# Scaffolding ELLs' Academic Acheivment Through School-Wide Strategy Instruction

TESOL 2009

Class Building:
Stand Up, Hand Up, Pair Up
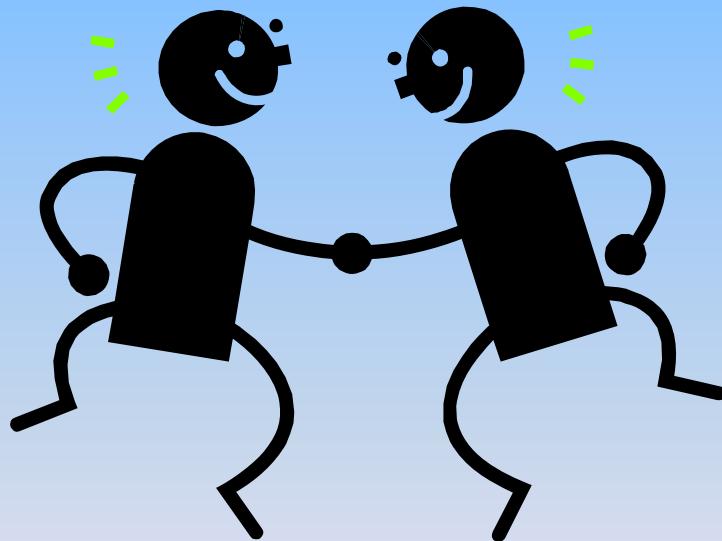
Teachers Speak Out:

Only one in five teachers told a national survey they felt "very well prepared" to work in a modern classroom. Only 20% said they were confident in working with students from diverse backgrounds, with limited English proficiency, or with disabilities.

Goals for Today

- Relate Background and Application of one school districts Staff Development Model

- Focus on a essential understandings about the complexity of educating English Language Learners

- Provide sample modules that can be used in designing turnaround training

- Model rich instructional strategies and ideas while providing content
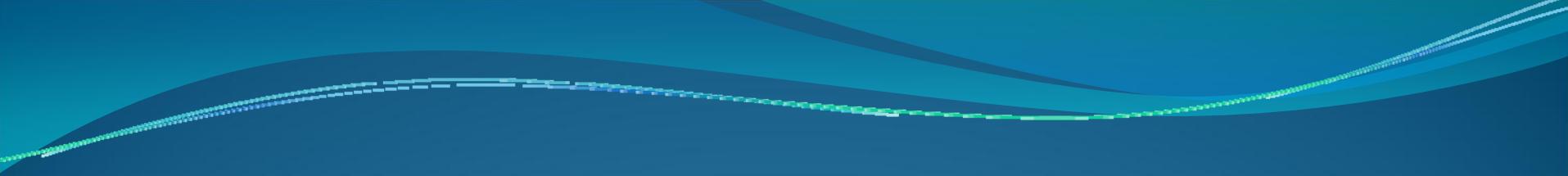
Why LEARN?

- **Content delivery is a key factor in student learning and achievement**
- Research based best practice :
  - Activating prior knowledge
  - Making connections
  - Providing active learning experiences
  - Allowing students processing and reflection time

LINK

- Make connections to recent learning
- Activate prior knowledge
- Objectives stated to and referred to throughout lesson in student friendly language
- On-going formative assessment

Engage and Explain

- Direct Instruction
- Minds On
- Students Engaged in Higher Level Thinking
- Hook used to Motivate Students
- Use of Supplemental Materials
- Vocabulary and Reading Strategies
- On-going Formative Assessment
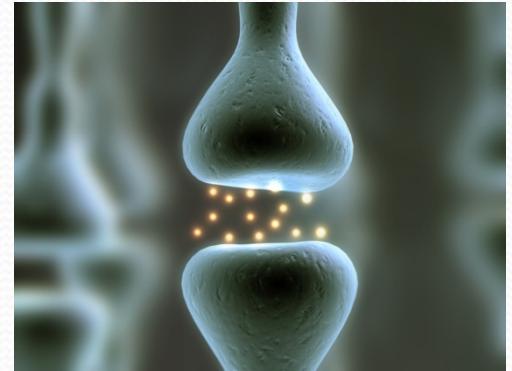
Active Learning

- Student centered learning
- Hands-on
- Guided Practice – teacher facilitates
- Flexible Grouping
- Differentiation Strategies
- Higher Level Thinking
- On-going formative assessment

Reflect

- Students write or speak individually to process what they have learned
- Use processing strategies
- On-going formative assessment
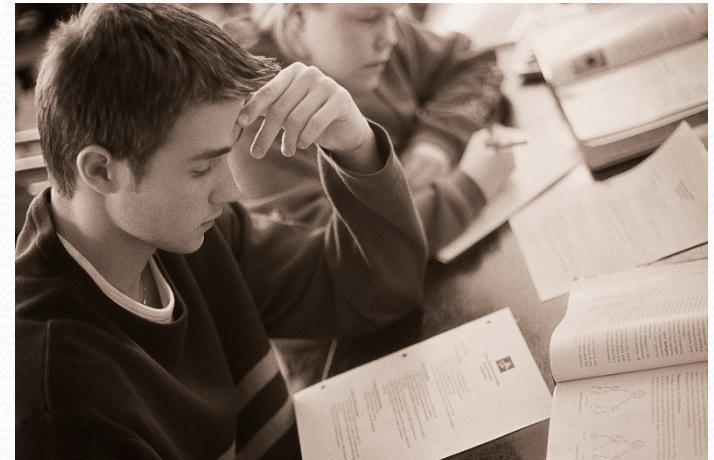
Now and Then

- Connections to long-term, future learning
- Connections to other content areas
- Connections to practical experiences and application

Keeping the Focus on Learning

- Instruction should…
  - Be meaningful
  - Be appropriate for the knowledge, skills, and processes to be learned
  - Take into account students' backgrounds, perspectives, and learning styles

Second Language Acquistion

Module 2: Language Difference or Possible Disability

Language Exposure

- "Young children growing up bilingually are for the most part doing so because there is no way that they can grow up monolingually." (De Houwer)

- However, there is great variation in children's bilingual experiences:
  - Predominance of a single language
  - Equal exposure to both, in terms of quality and quantity of language exposure
  - Intermixing of two languages
  - Fluctuating exposure to both languages
  - Exposure to multiple languages

First Language Development

(drawing on prior knowledge)

Think of babies you've known....

- Silent period

- One-word utterances

- Two- and three word utterances

- Phrases

What's "normal" ?

Stages of Language Acquisition

			Continued Language Development 5 to 7 (10) years Content Area Vocabulary	
		Intermediate Fluency An additional 1 year 6000 active words		
	Speech Emergence An additional 1 year 3000 active words			
Early Production An additional 6 months 1000 receptive/active words				
Preproduction 10 hours to 6 months 500 receptive words				

1 year	2 Years	3 years	5 years	7-10 years

NOTE: A student often moves between the stages depending on the lesson being taught.

EXAMPLE: A student who is working consistently at the Intermediate Fluency stage may temporarily regress to the Speech Emergence stage when confronted with challenging content that is outside his/her background knowledge and experiences.

Variables Affecting Second Language Acquisition (Whole Group Brainstorm)

- Affective

- Socioeconomic

- Educational

- Cultural

- Classroom Environment & Teaching Style

Using the Home Language…

Parents should be encouraged to speak in the language that is most comfortable to them in order to create a language-rich environment in the home.

Current studies on the effect of bilingualism on the academic growth of students conclude that when children maintain their first language ability, they transfer skills to their second language; in fact, "native language proficiency is a powerful predictor of the rapidity of second language development."

(K. Hakuta)

"***When parents are unable to talk to their children***, they cannot easily convey to them their values, beliefs, understandings, or wisdom about how to cope with their experiences.

They cannot teach them about the meaning of work, or about personal responsibility, or what it means to be a moral or ethical person in a world with too many choices and too few guideposts to follow.

What is lost are the bits of advice, the *consejos* parents should be able to offer children in their everyday interactions with them.

Talk is a crucial link between parents and children: It is how parents impart their cultures to their children and enable them to become the kind of men and women they want them to be. When parents lose the means for socializing and influencing their children, rifts develop and families lose the intimacy that comes from shared beliefs and understandings."

(Wong Fillmore, 1991)

Typical Characteristics and Processes of L2 Acquisition

1. Silent Period
2. Code-switching
3. Transfer
4. Language Loss

Roseberry-McKibbin, C.

(ASHA)

Theories

1. Comprehensive Input (S. Krashen)
2. Communicative Proficiency Framework (J. Cummins)
3. Interdependence Hypothesis (J. Cummins)
4. Language Acquisition Hierarchy (Natural Order Hypothesis) (S. Krashen)

1. *Comprehensive Input* (S. Krashen)

- "Caretaker" language (comprehensive input and output
- I + 1 (meaningful and of interest)
- Affective Filter (emotions, attitudes, motivation)

When assessing ELLs' skills, less importance should be given to the learner's grammatical accuracy, syntax, and pronunciation; and greater focus should be given to the student's overall language usage, ability to comprehend, and capacity to communicate and be understood.

J. Cummins

Cognitively Undemanding

Context
Embedded

A   C

B   D

Context
Reduced

Cognitively Demanding
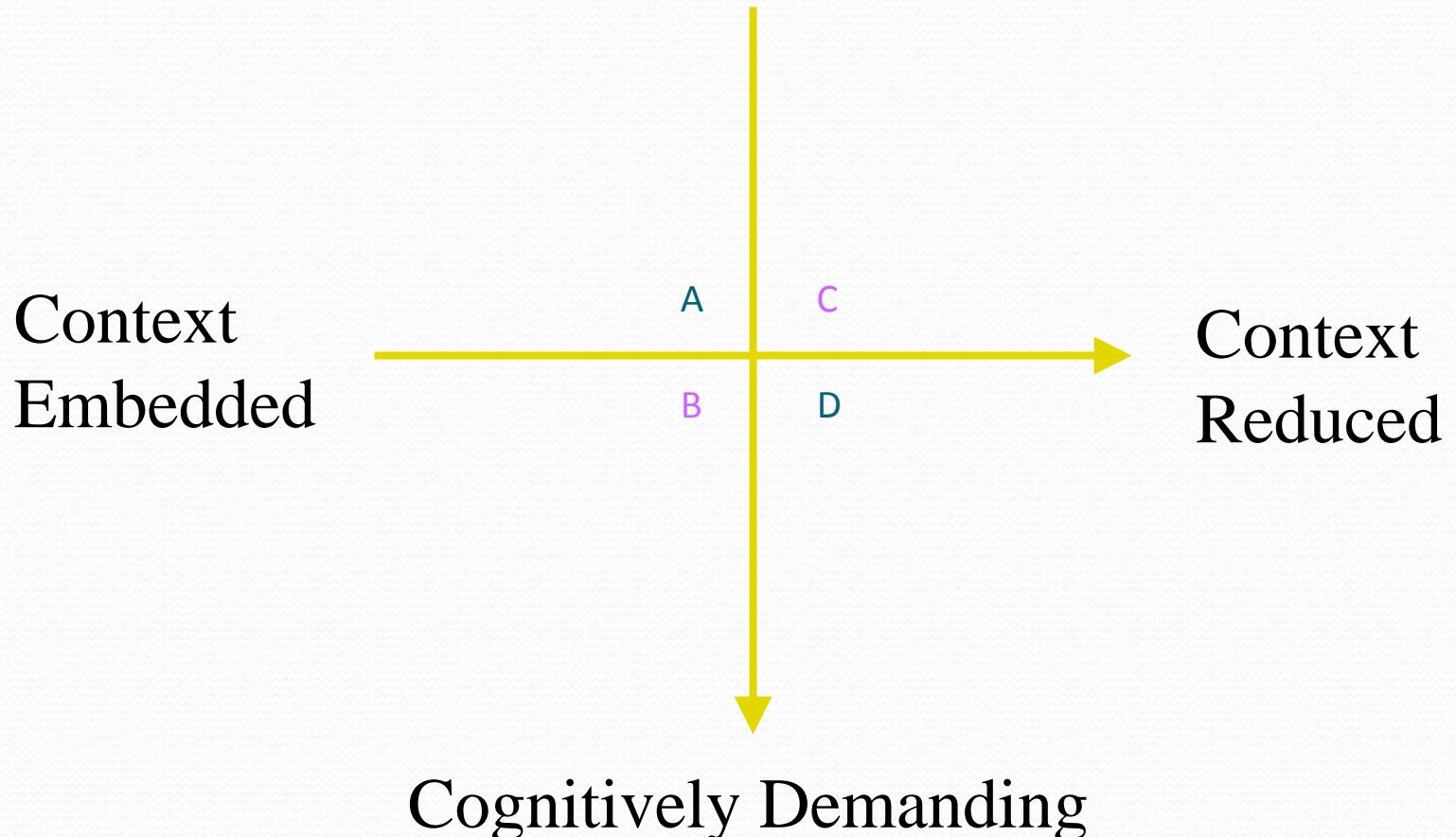
Length of Time Required to Achieve Age-Appropriate Levels of Content-Embedded & Content-Reduced Communicative Proficiency — J. Cummins

BICS

CALP

1-3 years

5 to 7 years

Context-Embedded (Face to Face) Communicative Proficiency

Context-Reduced (Academic) Communicative Proficiency
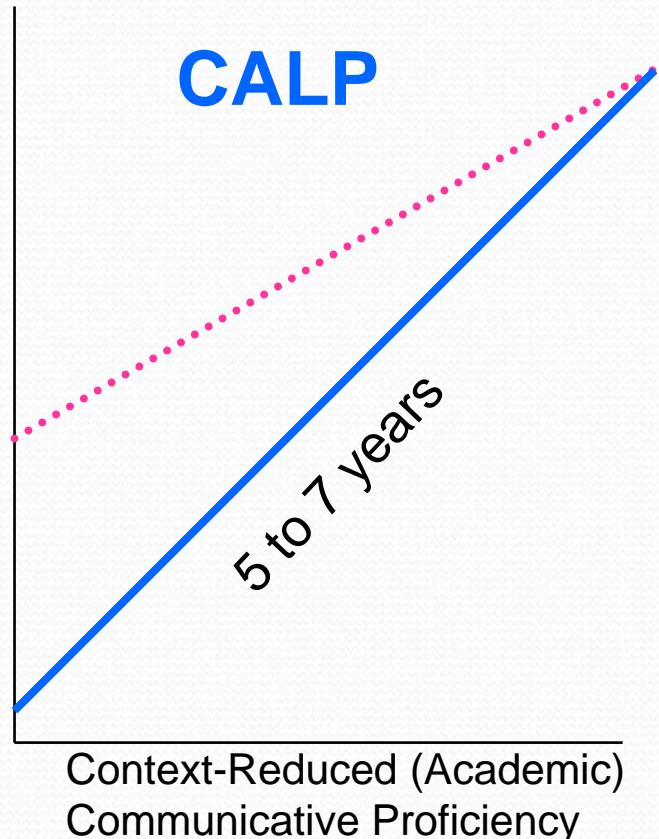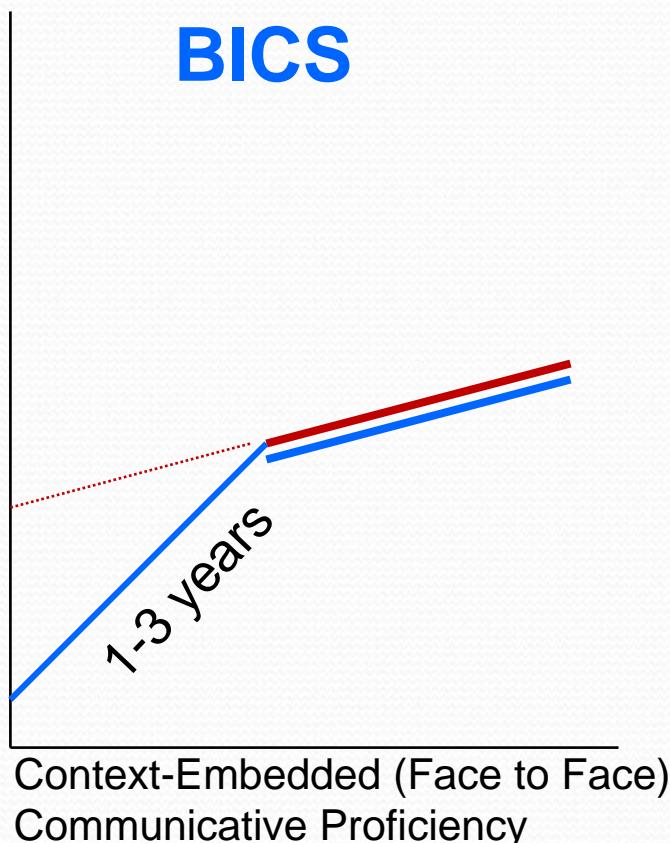
Summary: Characteristics and Descriptors of ELLs

1. A silent period

2. Limited comprehension and production of the second language; reliance on gestures and simple utterances

3. First language transference. Errors in production of phonemes or other structures of the second language and/or errors in the use of words to replace those sounds the student is either unable to produce or which cause confusion

4. Temporary competition between the two languages, commonly referred to as the "Interlingual Stage"

5. Limited or inappropriate use of lexicon, syntax, and/or grammar. Includes syntax that parallels first language word-order patterns; overuse of simple tenses; overgeneralization of rules; etc.

Summary: Characteristics and Descriptors of ELLs, continued

6. Code-switching from one language to another. Used as an ethnic or social marker or as a transition tool as student acquires L2; also results from being forced to speak L2 before having adequate control. (In fully bilingual individuals, code-switching is purposefully used to communicate most efficiently)

7. Gradual or partial loss of first language

8. Arrested language development in preschool through kindergarten age children. Occurs when children are introduced to the L2 before their L1 is fully developed. May affect extent of development of the first <u>and</u> second language; child may not become proficient in either language or require much longer period of time to gain proficiency in the second language

Based on: Ortiz & Maldonado-Colon (1986) in Willig & Greenberg (Ed)), Bilingualism and learning disabilities. New York: American Library Publishing Co. Schiff-Myers, N.B. (1994) Assessment considerations in the evaluation of second-language learners: A case study. Exceptional Children, 60, 237-248.

Clues to Distinguishing Differences from Possible Disabilities in ELLs

- Key Background Information
- Key Observable Concerns
- Key Areas that May Be Misleading

Clues to Distinguishing Differences from Possible Disabilities

Key Background Information:

- Recorded or reported relevant birth or medical history
  _____

- Uncommon delay in learning the first language
  (prior to exposure to second language)

- Language/communication difficulties at home & in L1 which might include unintelligibility or incomprehensibility (prior to L2 exposure)

- Dysfluency or voice disorders in the home language *(CAUTION!)*

- Age-inappropriate reliance on gestures and/or vocalizations to communicate & express needs in home environment and language
  _____

- Fine, gross, or oral motor difficulties

- Presence of existing disabilities or other handicapping conditions
  _____

- Documented/reported history of academic difficulties in home country
  _____

- Previous traumatic experiences or deprivation of food and resources

Clues to Distinguishing Differences from Possible Disabilities *(continued)*

Key Observable Concerns:

- Uncommon and extended delay in beginning to acquire English oral skills (beyond the "Silent Period")

- Lack of continued, steady (even if somewhat slow) progress in L2 proficiency; limited vocabulary and/or low length of utterance in L2 over time
----

- Dysfluency or voice disorders (unrelated to "accent")

- Inability to retain simple, learned knowledge from one day to next

- Marked discrepancies performing in different language/academic areas. (Note: while it is expected that oral communicative skills are acquired sooner than literacy and other cognitive academic skills, given appropriate instruction, the "gap" between these areas should decrease over time).

- Apparent lack of comprehension of simple concepts, even with the help of bilingual peers
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- Inability to conform to or follow simple classroom routines

Clues to Distinguishing Differences from Possible Disabilities (continued)

Key Areas that May Be Misleading:

- Lack of oral production (may be due to silent period, cultural expectations, affective variables)

- Unexpected behaviors; social withdrawal; unusual peer interactions

- Speech sound distortions (articulation may be confused with pronunciation; absence of certain sounds in home language may be difficult to replicate in second language)

- Limited self-help skills for younger students (may be culturally related)

- Apparent weakness in pencil-paper skills (may be due to cultural differences, lack of previous exposure, language)

Possible Exceptionality or SLA?

- Let's look at our original concerns: could the behaviors be due to acculturation or the process of acquiring English as a new language?

- Remember:

  "What may appear to be a disability for Johnny may not be for José"

  and

  "What may appear to be a disability for José, may not be for Manuel or Thuy."

If I were in charge of school,

school wouldn't have a first day.
I'd not be afraid.
Classmates would accept me.
I'd understand the rules.
My teacher would understand me
and my culture.
My parents would be able to talk to my teacher.
Nobody would give me a book I couldn't read.
They wouldn't say the same thing louder
when I didn't understand them.
I'm not deaf.
Nobody would call on me when
I didn't even know the question,
let alone the answer.
I'd know what to do when the teacher said,
"Pass out the papers"
or the kids said, "Eat your heart out."
I wouldn't expect to rest in the rest room,
or take a bath in the bathroom,
or cough in the cougheteria.

FCPS ESOL Student

BREAK

Culture, Relationships and the Learning Environment

"An affirming attitude toward students from culturally diverse backgrounds significantly impacts their learning, belief in self, and overall academic performance"

(Villegas & Lucas, 2002, p. 23)

what do teachers need to know?

- ***Relationships are key***
    - Student – Teacher
    - Student – Student
    - Teacher – Parent

- ***Ideas for Culture/Learning Environment Module***:
    - Parent Panel
    - Discussions on current articles and books
    - Immigrant experience videos

Parent Panels

- Find 3 or 4 parents of ELLs who at one time had students in the school system
  - Parents share their personal stories and information about educational systems in their countries
    - expectations from schools
    - expectations from students
  - Teachers ask parents questions
  - Provide resources

In Staff Development

Mutual respect is promoted when teachers listen as much as they speak, when students can build on their personal and cultural strengths, when the curriculum includes multiple points of view, and when students are given the chance to genuinely talk to one another about topics that concern them.

(Diaz-Rico, 2008, p.327)

Current Articles

- Educational Leadership
  - March 2007
  - September 2008
  - Many include implications for ELLs

  Facilitate group discussions around important topics. Provide structure.
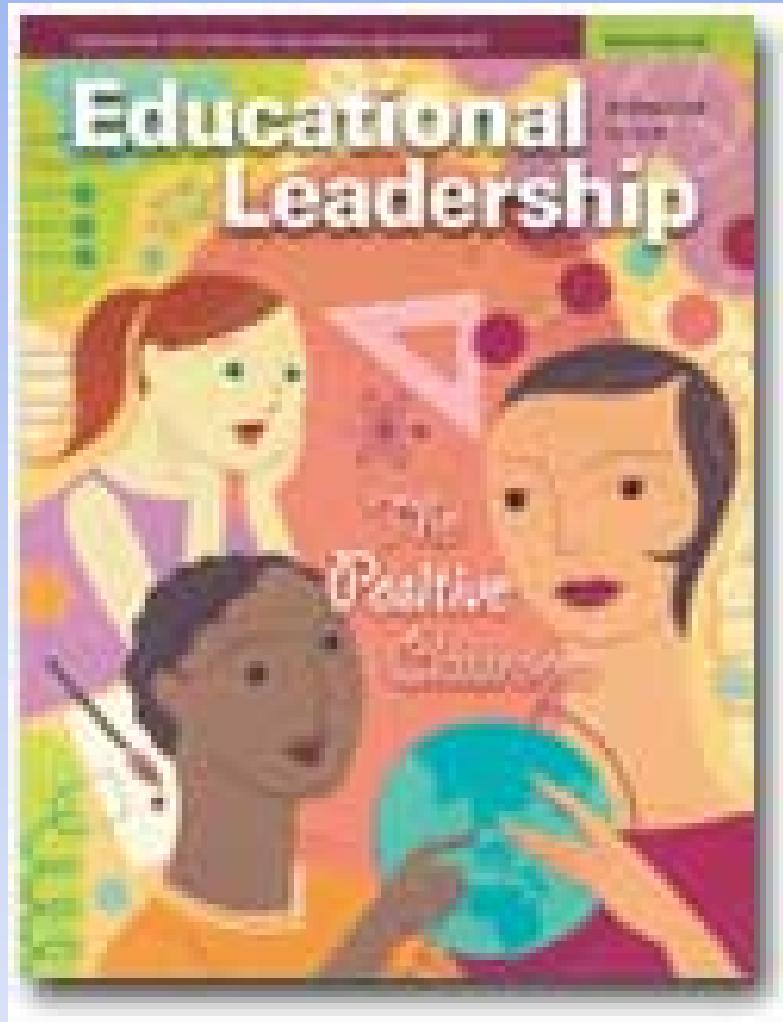
English Language Learners in the Classroom

By Cynthia Mata Aguilar, Danling Fu, Carol Jago. *Adolescent Literacy*, 2007
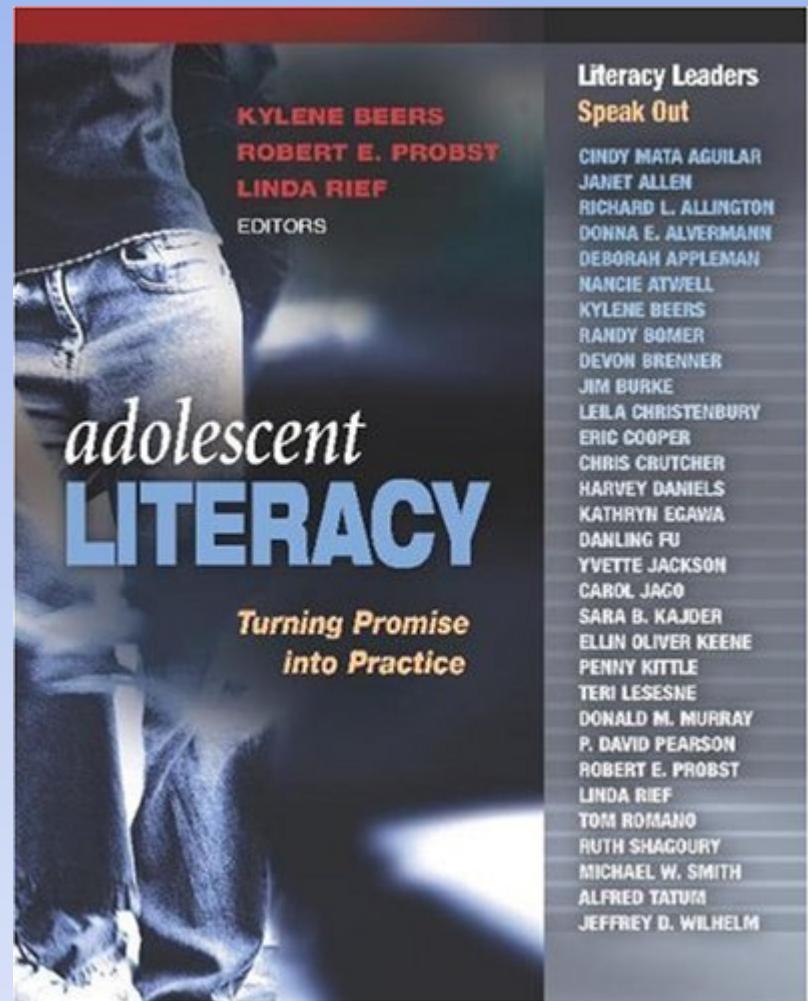
Group Jigsaw (modified) Reading

- Read your section
- Answer the first two questions
- Discuss them in your group
- Stand up and move into groups of three
  - Be sure each group has a section #1, #2, and #3.

Share your *key* ideas with each other!

We must understand our students' cultures and experiences

Teens In Between, Mhz Networks, 2002
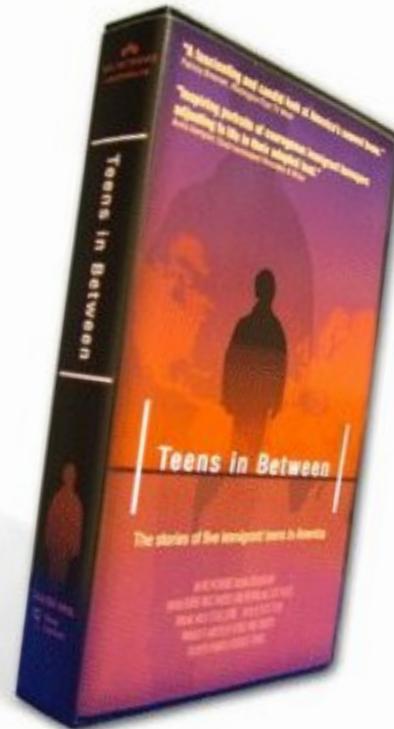
God Grew Tired of Us

Documentary film, Sudanese Refugees, directed by Christopher Dillon Quinn (2006)
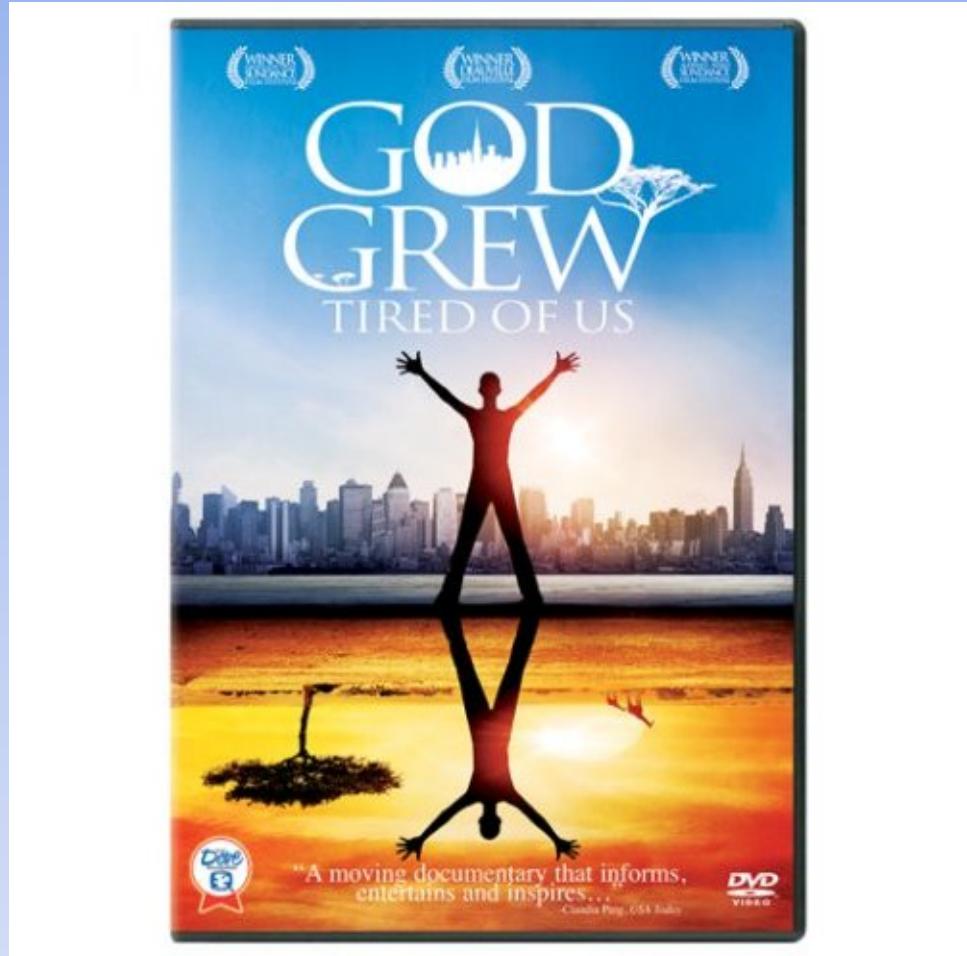
Benefits of Using Real Life Stories

1. Builds understanding and empathy for immigrant students
2. Provides positive and negative examples to discuss
3. Builds background knowledge for teachers
4. Provides a common ground for discussions

Educators of all racial and cultural groups need to develop new competencies and pedagogies to successfully engage our changing populations.

- Gary R. Howard

As Diversity Grow, So Must We, <u>Educational Leadership</u>, March 2007.

LINK

- What standardized assessments do your students take?

- How do the results impact your schools' instructional delivery?

Current Federal (NCLB) Requirements

- Include all LEP students in state content area assessment (SOLs, etc.) in grades 3-8 (and in high school) in reading, math and science*

  - (* science at least once in grades 3-5, 6-9 and 10-12)

- Annual English language proficiency (ELP) assessment in reading, writing, listening and speaking for all K-12 LEP students

Best Instructional Practices Based on Current Research

- Current research demonstrates that one of the most effective teaching methods for English language development of ELL students is <u>teaching English through the content areas.</u>

Best Assessment Practices Based on Current Research

- To align with instruction, assess ELL students' development of <u>academic English linked to the content areas</u>, rather than assessing "English in isolation" or only "social English"

Total Instructional Alignment

Best-kept secret:

Children tend to learn those things they are taught.

Carter, L. (2008) *Total Instructional Alignment: From Standards to Student Success*

What It Is . . .

Total Instructional Alignment means making sure that what we teach, how we teach, and what we assess are congruent.

- Alignment of System
- Alignment of standards, curriculum, and assessments
- Alignment of instructional practices in the classroom

How Do We Achieve It?

- Develop clear learning goals in the form of specific and measurable behavioral objectives

- Understand the multiple ways to assess what students are learning

- Establish what students are expected to learn and then determine the best activity to teach it.

The Process

- Determine the learning goal
- Make sure there is clear understanding of the learning goal
- Identify the learning steps needed to accomplish the goal
- Establish a logical order for the instruction

Student Name: _____

Reporting Category	SOL	Specific Virginia Standard of Learning
RC2 Demonstrate comprehension of printed materials.	6.4	The student will read and demonstrate comprehension of a variety of fiction ☐, narrative nonfiction ☐, and poetry ☐. a) Identify the elements of narrative structure including setting ☐, character ☐, plot ☐, conflict ☐, and theme ☐. b) Use knowledge of narrative and poetic structures ☐ to aid comprehension and predict outcomes ☐. c) Describe the images created by language ☐. d) Describe how word choice ☐ and imagery ☐ contribute to the meaning of a text. e) Describe cause-effect relationships and their impact on plot ☐. f) Use information stated explicitly in the text to draw conclusions ☐ and make inferences. g) Explain how character and plot development are used in a selection to support a central conflict or story line ☐. h) Paraphrase and summarize the main points in the text ☐.

Fairfax County Public Schools © July 2008

Individual Student Checklist for VGLA Evidence Collection

The language of the SOL blueprint has been adapted in this checklist to clarify teacher understanding during evidence collection.

Page 2 of 3

Reporting Category 2 (RC 2): Demonstrate comprehension of printed materials.		
Standard: 6.4 The student will read and demonstrate comprehension of a variety of fiction ☐, narrative nonfiction ☐, and poetry ☐. Benchmark: a. Identify the elements of narrative structure including setting ☐, character ☐, plot ☐, conflict ☐, and theme ☐.		
References	Notes	Evidence Suggestions/Resources
Guided Reading in Grades 3-6, Scholastic (2006) *Reader's Handbook,* Great Source (2002)	<u>Setting</u> – time and place of story. <u>Characters</u> – people, animals, or inanimate objects that appear in text. <u>Plot</u> – description of action in a selection. <u>Conflict</u> – part of plot; four basic patterns of conflict: • person against nature • person against person • person against society • person against self. <u>Theme</u> – the big idea; what the text is mainly about.	• DRA2 • story maps and other graphic organizers • reading response logs/journals • teacher observations w/ anecdotal notes
Standard: 6.4 The student will read and demonstrate comprehension of a variety of fiction ☐, narrative nonfiction ☐, and poetry ☐. Benchmark: b. Use knowledge of narrative and poetic structures ☐ to aid comprehension and predict outcomes ☐.		
References	Notes	Evidence Suggestions/Resources
The Comprehension Toolkit, Heinemann (2005) *Guided Reading in Grades 3-6,* Scholastic (2006) *Reader's Handbook,* Great Source (2002) *Strategies That Work,* Stenhouse (2000 or 2007 edition)	<u>Narrative nonfiction</u> includes biographies, autobiographies, personal essays, and biographical poems. <u>Poetic structure</u> includes elements (*rhyme, rhythm, repetition,* and *figurative language*) **and** form (*haiku, limerick, ballad,* and *free verse*).	• DRA2 • story maps or other graphic organizers • character sociograms • story notes on chapter grid • biographical web • summaries • reading response logs/journals

WIDA ELP Standards

Standard 1: English language learners communicate for social and instructional purposes within the school setting.

Standard 2: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of **Language Arts.**

Standard 3: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of **Mathematics.**

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of **Science.**

Standard 5: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of **Social Studies.**

Unwrapping the Standards:
Model Performance Indicators (MPIs)

- Language Function
- Content Stem
- Support or Strategy

Creating Sentence Frames

- Give students the language to articulate their understanding or to express their thoughts in relationship to the standard.

- Careful consideration is made to the language necessary to support a given function.

Sample Sentence Frames

Academic Language for Language Arts
DRAFT

Language Functions	Sentence Frames
Identify Recognize Explain Describe Examine Analyze	• _____means _____. • The meaning of _____ is _____. • The reasons for _____are _____. • The impact of _____ is _____. • The cause of _____ is _____. • The role of _____is _____. • The purpose of _____ is _____. • The significance of_____ is _____. • The result of _____is _____. • The effect of _____is _____. • The relationship between _____ and _____ is _____. • The author's viewpoint is _____. • This passage shows/illustrates that _____. • The source is _____. • The characteristics of _____ are _____. • _____ is organized by/into _____. • The structure of _____ is _____. • _____ conveys _____. • _____ connotes _____.
Compare & Contrast Distinguish	• _____is similar to _____because_____. • _____ is different from _____because____. • The differences between ____ and ____ are _____. • The similarities between ____ and ____ are _____. • _____ is like _____, whereas _____is like _____. • _____ is _____; on the other hand _____ is _____. • _____ is (like/unlike) _____ because_____. • _____is _____; in contrast, _____is _____. • The advantages/disadvantages of ___ are ___. • The pros/cons of ____ are _____.

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Organize Synthesize Summarize	• At the beginning, _____. • In the middle, _____. • First _____, second _____, and then ____. • After that _____. • Moreover, _____. • Next _____. • According to _____, _____. • Based on _____, _____. • In conclusion,_____. • In summary, _____. • Finally, _____. • Consequently, _____. • Therefore, _____.
Draw conclusions Make inferences	• As a result of _____, _____. • From _____, I can infer _____. • I infer _____ because _____. • I conclude that _____ because _____. • Based on _____, I think _____. • _____ reveals that _____. • I believe _____ because _____.
Critique Evaluate	• I liked/did not like ____ because _____. • This idea has/does not have merit because _____. • _____ was effective/ineffective because _____. • The argument was persuasive because ____. • _____ was compelling/not compelling because _____. • I thought _____was fantastic/good/bad/awful because _____. • I think the author is biased because _____. • This could have been improved by _____. • Had the author _____, it would have _____.

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	Conversational Language		Academic Language	
Type of Learner	English	First Language	English	First Language
Newly arrived **with limited formal schooling**	X	√	X	X
Newly arrived with adequate schooling	X	√		√
Long Term English Language Learner	√	(√)	√	(x)

How Do We Know Learning Objectives Have Been Met?

- Performance assessments allow students to demonstrate their knowledge, understandings, and skills in the academic content areas.

- Performance assessments allow students to demonstrate their understanding of grade level standards at their individual language proficiency level.

- This demonstration occurs in the classroom while students are engaged in authentic learning experiences. This allows the teacher to differentiate to support ELLs.

Voices of the Teachers:

- It has clarified and expanded my understanding of the standards for my students. I see the assessment cycle in practice: teach-assess-re-teach-assess, etc.

- The process has given us the opportunity to reflect on our teaching practices, differentiating instruction and clearly looking at the standards.

- I have learned many new ways of teaching standards and working with small groups.

- We communicate more about what we were teaching; we share instructional strategies and materials.

- It has helped us to really define and create a common understanding (definition) of each standard.

Matching Instruction and Assessment

Module 5

Share with a Partner:

- Something new you have learned recently....maybe how to play an instrument or a sport, how to make a gourmet meal or fly a kite, how to speak a new language or whatever else you have learned.

  Include the when, where, how and why of the experience...

  How did you assess your progress?

Current Classroom Assessments

- Assessments generally encourage rote / superficial learning

- Questions used are not reviewed with peers, not critical about what is being assessed

- Can predict students results on external tests, but know little about students' learning needs

- Tend to emphasize quantity rather than quality of work

- Grading function over-emphasized, learning function under-emphasized

Types of Assessment

Diagnostic

Formative

Summative

Assessment Word Sort!

•Separate/classify the activities given, in the envelope, as Diagnostic, Formative, or Summative assessment.

Comparing forms of assessment

	Diagnostic ⟷	Formative ⟷	Summative
Timing	varies	ongoing	terminal
Purpose	Identifying learning difficulties	Improving learning	Verification of learning
Control	Teacher	Teacher and learner	Teacher and external
Examples			
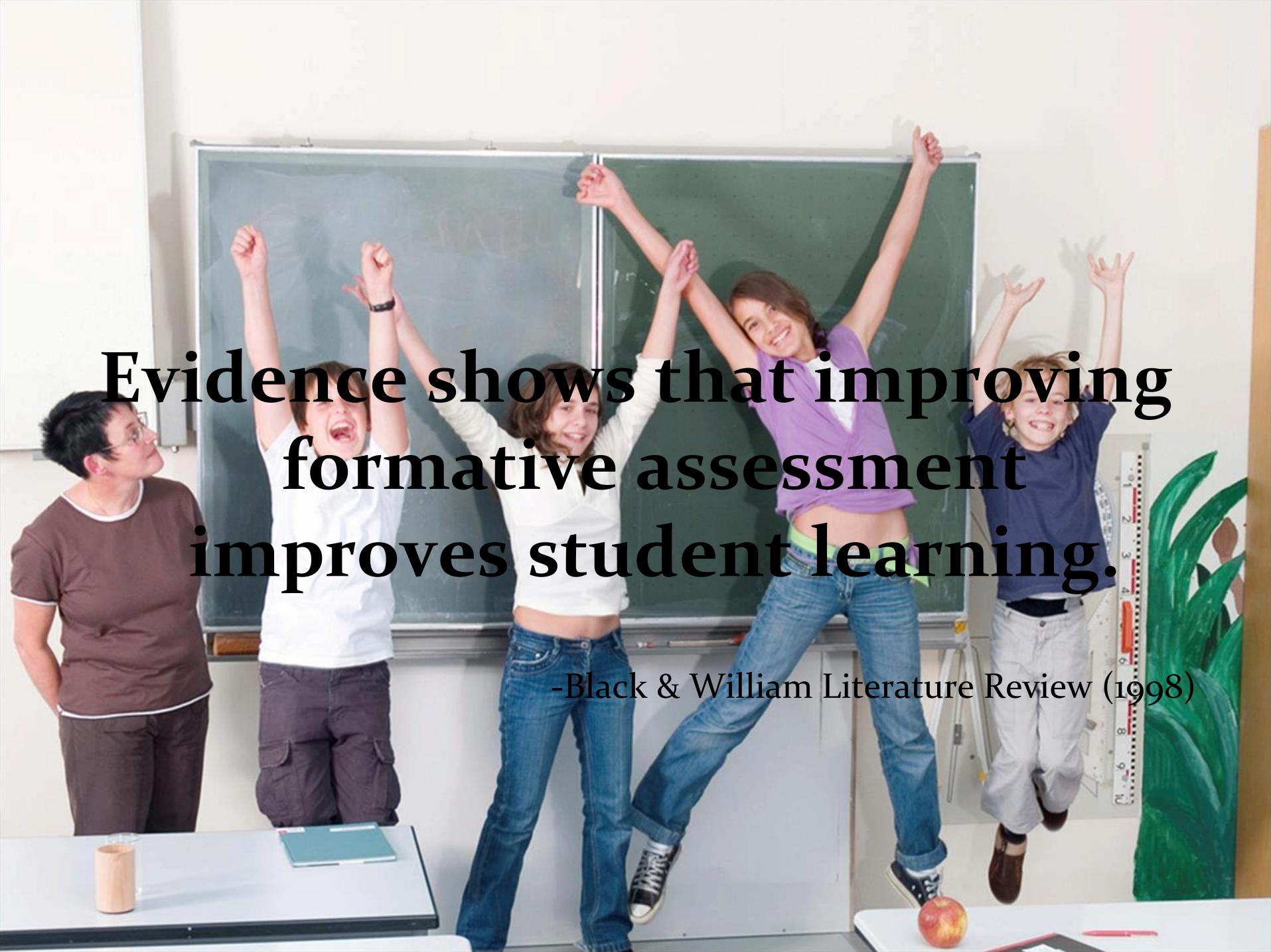
Evidence shows that improving formative assessment improves student learning.

-Black & William Literature Review (1998)

Butler: Assessment Study (1997)

Overview

- 132 students aged 11 from 12 classes in 4 schools
- Selected top 25% and bottom 25% for data analysis

Experiment

- Divided students into 3 groups (within each class): A, B, C
- All students given the same teaching by two teachers
- All students given same aims and criteria, asked to produce the same work for marking

Butler, Ruth. 1997. Task-involving and ego-involving properties of evaluation: Effects of different Psychology feedback conditions on motivational perceptions, interest, and performance. *Journal of Educational, 79(4), 474-482.*

Butler, Ruth. 1988. *British Journal of Educational Psychology*, 58, pp. 1-14.

Butler Findings (1997)

Group	Feedback	Pre-post gain	Attitudes
A	Comments Only		
B	Grades Only		
C	Grades and Comments		

Group	Feedback	Pre-post gain	Attitudes
A	Comments Only	30% gain	
B	Grades Only	No gain	
C	Grades and Comments	No gain	

Group	Feedback	Pre-post gain	Attitudes
A	Comments Only	30% gain	Positive
B	Grades Only	No gain	Top - positive Bottom - negative
C	Grades and Comments	No gain	Top - positive Bottom - negative

Principles for Developing Good Classroom Assessments

Assessments should be:

- Used as a learning tool for teachers and students
- An on-going process that provides feedback to students
- Matched to standards
- Put into context as they relate to standards, benchmarks and indicators
- Equitable and fair

Principles for Developing Good Classroom Assessments

- Teachers should:
  - Use a variety of assessments over time
  - Communicate expectations for performance from the start
  - Define what evidence they will accept that demonstrates proficiency (what students know and are able to do)
  - Differentiate
  - Build in accommodations

Principles for Developing Good Classroom Assessments

- Begin with the end in mind

- First you must decide:

    What do you want the students

    to know and be able to do?

- Then you design a lesson or unit that will get the students to that point

Think about...

- Quality of feedback
- Nature of questioning
- Clear & explicit criteria
- Involving students

What are some ways to involve students?

Chart out

- Writing folders
- Blogs
- Surveymonkey.com
- Student designed rubrics

Classroom Accommodations

Fair does not mean everyone gets the same – it means everyone gets what they need.

Best Practices for Instruction

Module 6

Mathematics

Order of Operations/Word Problems

Making Math Work for ELLs

- Use collaborative learning
- Build background knowledge for new concepts
- Pre-teach vocabulary
- Scaffold content, model
- Integrate reading, writing, listening and speaking!
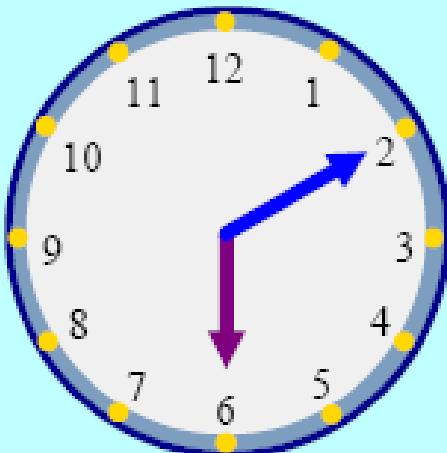
Warm-up:
Yesterday I took a test that started at the time on the left and ended at the time on the right. If there were 80 questions on the test, how much time did I spend on each one?
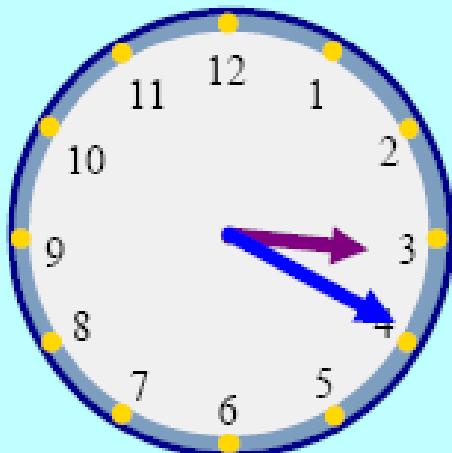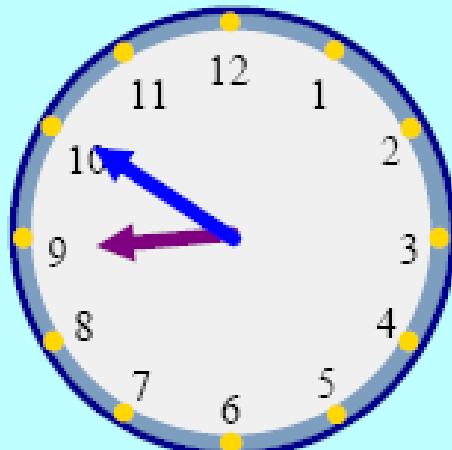
Warm-up:
Yesterday I also went to the gym. I started at the time on the left and finished at the time on the right. I spent one hour lifting weights and 35 minutes on a bike, and the rest swimming. How long did I swim?
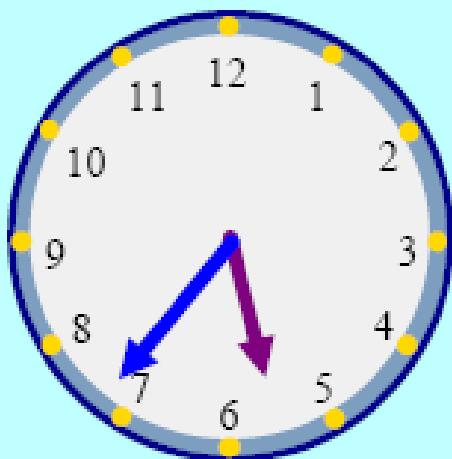
***Teaching vocabulary** is synonymous with **building background** knowledge.*
\- Robert Marzano

The more terms a person knows about a given subject, the easier it is to understand – and learn – new information related to that subject.

(Marzano and Pickering, 2005, 2-3)

For an ELL to be able to use a word, a teacher must give students opportunities to hear/use the word multiple times in authentic situations.
- Kate Kinsella

What Helps?

- Discussing the word with a partner

- Linguistic and non-linguistic representations

- Variety of virtual experiences

- Opportunities to play with language

Word Wall

Supports speaking, writing and memory.

Thematic

Example

More Word Walls

- Intermediate to Advanced ELLs –

    Word - Definition - Diagram

  - Supports speaking, writing and memory
  - Student-created definitions:

    higher order thinking & ownership

  - Permanent, color-coded by concept
  - Refer back to in future lessons

unit ^{2} squared

MATH WORDS
(vocabulary)

Area
The space inside something that is flat / 2-dimensional

Common Denominator
where the numbers on the bottom (denominators) of 2 fractions are the same
(we need common denominators when we have to add or subtract fractions)

Congruent – Congruency
the same, equal (=)

Circumference
the distance around a circle

distance
around
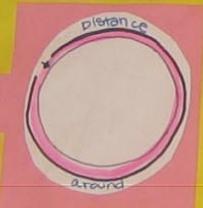
Coordinates
an ordered pair of numbers – first x, second y

(-2, 1)

Perimeter
add all the sides of the polygon

4 cm
4 cm
4 cm
4 cm
4 cm
The red ones are the outside so only add the outside but not the one in green color it isn't the outside.
P = 4+4+4+4 = 16 cm
4+4+4+4 = 16 cm

Quadrants
the 4 parts of the coordinate plane – they are where you draw figures & points

II I
III IV
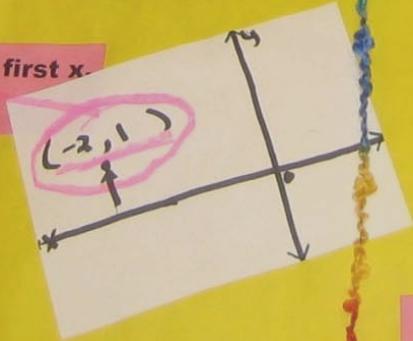
Rotation
turn the figure
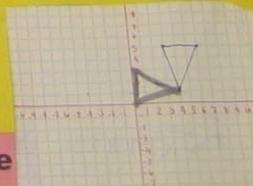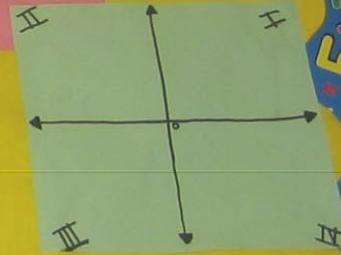
What skills are required for tasks like this?

n=3	x= -2
6n (n-1) + 4	x − (3x + 5)

Order of Operations

P	parentheses ( )
E	exponents 3^4
M	multiply x
D	divide ÷
A	add +
S	subtract -
Remember: Operations occur from left to right.	

Order of Operations

To solve a problem with more than _____ operation is called the _____ of _____ or _____ . First, you solve any equation inside _____. Second, you solve any_____ in the equation. Next, you_____ or _____ from _____ to_____. Finally, you _____ or _____ from _____ to _____. That will give you your correct answer.

Order of Operations

To solve a problem with more than _one_ operation is called the _order_ of _operations_ or _PEMDAS_. First, you solve any equation inside _parenthesis_. Second, you solve any _exponents_ in the equation. Next, you _multiply_ or _divide_ from _left_ to _right_. Finally, you _add_ or _subtract_ from _left_ to _right_. That will give you your correct answer.

To solve the equation
$36 \div 4 \times (5 - 2) + 6^2$,
I use the Order of Operations.

- First,

- Second,

Whatever English learners can do with support from others today, they will be able to do alone tomorrow.

-Aida Walqui r&d alert, pg 24

Solving Word Problems

- Teach students "tricks" to figure out what the problems are asking them to do.
- Pick out key words
- Write summary
- Solve problem

Social Studies/Language Arts

Point of View

Pacing Guide Topic

- World War I

Reading Standard

RC 2	7.6	The student will read and demonstrate comprehension of a variety of informational texts ☐.
		a) *Use* knowledge of text structures to aid comprehension ☐.
		b) *Use* knowledge of words and phrases that signal an author's organizational pattern to aid comprehension ☐.
		c) *Distinguish* fact from opinion in newspapers ☐, magazines ☐, and other print media ☐.
		d) *Identify* the source ☐, viewpoint ☐, and purpose of texts ☐.
		e) *Describe* how word choice ☐ and language structure ☐ convey an author's viewpoint.
		f) *Summarize* what is read ☐.
		g) *Organize* ☐ and *synthesize* information ☐ for use in written ☐ and oral presentations ☐.

Social Studies Standard

US II 7.2.3	**Students will be able to analyze information □ .**
	a.Identify the main idea (thesis) □ and supporting details (evidence) □ .
	b.Distinguish between relevant and irrelevant information □ .
	c.Recognize bias □ and stereotyping □ .

What standards are to be addressed by the lesson?

- Fact and Opinion
- Source, viewpoint and purpose of text
- Word choice and structure convey meaning
- Recognize bias and stereotyping

Build Background Knowledge

- Link:

- What is an advertisement?
  - [Sample 1](#)
  - [Sample 2](#)
  - [Sample 3](#)

Think – Pair - Share

- Think about the question
- Share with a partner

Describe an advertisement that resonated with you.

Have you ever bought anything because of an advertisement?

Has an advertisement ever influenced your thinking?

Vocabulary

- Today we are going to study about Propaganda. _____ is **similar** to *advertisement*. It has a strong **viewpoint** or **bias** that tries to **influence** people. _____ was used in WWI. When do you th[_____]anda might be used?

Active Learning

- Engage students using cooperative learning structures.

- Rather than work independently students can develop listening, speaking, reading, or writing domains

- Scaffold activity for students with lower language proficiency
  - Use sentence frames
  - Provide word banks
  - Allow students to graphically represent responses

Reflection

- Provide differentiated processing activities:
- Write a headline
- Complete a concept web

Assessment

- Using what you know about WWI, design your own propaganda message.

Science

Nature of Matter

Physical Science

Virginia Standard PS.2 (Grade 8)

- **The student will investigate and understand the basic nature of matter.**

- **Key concepts include characteristics of types of matter based on physical and chemical properties; physical properties (shape, density, solubility, odor, melting point, boiling point, color)**

Anticipation Guide

	Agree	Disagree
* Characteristic Properties such as boiling point and density can be used to identify a particular substance.		
* A glass marble is more dense than a plastic bowling ball.		

Science Anticipation Guide

* Characteristic Properties such as boiling point and density can be used to identify a particular substance.	• Yes! • ***Characteristic properties are used to identify specific substances. In addition, many other properties such as magnetism, luster, etc. are used***
* A glass marble is more dense than a plastic bowling ball.	• Yes! • ***The size of the object has NOTHING to do with its density.***

Properties of Matter
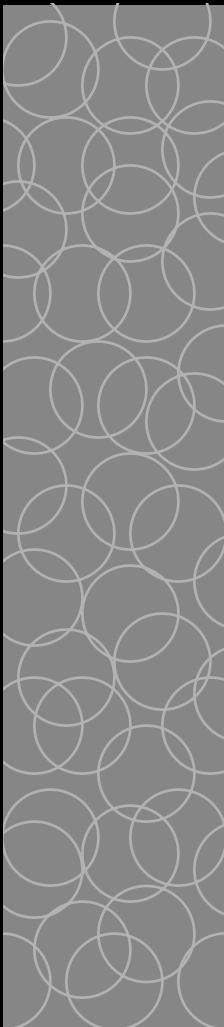
A property is a characteristic.

All elements have properties.

There are two types of properties:
- physical
- chemical

Physical Properties
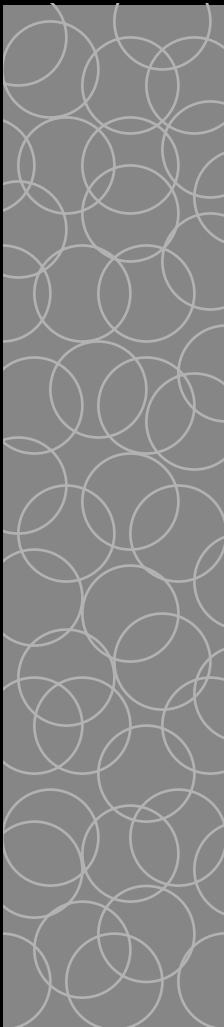
- Physical properties describe a substance.

- Use your five senses to name the physical properties of an object.

- Physical properties include color, shape, texture, mass, and volume.

- What are the physical properties of your lab table?
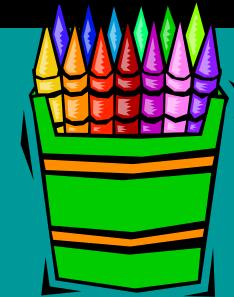
Physical Property Practice

- ◆ With a partner, name each other's physical properties.

- ◆ Examples include
  - – Hair color
  - – Eye color
  - – Height
  - – Skin color
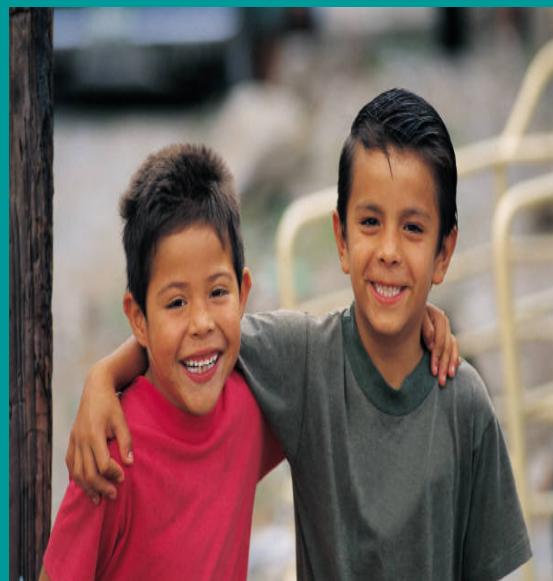
Density can tell you about the physical state of matter.
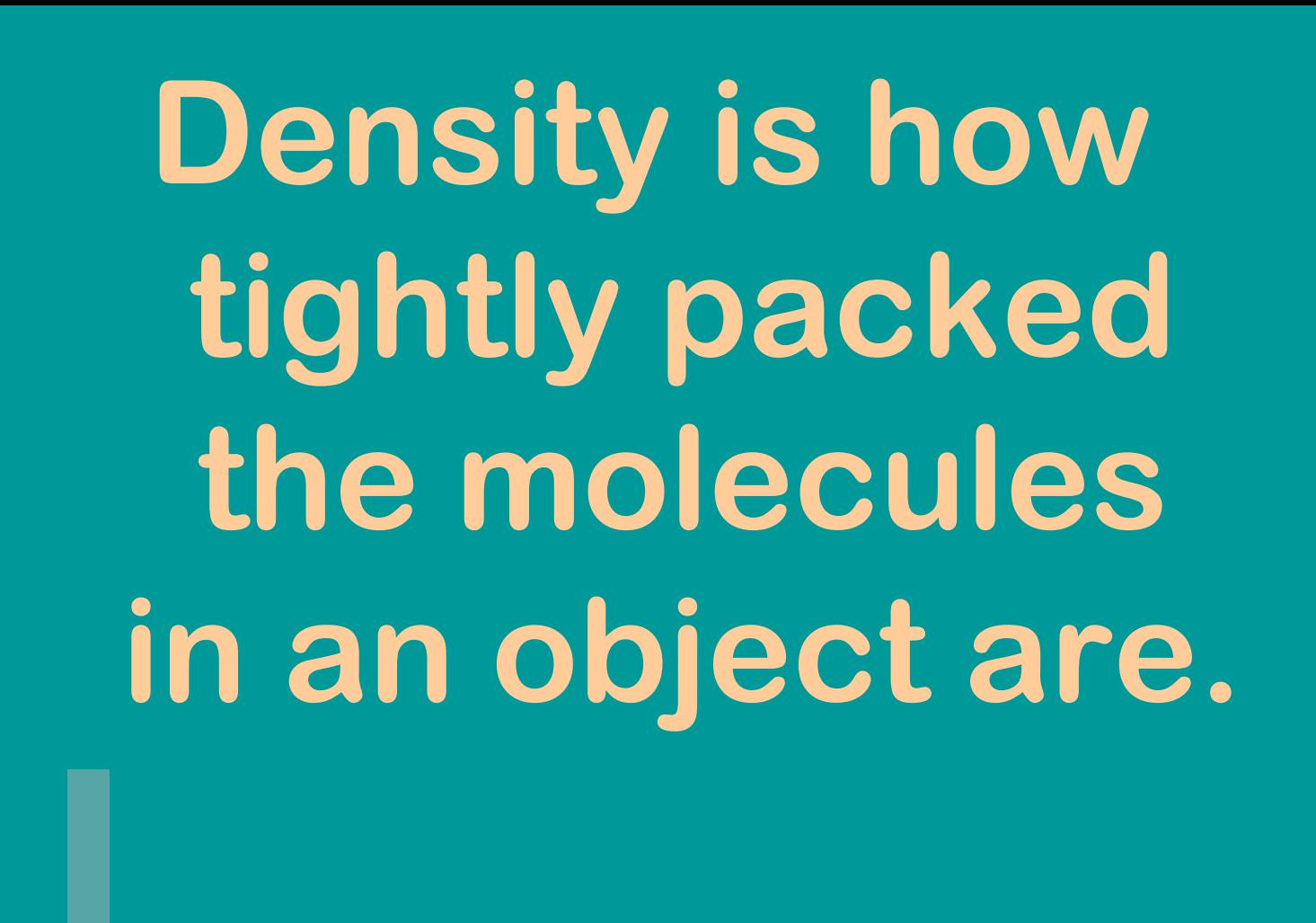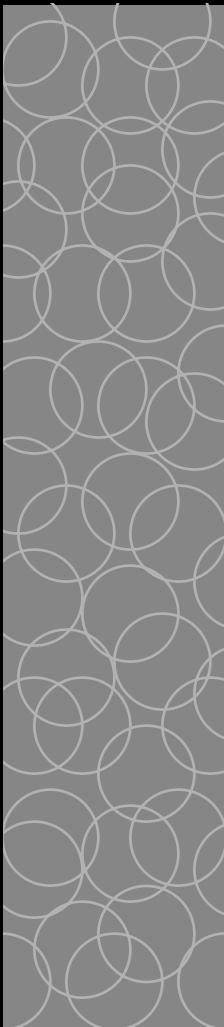
# Density is how tightly packed the molecules in an object are.

Solid's Density
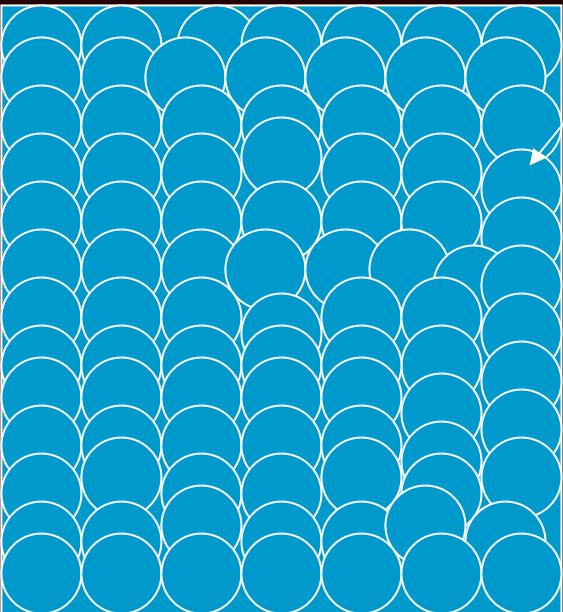
- The molecules are very close together and do not move.

- There is little energy in a solid.

- The temperature of a solid is the lowest.

Density of a Liquid
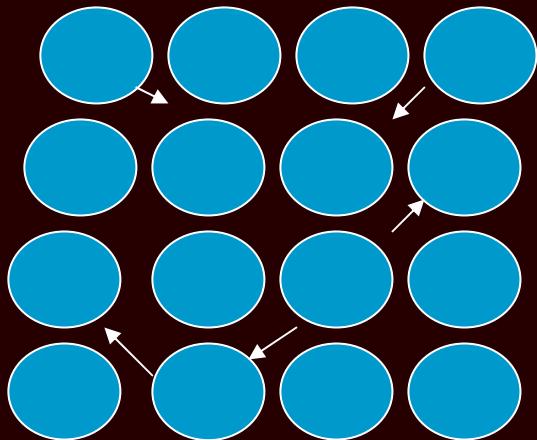
- The molecules of a liquid are close together and move slowly.

- There is little energy in a liquid.

- The temperature is rising.

Density of a Gas
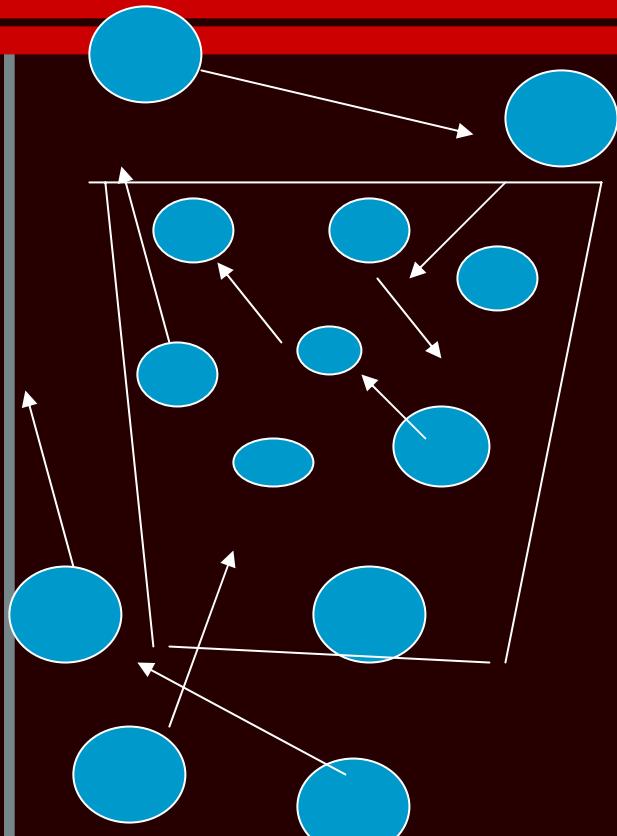
- The molecules of a gas are far apart.

- There is a lot of energy in a gas, so the molecules move very quickly.

- The temperature of a gas is the highest.

Density of Solids, Liquids and Gases
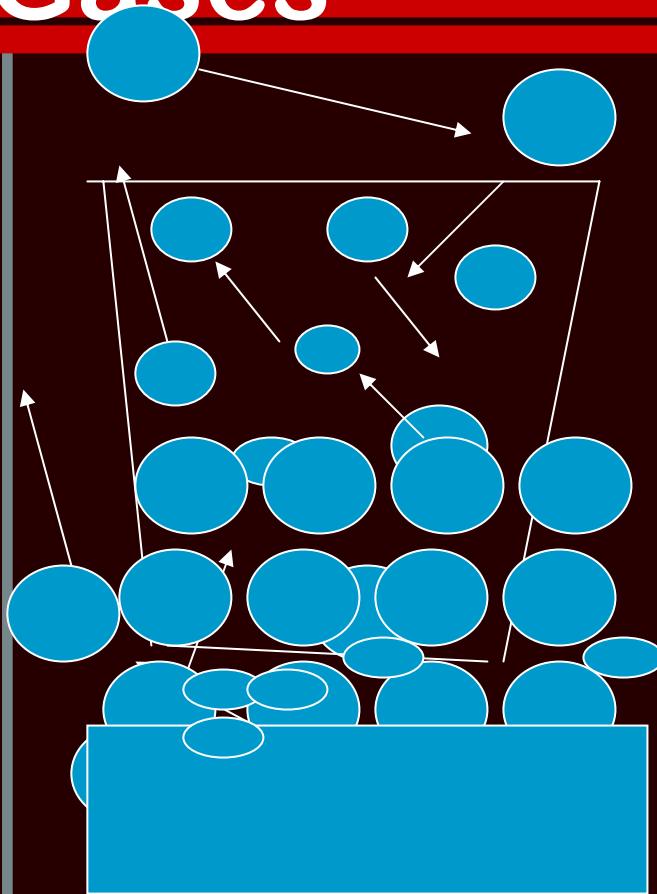
- **Density is only one characteristic property**

- **USUALLY solids are denser than liquids.**

- **Usually gases are less dense than liquids.**

Your Turn

- Read your card.

- Refer to the density chart. Are you a solid or liquid?

- Line up on the human graph: Find your spot on the axis and stand holding the card in front of you.

- Interpret the data. What conclusions can we draw?

DENSITY REVIEW

- You try- density-which is denser? marble or plastic bowling ball? Wood or rock?

Authentic Assessment

- Create a video using <u>Photostory</u> and explaining your understanding of your topic.
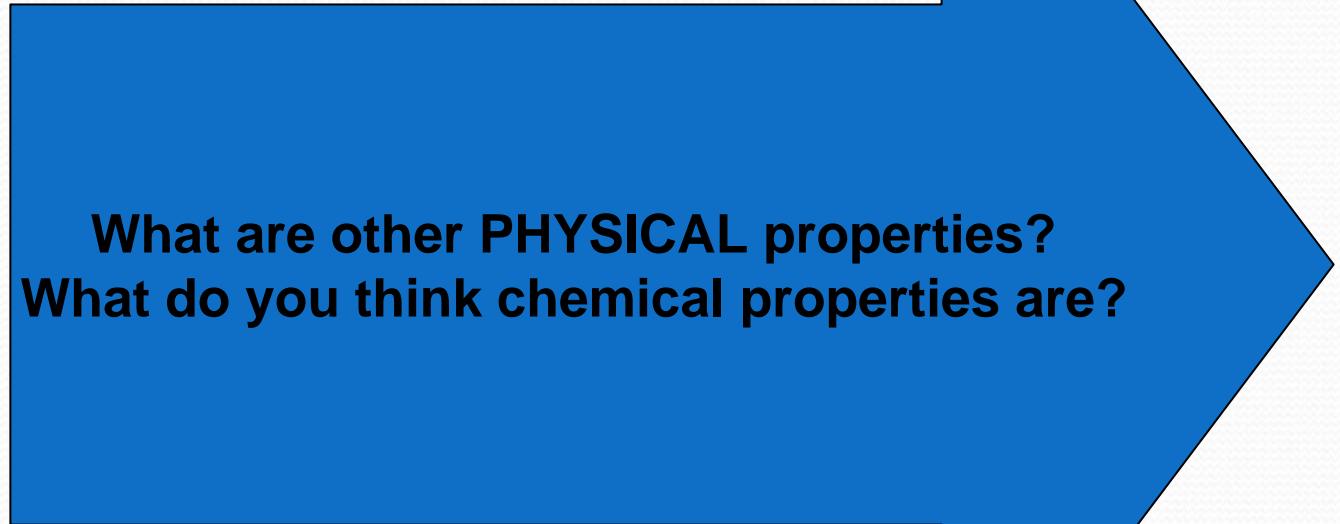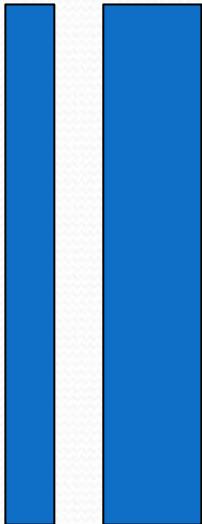
What are other PHYSICAL properties?
What do you think chemical properties are?

Strategies for Differentiation

- Establish a language rich learning environment
- Activate and build on background knowledge
- Repeat Key phrases often to ensure student learning
- Slow down the rate of presentation
- Draw connections between content and real life
- Provide hands on activities
- Establish a daily routine
- Break information into manageable chunks
- Paraphrase information
- Provide wait time
- Control new vocabulary
- Integrate language and content

- Provide word lists
- Use global strategies
- Use of first language dictionaries
- Provide exemplars of student work
- Use gestures
- Use visuals and graphic representations
- Provide cooperative learning opportunities
- Summarize
- Allow students to work at their own pace
- Differentiate assessments
- Reduce Language Load
- Provide opportunities for ESOL students to actively participate in class

"If an educator keeps using the same strategies over and over and the student keeps failing, who really is the slow learner?"