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Annual Conference 2017

COLLECTIVE EFFICACY

Making Learning Visible Across the School

Everyday Actions

Presented by B.R. Jones, PhD

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Handout, p. 1

Learning Intentions:

- Evaluate the importance of clear learning intentions and success criteria.
- Understand how data can be used to promote collective inquiry and efficacy.
- Compare and contrast the importance of a focus on proficiency and progress.

Handout, p. 1

Success Criteria:

- Be able to share the importance of clear learning intentions and success criteria with a colleague and how one might go about creating these for use in the school.
- Develop a deeper understanding of how data can be used across a school and develop the ability to share some key reasons how, when used effectively, data can help drive improvement across the school.
- Be able to discuss with a colleague – and develop a commitment to – promoting the need for both proficiency and progress for all of a school's students.

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Section I

Let's Be Clear

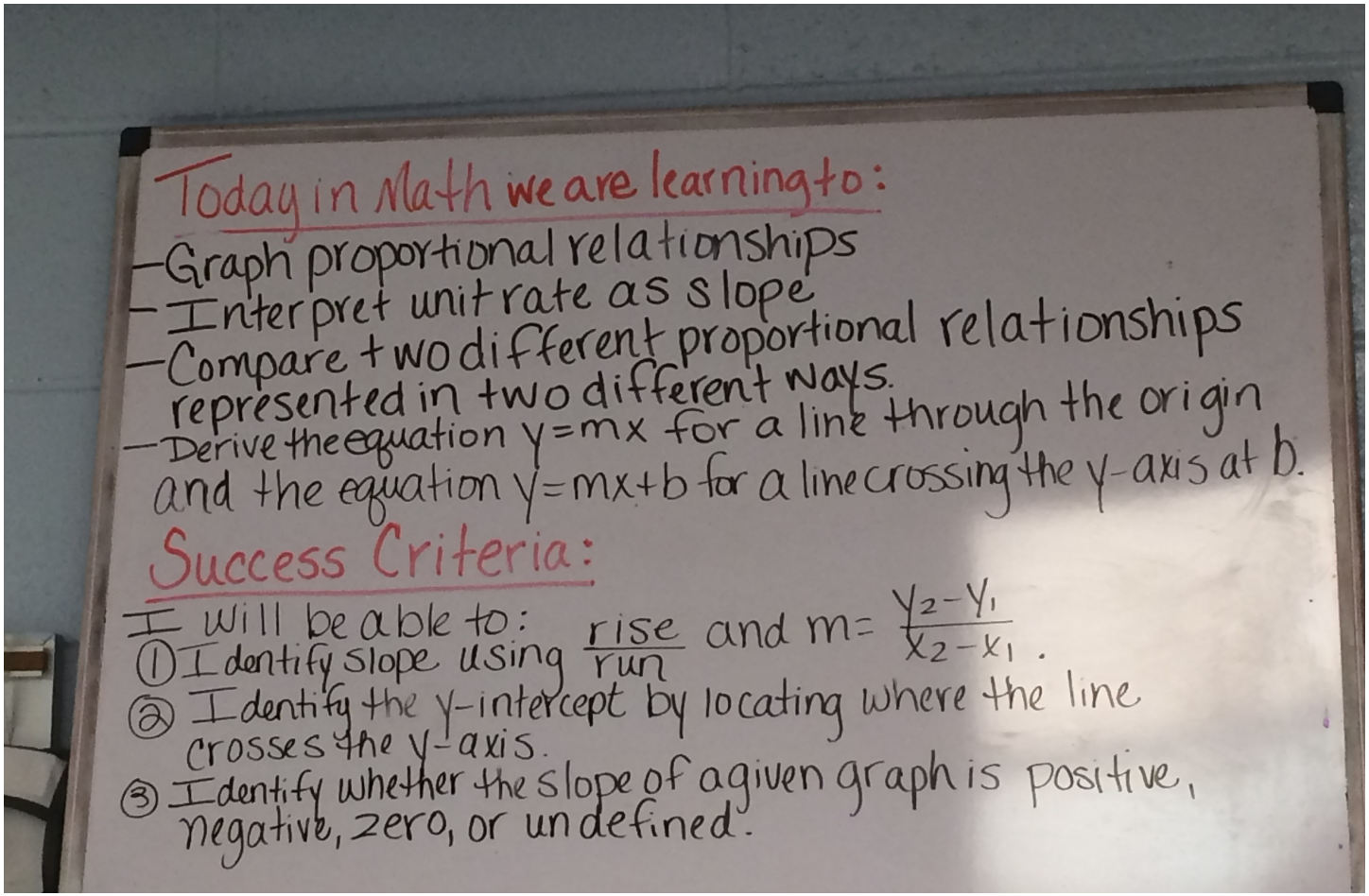
Handout, p. 1

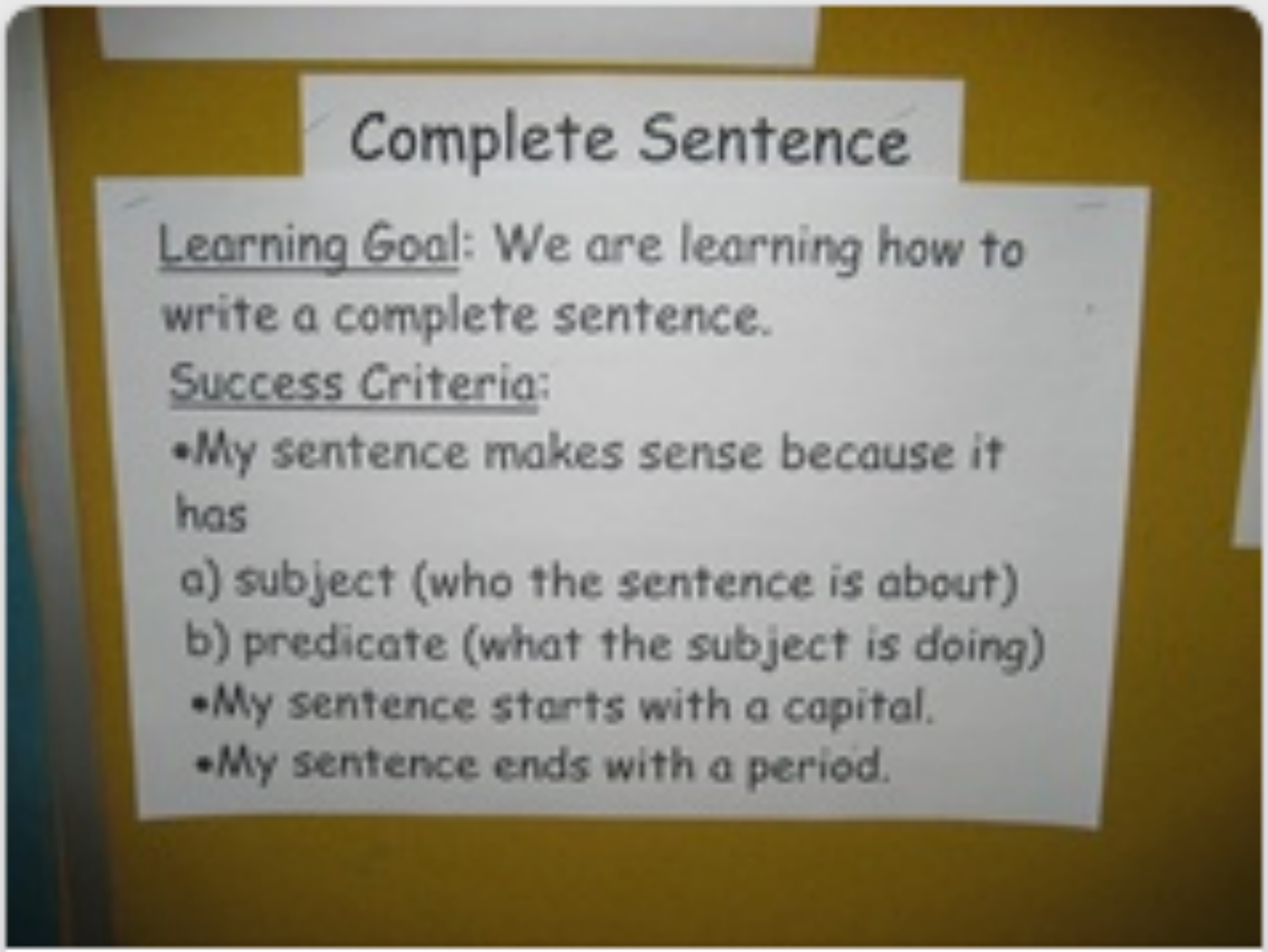
Activity #1

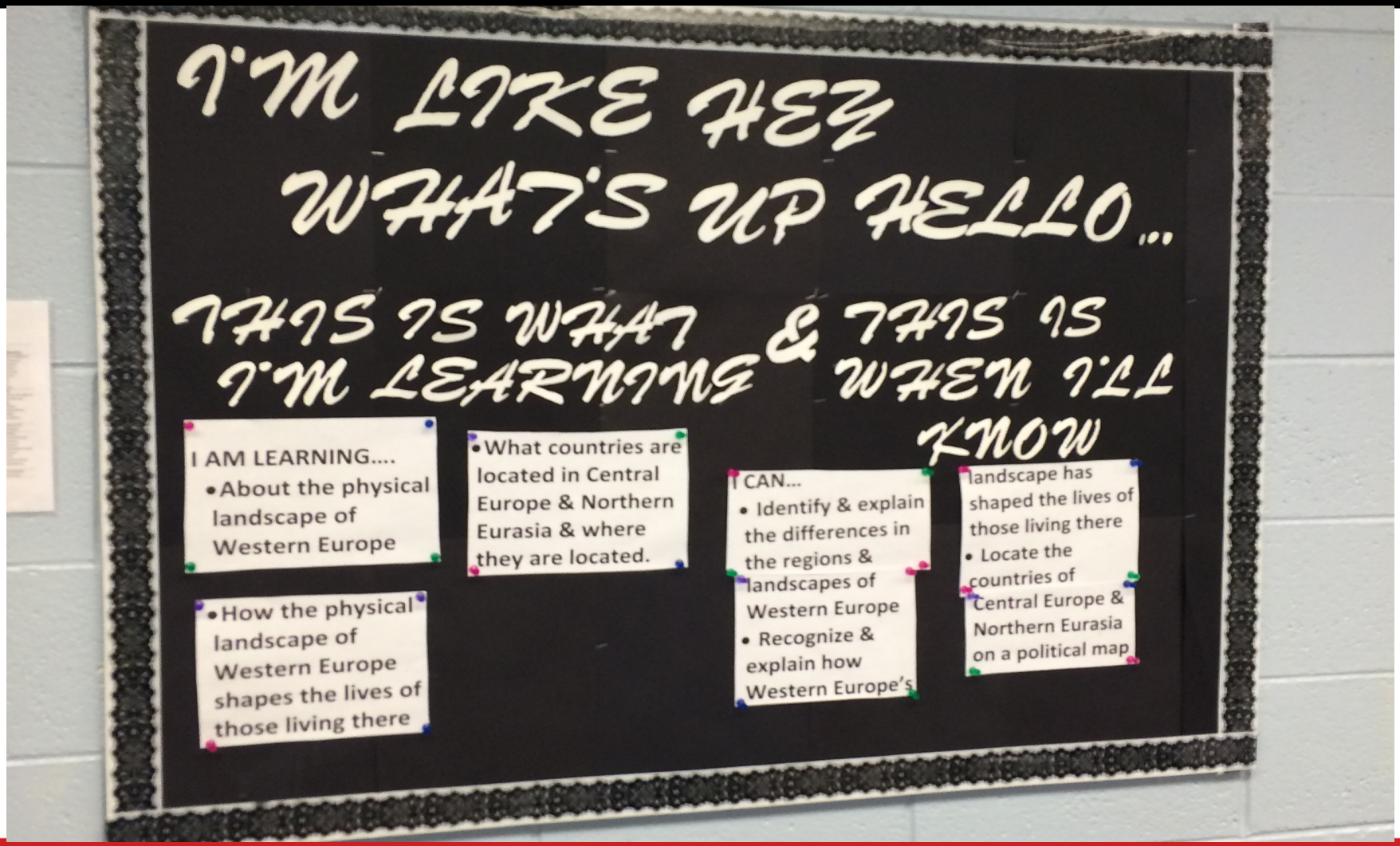
In the space provided on your handout, draw a picture of a mushroom.

Success Criteria:

- Top should be a half circle
- Stem should start out as two parallel lines and then curve outward towards the bottom
- Should have three spots on the top or cap
- Stem should be darker than the cap or top


Today in Math we are learning to:
-Graph proportional relationships
-Interpret unit rate as slope
-Compare two different proportional relationships represented in two different ways.
-Derive the equation y=mx for a line through the origin and the equation y=mx+b for a line crossing the y-axis at b.
Success Criteria:
I will be able to:
① Identify slope using rise/run and m = (y2-y1)/(x2-x1).
② Identify the y-intercept by locating where the line crosses the y-axis.
③ Identify whether the slope of a given graph is positive, negative, zero, or undefined.

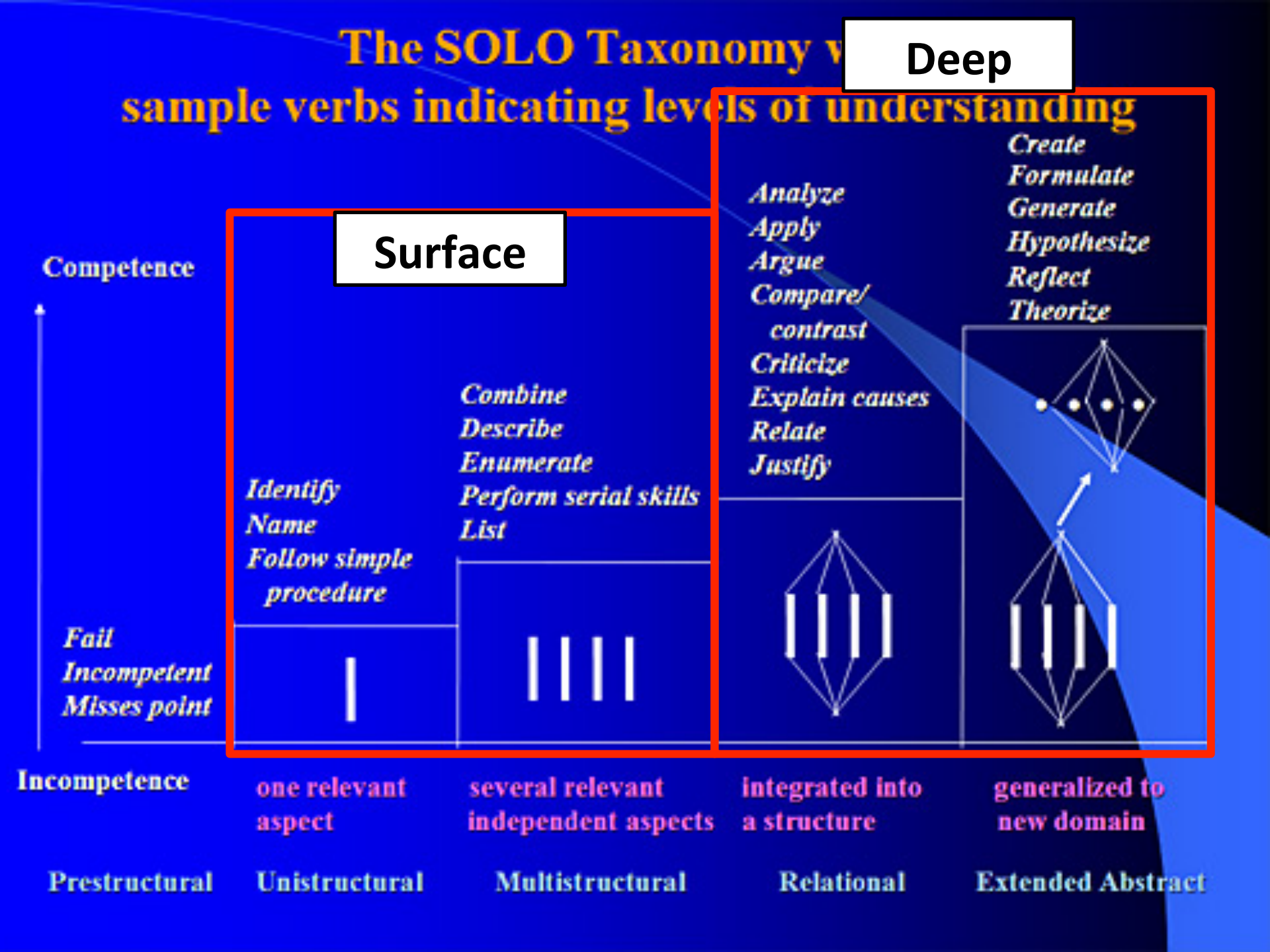

Complete Sentence
Learning Goal: We are learning how to write a complete sentence.
Success Criteria:
•My sentence makes sense because it has
a) subject (who the sentence is about)
b) predicate (what the subject is doing)
•My sentence starts with a capital.
•My sentence ends with a period.


I'M LIKE HEY
WHAT'S UP HELLO...
THIS IS WHAT I'M LEARNING
& THIS IS WHEN I'LL KNOW
I AM LEARNING....
• About the physical landscape of Western Europe
• What countries are located in Central Europe & Northern Eurasia & where they are located.
• How the physical landscape of Western Europe shapes the lives of those living there
I CAN...
• Identify & explain the differences in the regions & landscapes of Western Europe
• Recognize & explain how Western Europe's
landscape has shaped the lives of those living there
• Locate the countries of Central Europe & Northern Eurasia on a political map

Activity #2

Handout, p. 2

- Divide into pairs.
- Using an activity or task you previously used (or observed) in class, determine the Learning Intention(s) that was reinforced by the task.
- Create a "child speak" learning intention(s), then the success criterion, and rework until all agree.
- Then match the learning intentions with the learning resources (are they matched, efficient, etc.).
- Be prepared to share your work.


The SOLO Taxonomy v
sample verbs indicating levels of understanding
Deep
Surface
Competence
Fail
Incompetent
Misses point
Identify
Name
Follow simple procedure
Combine
Describe
Enumerate
Perform serial skills
List
Analyze
Apply
Argue
Compare/ contrast
Criticize
Explain causes
Relate
Justify
Create
Formulate
Generate
Hypothesize
Reflect
Theorize
Incompetence
one relevant aspect
several relevant independent aspects
integrated into a structure
generalized to new domain
Prestructural
Unistructural
Multistructural
Relational
Extended Abstract

Activity #3

Handout, p. 3

- Looking back to the work you did in activity #2.
- Is there balance in the possible learning intentions that are being addressed.
- Using the SOLO Taxonomy, make adjustments so that both surface and deep learning intentions are represented.
- Be prepared to share/discuss your work.

Handout, p. 4

Activity #4 – Partner Ponder

With a partner, ponder the questions on page 4.

Handout, p. 5

Formative Walkthrough

Teacher: Class: Date:

Physical Space	Effective	Emerging	Un-satisfactory
• Classroom is clutter free and **organized** for learning			
Classroom Structures			
• **Learning Intention(s)** and **Success Criteria** are visible for the current lesson			
• **Tasks** are directly **aligned** to stated Learning Intention(s)			
• Tasks **balance surface** and **deep** learning			
• Students can answer the question, **"What are you learning today?"** with language that expresses understanding of the day's Learning Intention(s)			
• Students can answer the question, **"How is your learning going?"** in relation to the **Success Criteria**			
• **Worked examples**, scoring guides, rubrics, and/or anchor charts exemplifying the Success Criteria are on display			
• Current student-created work is displayed with evidence of **feedback**			

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Handout, p. 6

Reflection

Making Learning Visible

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Section II

Why PLC?

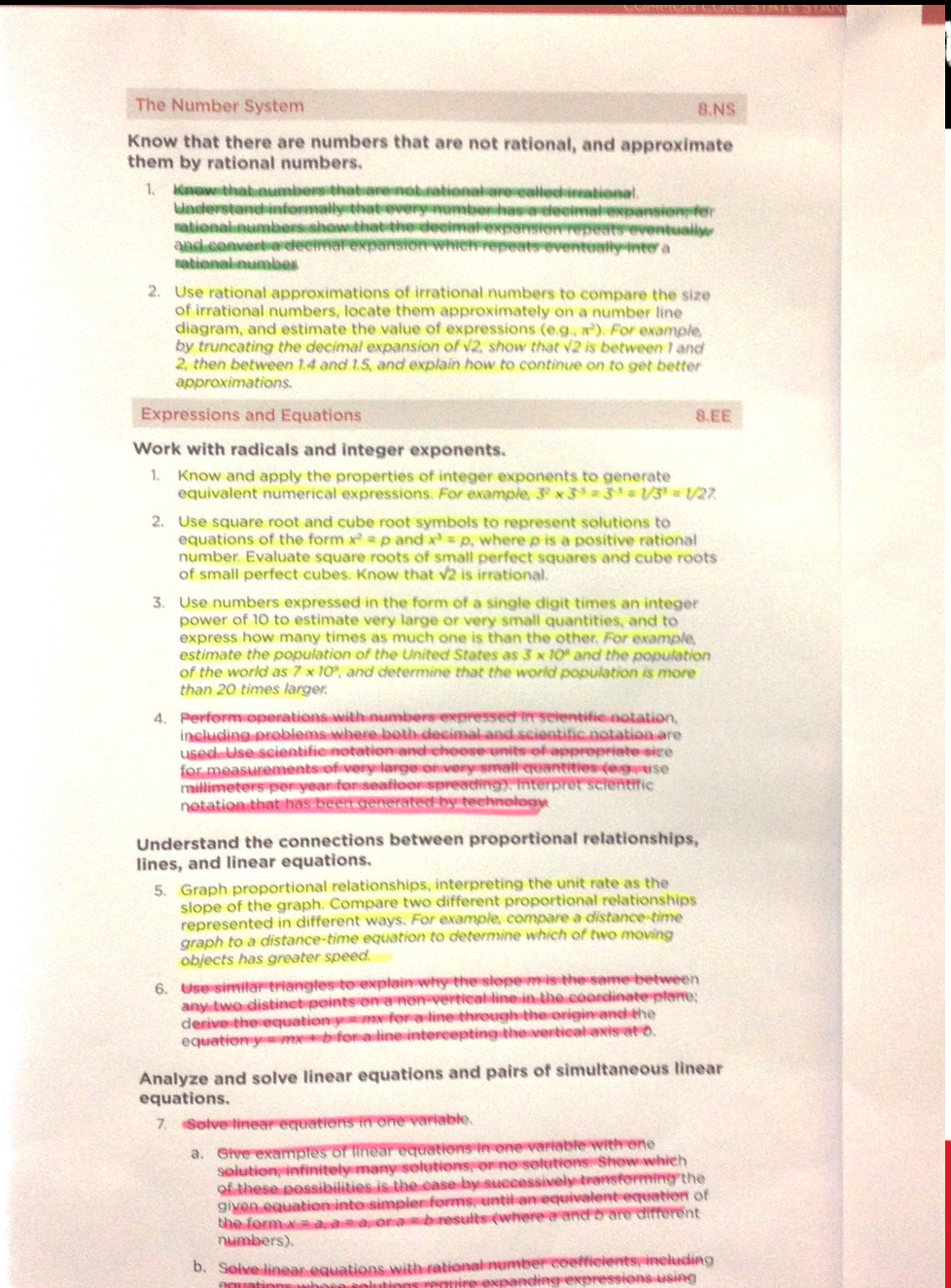
Handout, p. 7

Know thy Impact

"…using the preponderance of the evidence to make professional judgments and to see, as far as possible, beyond reasonable doubt that all in a school have sufficiently high impact on all students"

John Hattie, Visible Learning for Teachers (2012), p. 169

1. Categc



The Number System 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.

1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*

Expressions and Equations 8.EE

Work with radicals and integer exponents.

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.*
2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.*
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

Understand the connections between proportional relationships, lines, and linear equations.

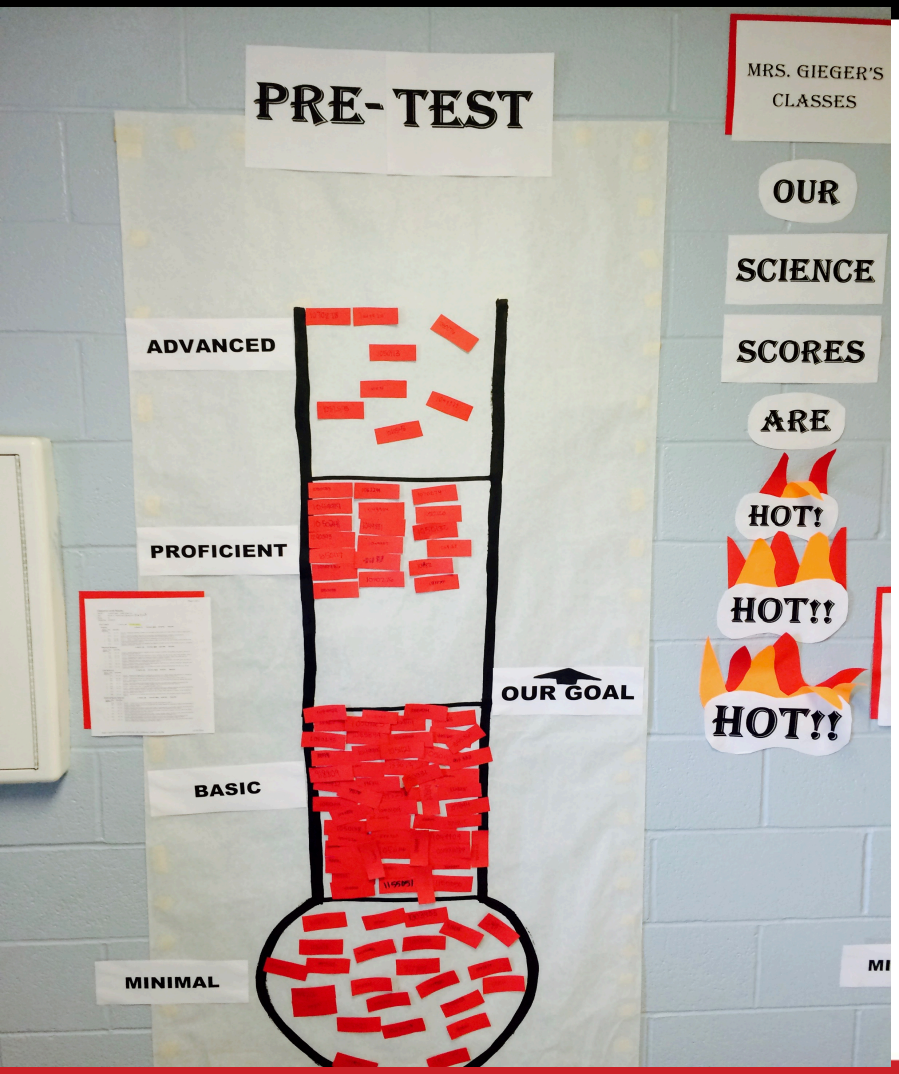
5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*
6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.

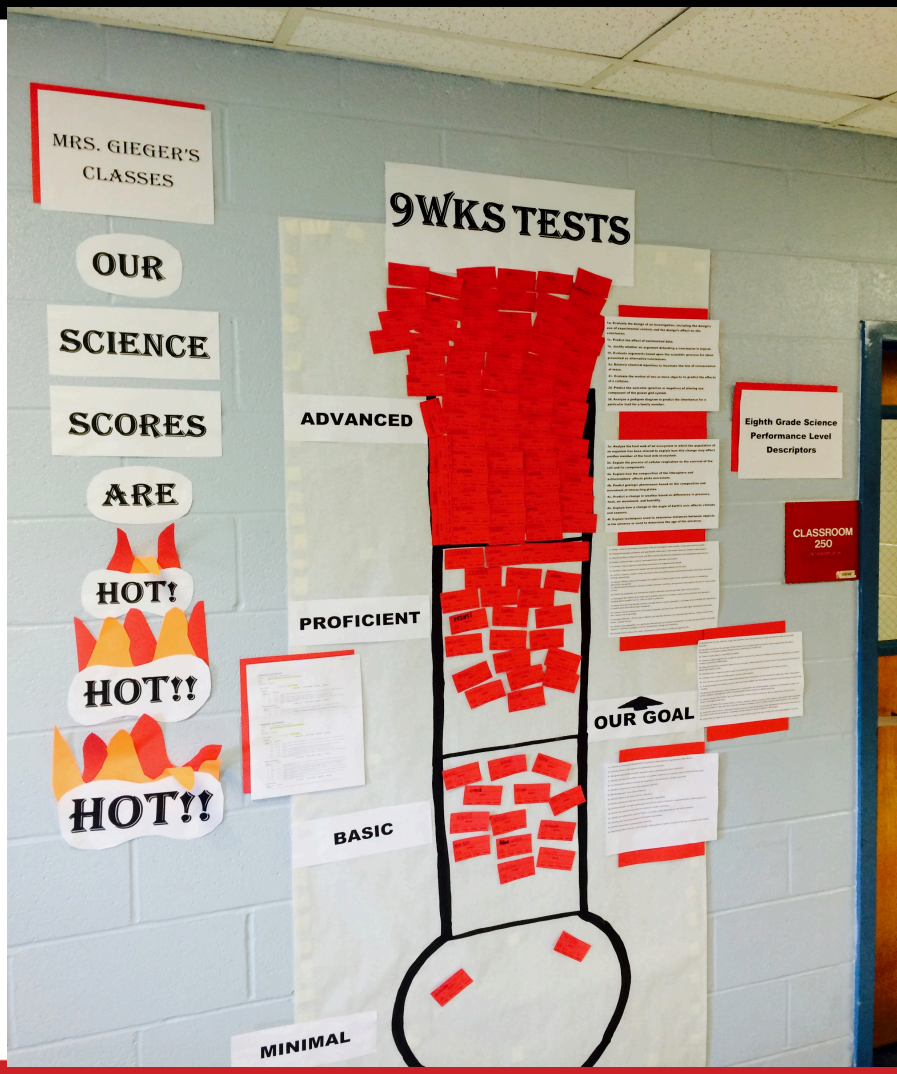
Analyze and solve linear equations and pairs of simultaneous linear equations.

7. Solve linear equations in one variable.
   a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
   b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using

"Formative Assessment – is a planned process in which assessment-elicited evidence of students' status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning tactics."

Jim Popham, 2008, p. 6

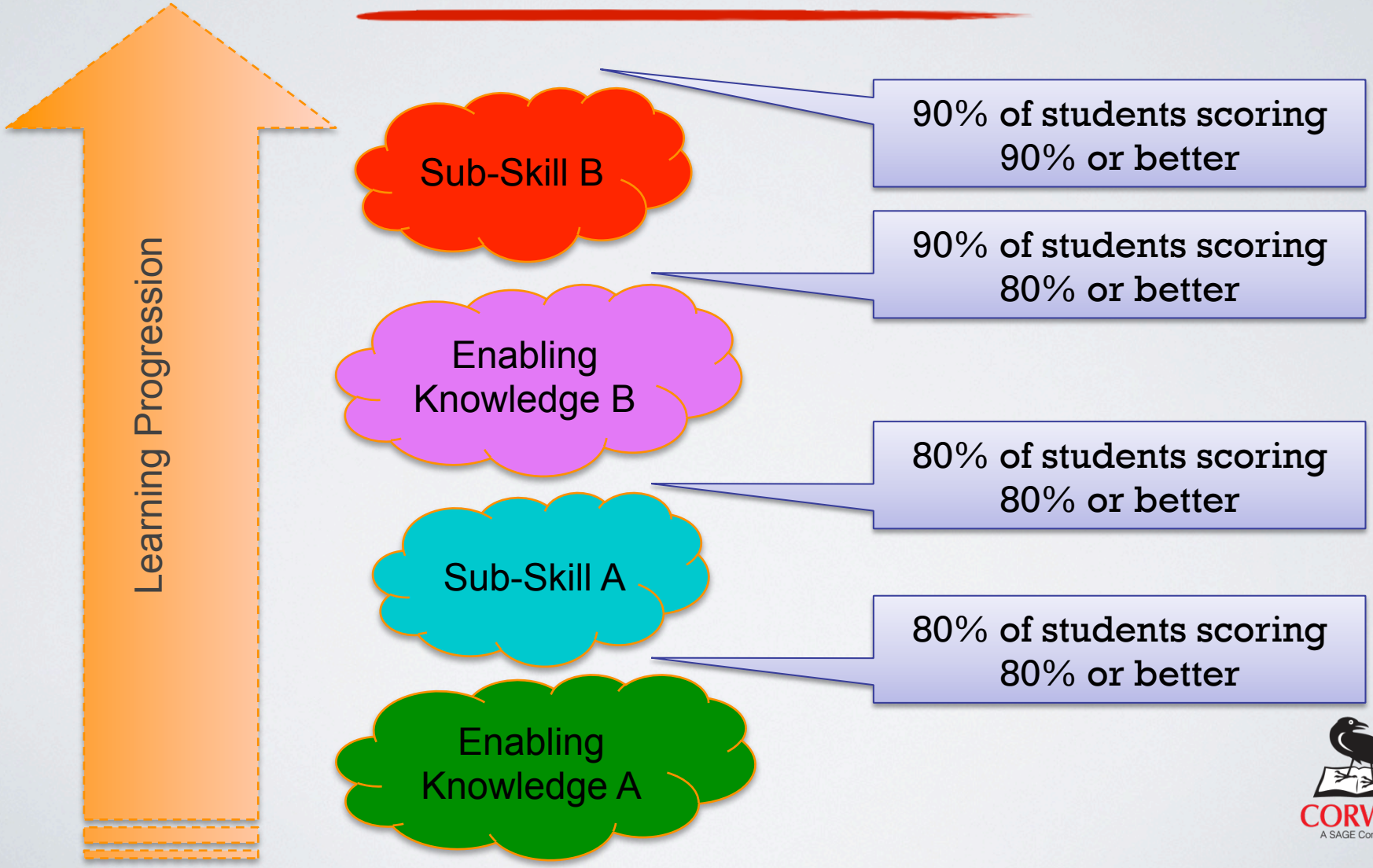

PRE- TEST
MRS. GIEGER'S CLASSES
OUR SCIENCE SCORES ARE
HOT!
HOT!!
HOT!!
ADVANCED
PROFICIENT
BASIC
MINIMAL
OUR GOAL


MRS. GIEGER'S CLASSES
OUR SCIENCE SCORES ARE
HOT!
HOT!!
HOT!!
9WKS TESTS
ADVANCED
PROFICIENT
BASIC
MINIMAL
OUR GOAL
Eighth Grade Science Performance Level Descriptors
CLASSROOM 250

Adjustment Triggers

- Formative assessment points marked by the building blocks of the learning progression
- Decisions will be either “increase” or “decrease” decisions

Targeted Curriculum Aim/Standard



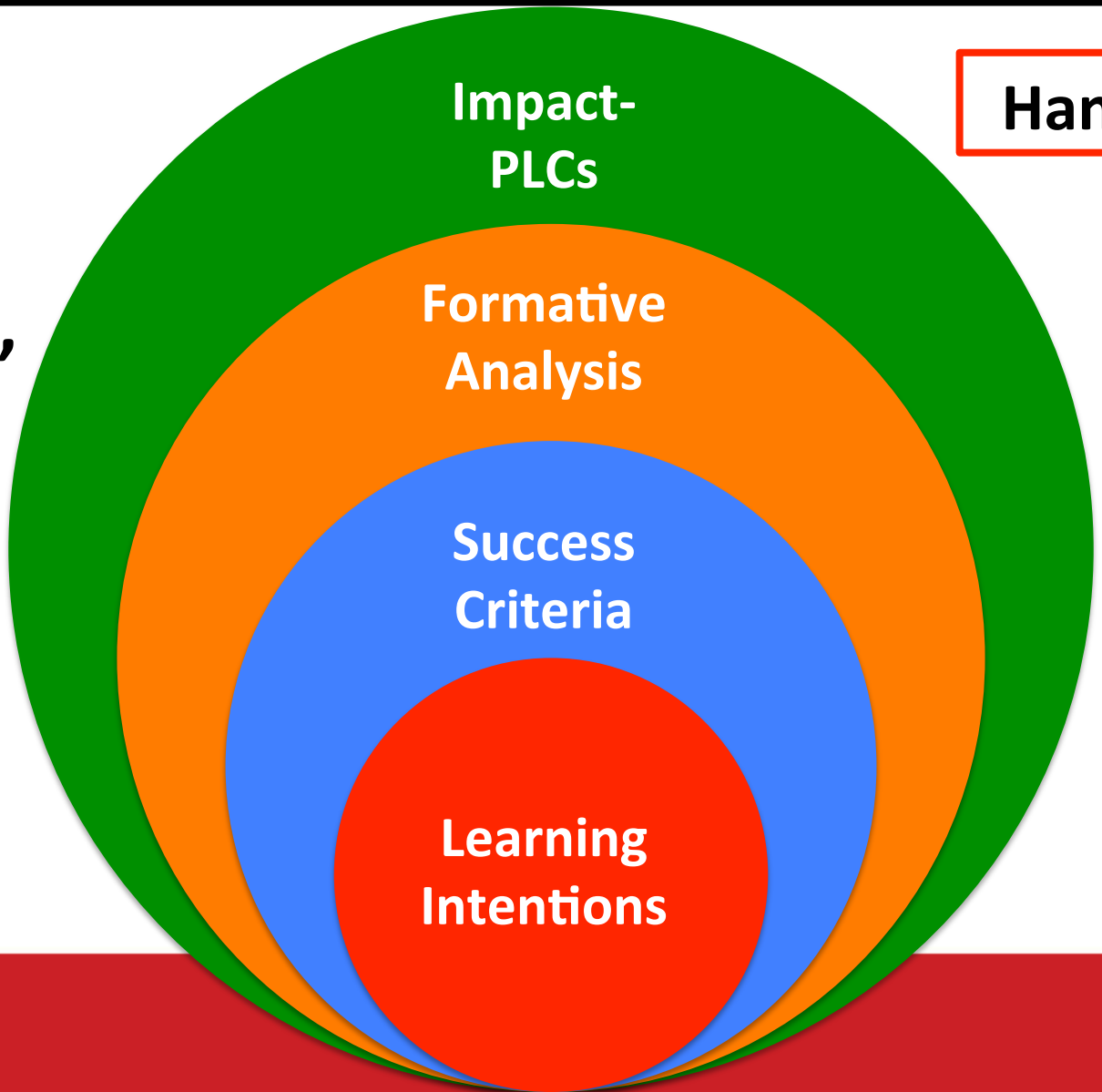
Decrease Decision

- 90% of students scored 90% or above on my check for understanding – instead of spending the rest of the day on lesson #1 – I will move on to lesson #2.
- Teacher makes a decision to “decrease” instruction on lesson #1

Increase Decision

- 40% of students scored 90% or above on my check for understanding – instead of moving on to lesson #2 – I will spend the rest of the day on lesson #1 using strategy B.
- Teacher makes a decision to “increase” instruction on lesson #1

The Focus Model, 2014



Handout, p. 8

I-PLCs

Goal: SMARTER and more informed decisions to power learning

Handout, p. 9

Activity #5 – Think, Pair, Share

With a partner, ponder the questions on page 9.

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Handout, p. 10

Reflection

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Section III

Progress and Achievement

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Handout, p. 11

Activity #6 – Decisive Definitions

*How would you define **Achievement?***

*How would you define **Progress?***

Achievement – something that has been done or achieved through effort: a result of hard work.

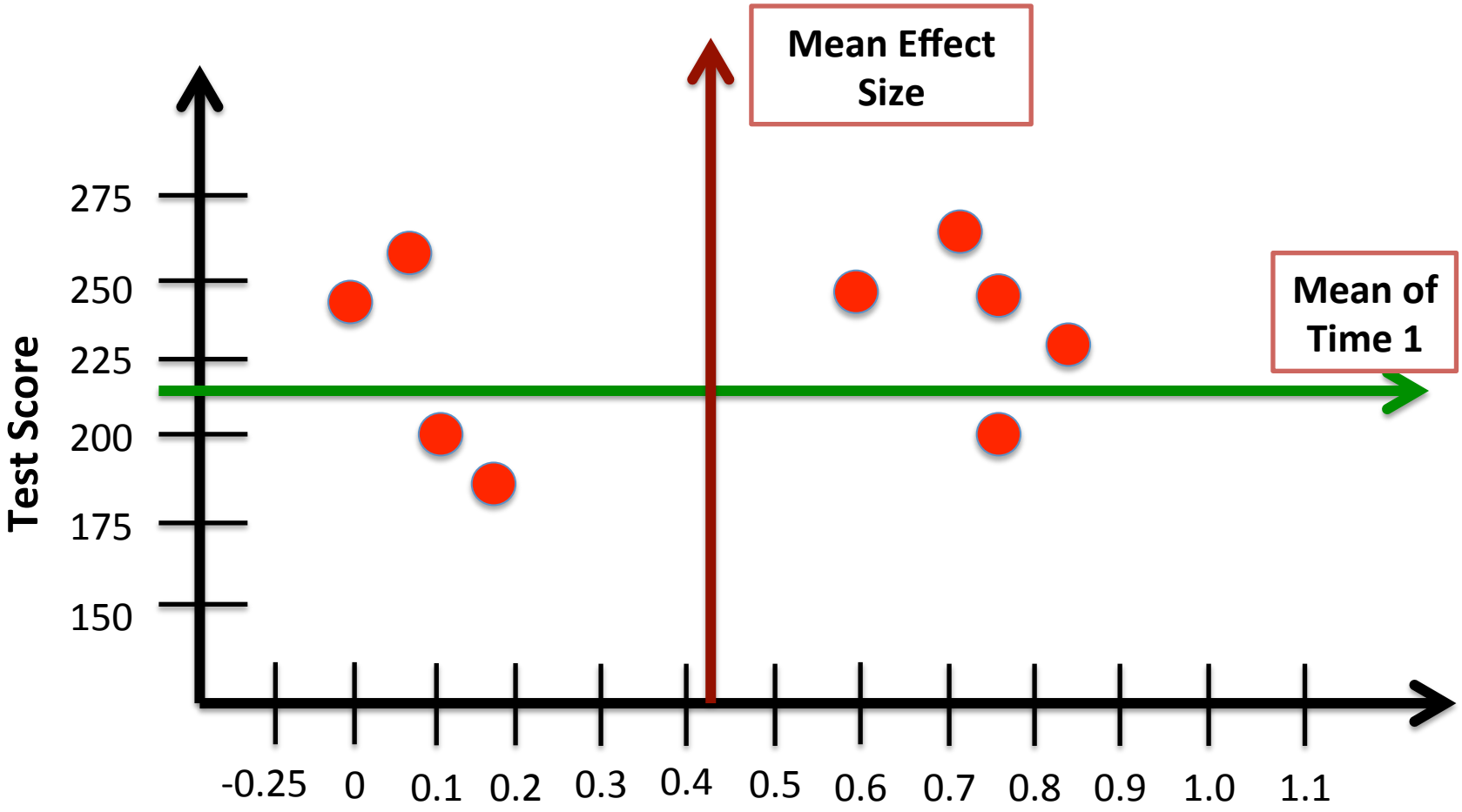
Merriam-Webster, Online

Progress – movement forward toward a place. The process of improving or developing something over a period of time.

Merriam-Webster, Online

4 Key Areas of Focus

- Promoting Student Engagement in Learning
- Inspired and Passionate Teaching
- Knowing the Impact of the Organization
- Effective Feedback


Mean Effect Size
Mean of Time 1
Test Score
275
250
225
200
175
150
-0.25
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
Effect Size

Examples of Knowing Impact

Score 3rd Grade	Score 4th Grade	Effect Size
169	165	-0.36
171	164	-0.64
158	166	+0.77
142	152	+0.91

Examples of Knowing Impact

Score 7th Grade	Score 8th Grade	Effect Size
135	148	+1.14
114	130	+1.41
139	150	+0.97
149	155	+0.70

Systematic Change

- Implement a systematic model for school reform
- Create Systems to support systematic school reform in the four key areas
- Understand it takes 3-5 years.

Handout, p. 11

Activity #7 – Tantalizing Tasks to Take Progress More Seriously

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Handout, p. 17

Reflection

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