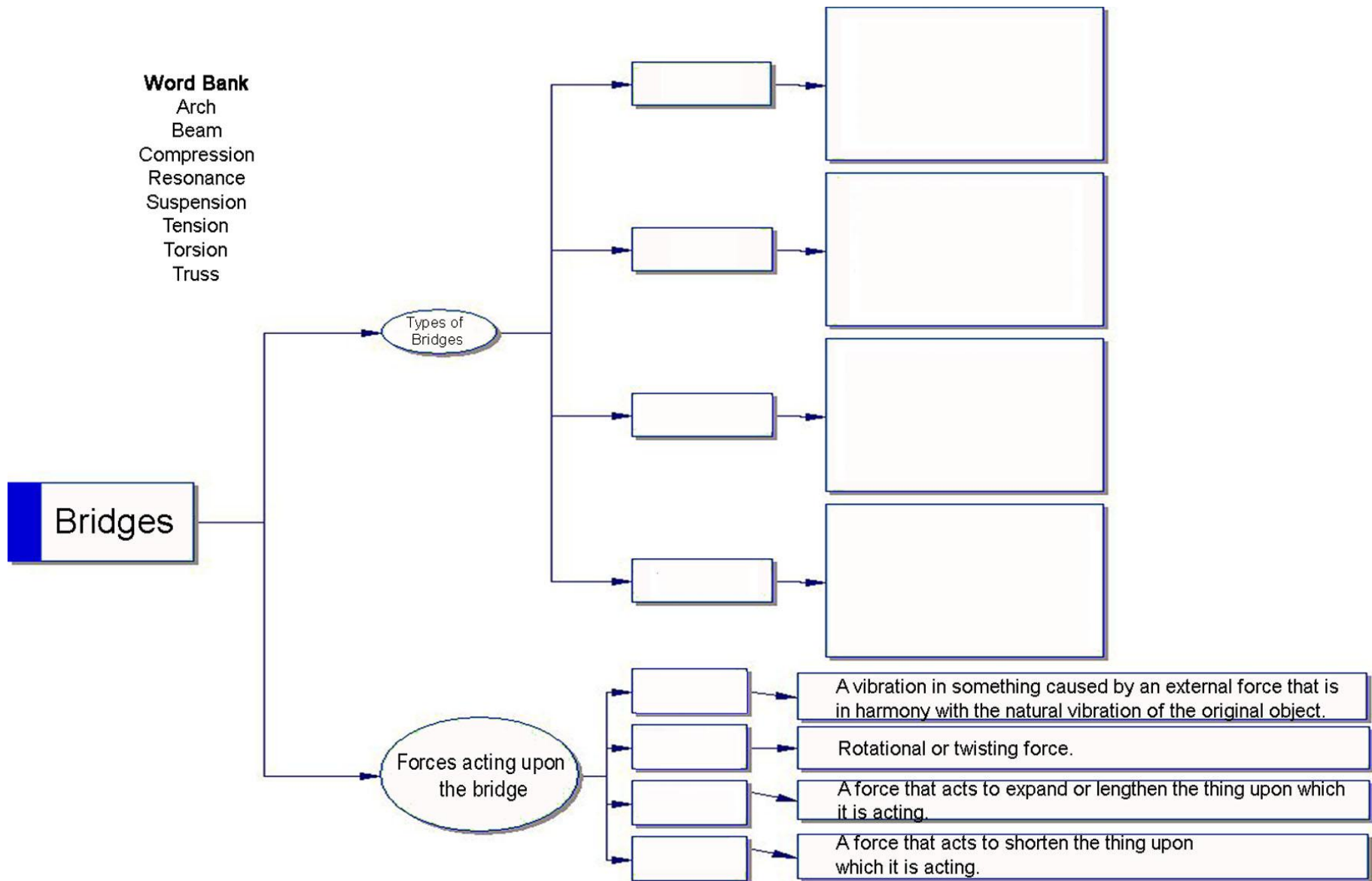
**Time
Sequence**

Episode

Generalization/Principle

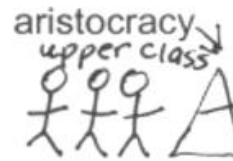
Concept

Use graphic advance organizers.



Create pictures, illustrations, and pictographs

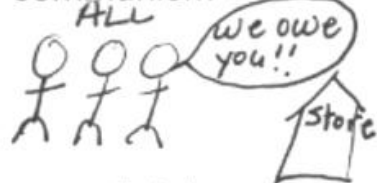
absolute monarchy



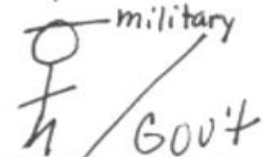
bureaucracy



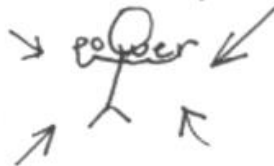
communism



coup d'etat



dictatorship



nationalism



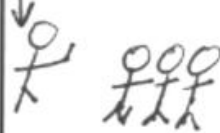
Plebiscite



sultan



totalitarian state



sage



guile



insolence



clarion



unshorn



shroud



tarry



dissemble



pillage



wanton



Use physical models or manipulatives



Generate mental pictures.

Sounds



Smells



Tastes



Emotions



Engage in kinesthetic activities

Kinesthetic activities are those that involve physical movement.

Physical movement associated with specific knowledge helps generate a mental image of the knowledge in the mind of the learner.

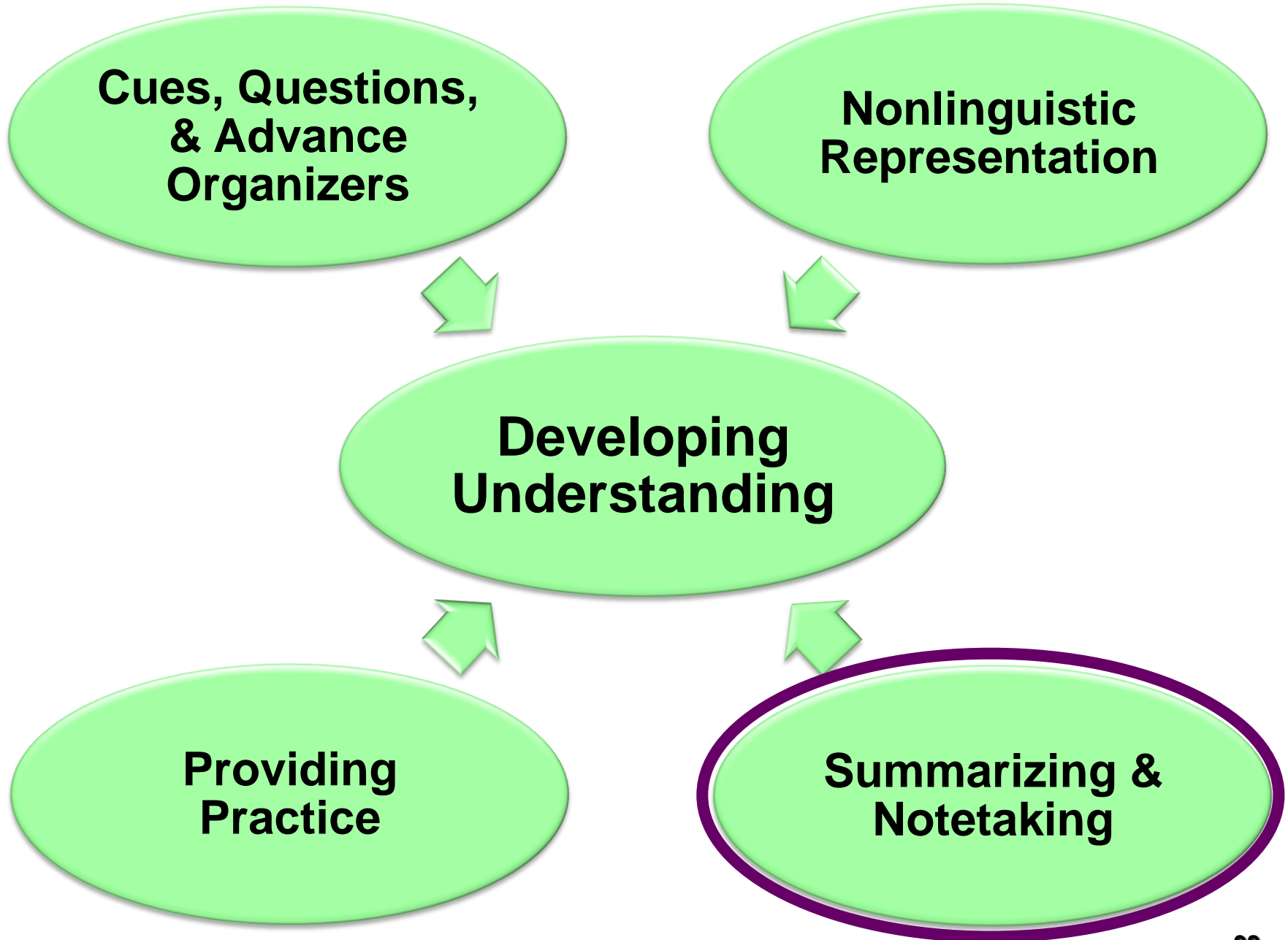


Acting out story of Isis and Osiris

What might you see if the teacher is intentionally using nonlinguistic representation?

- Story telling and/or multisensory experiences to create mental pictures.
- Kinesthetic movement to help convey concepts.
- Manipulatives and/or models.
- Graphs, pictures, or movies.
- Students creating sketches or drawings.
- Others?





Summarizing

***Enhances students' ability to
synthesize information and
organize it in a way that captures
the main ideas and supporting
details.***

Recommendations for Classroom Practice

Summarizing

- 1. Teach students the rule-based summarizing strategy.**
- 2. Use summary frames.**
- 3. Engage students in reciprocal teaching.**

Teach students the rule-based summarizing strategy.

Steps in Rule-Based Summarizing

- **Take out material that is not important to understanding.**
- **Take out words that repeat information.**
- **Replace a list of things with a word that describes the things in the list (e.g., use trees for elm, oak, and maple.)**
- **Find a topic sentence. If you cannot find a topic sentence, make one up.**

Civil Wars

Civil wars since the end of World War II have lasted on average just over four years, a dramatic rise from the one and a half year average of the 1900–1944 period. While the rate of emergence of new civil wars has been relatively steady since the mid 19th century, the increasing length of those wars resulted in increasing numbers of wars ongoing at any one time. For example, there were no more than five civil wars underway simultaneously in the first half of the 20th century, while over 20 concurrent civil wars were occurring at the end of the Cold War, before a significant decrease as conflicts strongly associated with the superpower rivalry came to an end. Since 1945, civil wars have resulted in the deaths of over 25 million people, as well as the forced displacement of millions more. Civil wars have further resulted in economic collapse; Burma (Myanmar), Uganda and Angola are examples of nations that were considered to have promising futures before being engulfed in civil wars of a number of countries engulfed in civil wars.

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What do you think this poem is about?

<http://wordle.net/>

Use summary frames

- 1. Narrative/Story**
- 2. Topic-Restriction-Illustration
(T-R-I)**
- 3. Definition**
- 4. Argumentation**
- 5. Problem/Solution**
- 6. Conversation**

What might you see if the teacher is intentionally using summarizing?

- **Students using rule-based summarizing.**
- **Discussing essentials of specific information.**
- **Summary frames actively used as an advance organizer.**
- **Podcasting, book reports, or outlining.**
- **Answering summarizing questions.**
- **Others?**



Note Taking

Enhances students' ability to organize information in a way that captures the main ideas and supporting details.



Classroom Recommendations for Note Taking

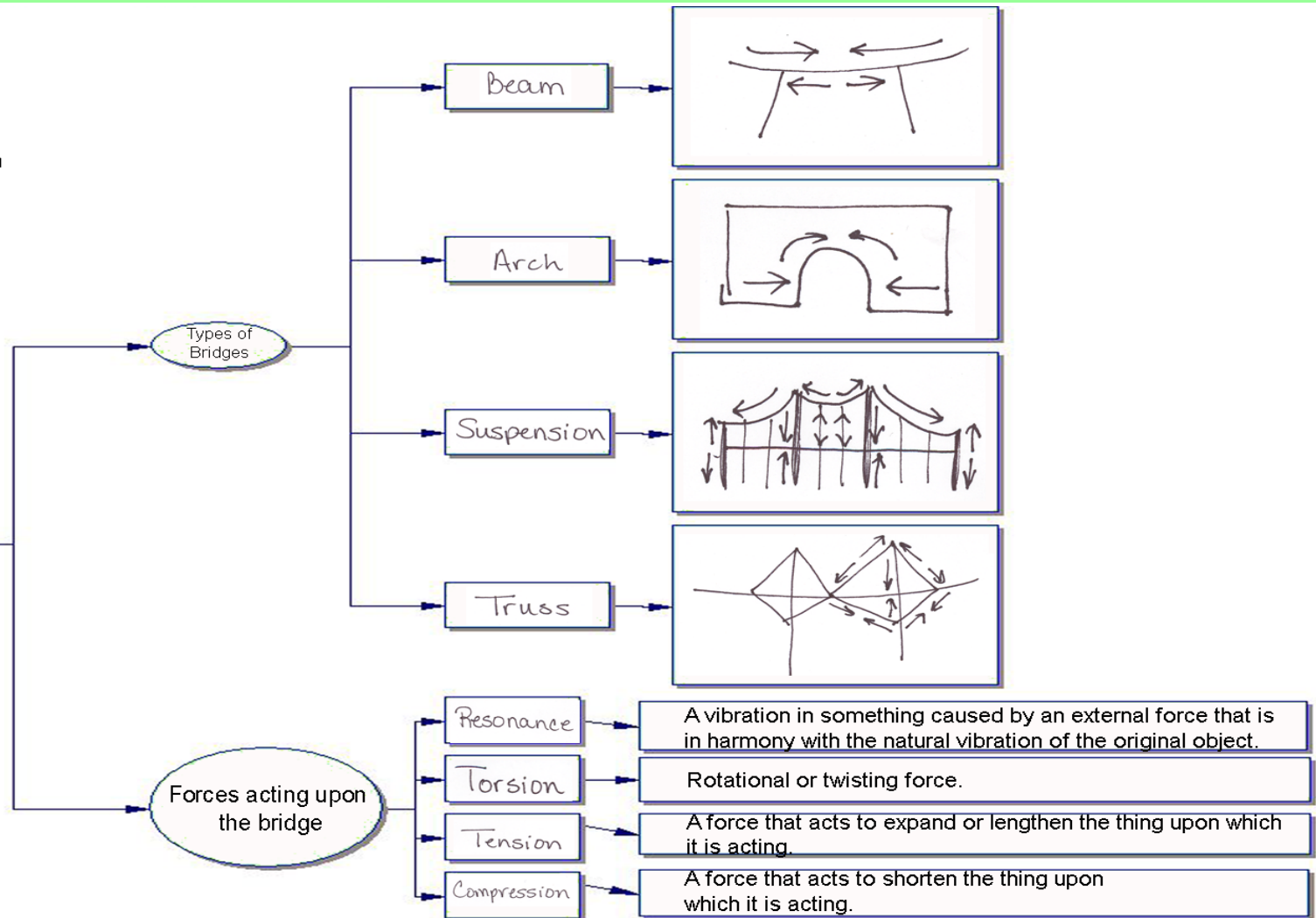
- 1. Give students teacher-prepared notes.**
- 2. Teach students a variety of note-taking formats.**
- 3. Provide opportunities for students to revise their notes and use them for review.**

Give students teacher-prepared notes

Word Bank

Arch
Beam
Compression
Resonance
Suspension
Tension
Torsion
Truss

Bridges



Teach students a variety of note-taking formats

**Formal and
informal
outline**

Webbing

**Combination
notes**

Cornell Notes

What might you see if the teacher is intentionally using note taking?

- **Teacher models effective note taking strategies.**
- **Students' notes show consistent information regardless of format.**
- **Recording of main ideas and supporting details.**
- **Others?**



**Cues, Questions,
& Advance
Organizers**

**Nonlinguistic
Representation**

**Developing
Understanding**

**Providing
Practice**

**Summarizing &
Notetaking**

Providing Practice

(Homework is not addressed in Power Walkthrough™)

...extends the learning opportunities for students to practice, review, and apply knowledge.

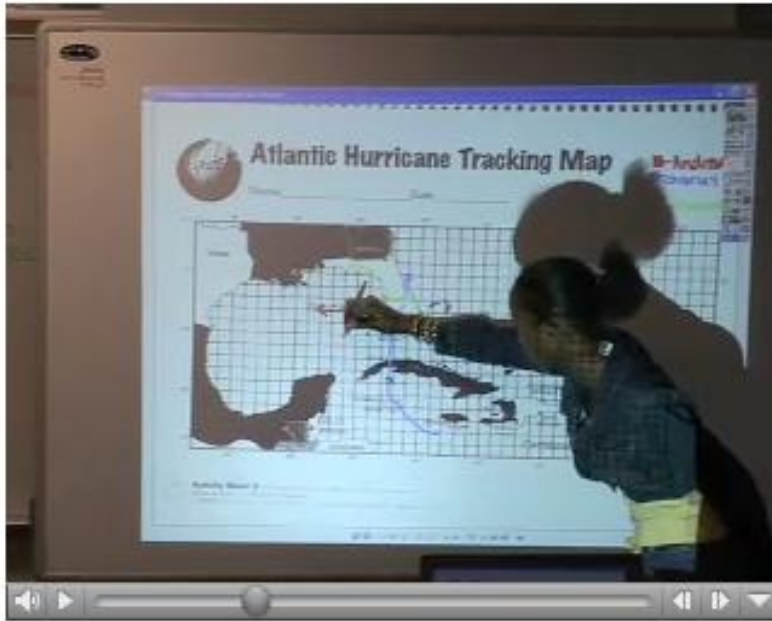


Recommendations for Classroom Practice Providing Practice

- 1. Clearly identify and communicate the purpose of practice activities.**
- 2. Design practice sessions that are short, focused, and distributed over time.**
- 3. Provide feedback on practice sessions.**

What Does Practice Look Like Enhanced by Technology?

After watching this video, pair with a neighbor and discuss how your school tries to make practice effective, engaging, and relevant.





Charting My Speed and Accuracy

Jackson Harwood

Number of items in my practice set	Number of items performed correctly	Number of minutes to finish the practice set
5	4	4.5
5	4	4
5	3	3.5
5	4	4
5	5	4
5	5	3.5
10	10	8
10	10	7.5

What might you see if the teacher is intentionally using practice?

- Students have designated time to work on skills
- Students are practicing in many different ways with rich feedback opportunities
- There is a clear purpose and outcome tied to objectives
- Others?

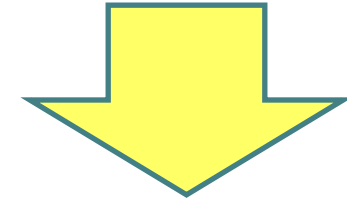
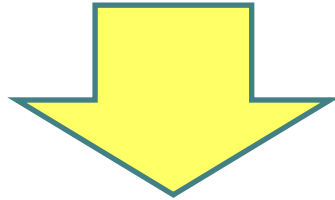


Creating the Environment for Learning

**Setting Objectives
and Providing
Feedback**

**Reinforcing Effort
and Providing
Recognition**

**Cooperative
Learning**



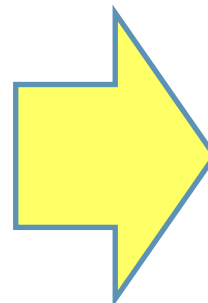
**Developing
Understanding**

**Cues, Questions,
and Advance Organizers**

Nonlinguistic Representation

Summarizing and Notetaking

Providing Practice



**Extending & Applying
Knowledge**

**Identifying Similarities
and Differences**

**Generating and
Testing Hypotheses**

**Identifying
Similarities &
Differences**

```
graph TD; A([Identifying Similarities & Differences]) --> B([Extending and Applying Knowledge]); B --> C([Generating & Testing Hypotheses]); C --> B;
```

**Extending and
Applying
Knowledge**

**Generating &
Testing
Hypotheses**

Similarities and differences can be identified through:



Comparing

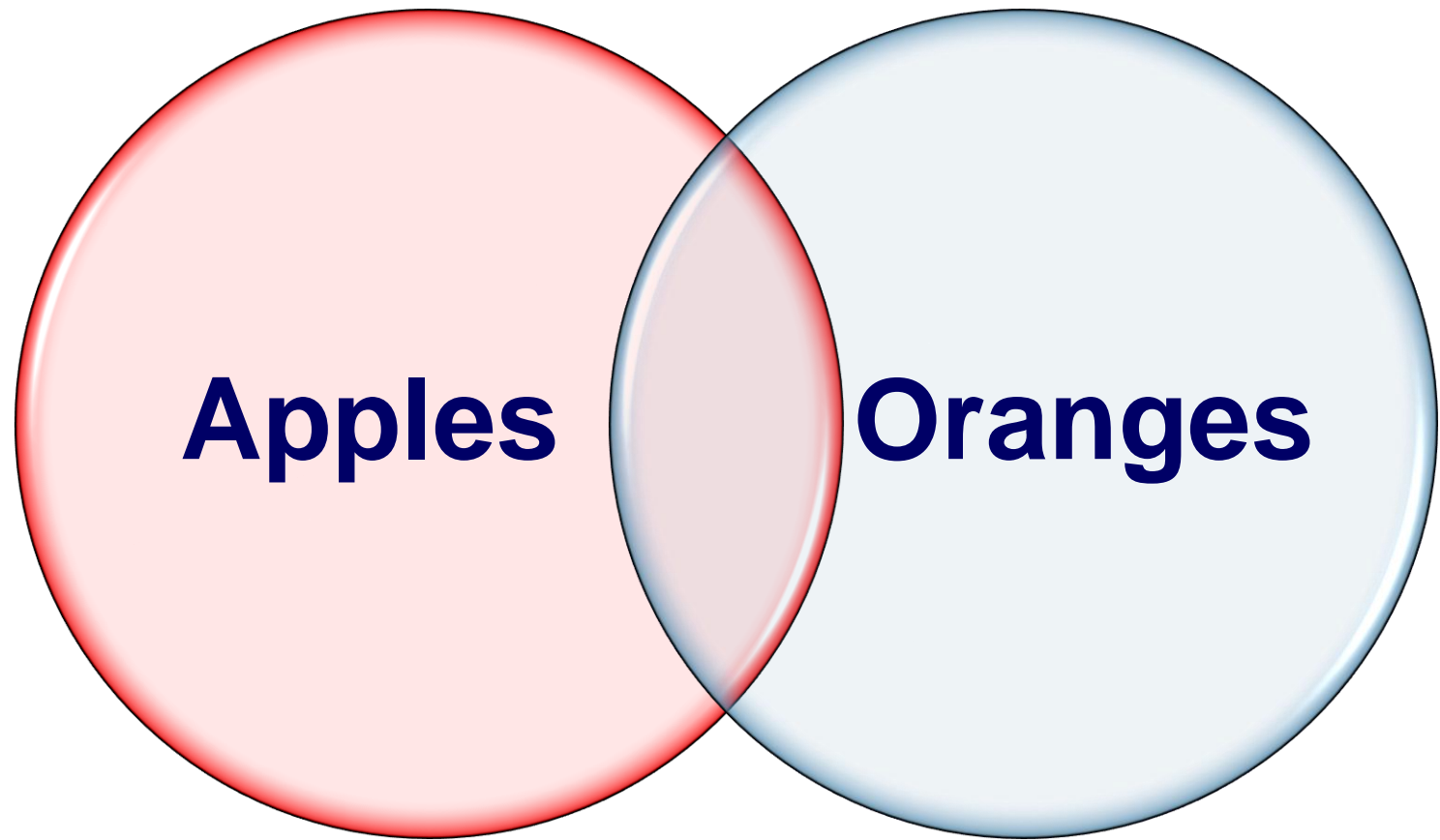
Classifying

Metaphors

Analogies

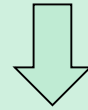
Classroom recommendations for Identifying Similarities and Differences

- 1. Teach students a variety of ways to identify similarities and differences.**
- 2. Guide students as they engage in the process of identifying similarities and differences.**
- 3. Provide supporting cues to help students identify similarities and differences.**



Graphic Organizer for Comparing

APPLES and ORANGES are the same because...



they are fruits, can be used as snack food, grow on trees, and are easy to carry in a backpack or lunch.

They are different with regard to



Characteristics

Eat the apple peel

PEEL

Don't eat the orange peel

Apples are red, green, or yellow

COLOR

Oranges are orange

Apples are baked or stewed

COOKING

Oranges are not cooked

What might you see if the teacher is intentionally using identifying similarities and differences?

- Graphic organizers such as Venn diagrams and matrices being used to compare/classify.
- Teachers use, and/or students create analogies and metaphors.
- Engaging students in mental processes that involve identifying ways items are alike and different.
- Abstract discussions of similes, allegories, or parables.
- Others?



**Identifying
Similarities &
Differences**



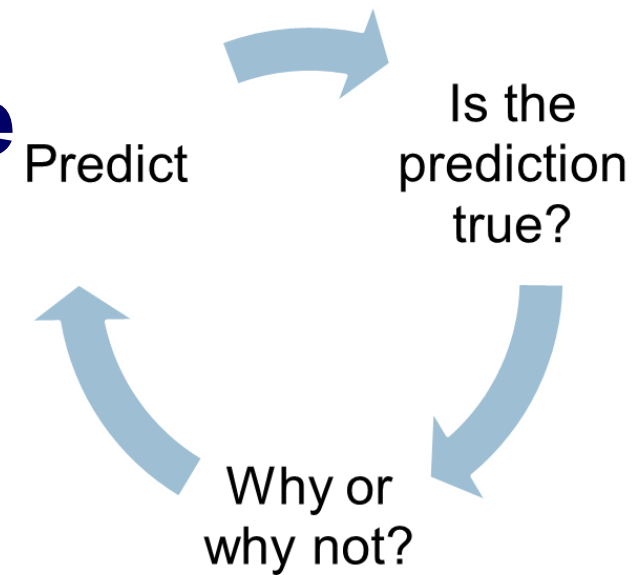
**Extending and
Applying
Knowledge**



**Generating &
Testing
Hypotheses**

Generating and Testing Hypotheses

Enhances students' understanding of and ability to use knowledge by engaging them in mental processes that involve making and testing hypotheses.



Classroom recommendations for Generating and Testing Hypotheses

- 1. Engage students in a variety of structured tasks for generating and testing hypotheses.**
- 2. Ask students to explain their hypotheses and their conclusions.**

Generating and Testing Hypotheses

Systems
analysis

Problem
solving

Investigation

Experimental
inquiry

What might you see if the teacher is intentionally using generating and testing hypotheses?

- High-level applications of learned concepts
- Students using knowledge in “real-world” contexts
- Students overheard saying, “Let’s try this”
- Students brainstorming and/or troubleshooting
- Others?



Practicing Classroom Walkthroughs



If your handheld device is not working yet, you can record a walkthrough at: <https://mxweb.media-x.com/home/mcrl>





Walkthrough Practice

- **What strategies did you see?**
- **What level of rigor matches the strategies?**
- **What was the context of the lesson?**
- **What kind of technologies were**



Walkthrough Practice

- **What strategies did you see?**
- **What level of Bloom's Taxonomy matches the strategies?**
- **What was the context of the lesson?**
- **What kind of technologies were**

Technology and Indicators of Learning

Teacher Directed Technology (Choose ALL that apply)		
<input type="checkbox"/> None <input type="checkbox"/> Brainstorming/ Idea Mapping Software <input type="checkbox"/> Calculator <input type="checkbox"/> Communication/ Collaboration Tool <input type="checkbox"/> Data Collection/ Analysis Tool <input type="checkbox"/> Database and Reference	<input type="checkbox"/> Diagnostic/ Prescriptive System <input type="checkbox"/> Display Tool <input type="checkbox"/> Instructional Interactive <input type="checkbox"/> Instructional Media <input type="checkbox"/> Interactive Whiteboard <input type="checkbox"/> Kinesthetic Technology	<input type="checkbox"/> Multimedia Creation <input type="checkbox"/> Non-Educational Use <input type="checkbox"/> Student Response Systems <input type="checkbox"/> Word Processing
Student Centered Technology (Choose ALL that apply)		
<input type="checkbox"/> None <input type="checkbox"/> Brainstorming/ Idea Mapping Software <input type="checkbox"/> Calculator <input type="checkbox"/> Communication/ Collaboration Tool <input type="checkbox"/> Data Collection/ Analysis Tool <input type="checkbox"/> Database and Reference	<input type="checkbox"/> Diagnostic/ Prescriptive System <input type="checkbox"/> Display Tool <input type="checkbox"/> Instructional Interactive <input type="checkbox"/> Instructional Media <input type="checkbox"/> Interactive Whiteboard <input type="checkbox"/> Kinesthetic Technology	<input type="checkbox"/> Multimedia Creation <input type="checkbox"/> Non-Educational Use <input type="checkbox"/> Student Response Systems <input type="checkbox"/> Word Processing
Indicators of Learning (Choose ALL that apply)		
<input type="checkbox"/> Experimenting <input type="checkbox"/> Formative Assessment (Informal Assessment) <input type="checkbox"/> Guided Reading <input type="checkbox"/> Learning Game <input type="checkbox"/> Oral Reading <input type="checkbox"/> Peer Teaching <input type="checkbox"/> Practicing	<input type="checkbox"/> Silent Reading (little evidence) <input type="checkbox"/> Simulating/ Modeling <input type="checkbox"/> Student Demonstrating <input type="checkbox"/> Student Discussion <input type="checkbox"/> Student Drawing <input type="checkbox"/> Student Graphic Organizing <input type="checkbox"/> Student Performing/ Presenting <input type="checkbox"/> Student Planning <input type="checkbox"/> Student Tutoring	<input type="checkbox"/> Student Worksheet <input type="checkbox"/> Student Writing <input type="checkbox"/> Student-Teacher Interview <input type="checkbox"/> Summative Assessment (Formal Assessment) <input type="checkbox"/> Teacher Directed Lecture (little evidence) <input type="checkbox"/> Teacher Directed Question/ Answer

Questions & Next Steps

Are there any questions about PWTs?

What are the next steps for...
the district?
school buildings?
individual teachers?

Agenda, Day 2

Debrief Live Practice Walkthroughs in Classrooms 1

Live Walkthrough Practice in Classrooms 2

Debrief Live Practice Walkthroughs in Classrooms 2

Lunch

**Website Tour of <https://mxweb.media-x.com/home/mcrl>
(general settings, editing, creating reports, and etc.)**

Implementation Planning and Instructional Mentoring

**Technical Support and Website Tour of
<https://sites.google.com/site/powerwalkthroughusersgroup>**

**How to Add/Delete Staff and Customize Templates
(For designated personnel only)**