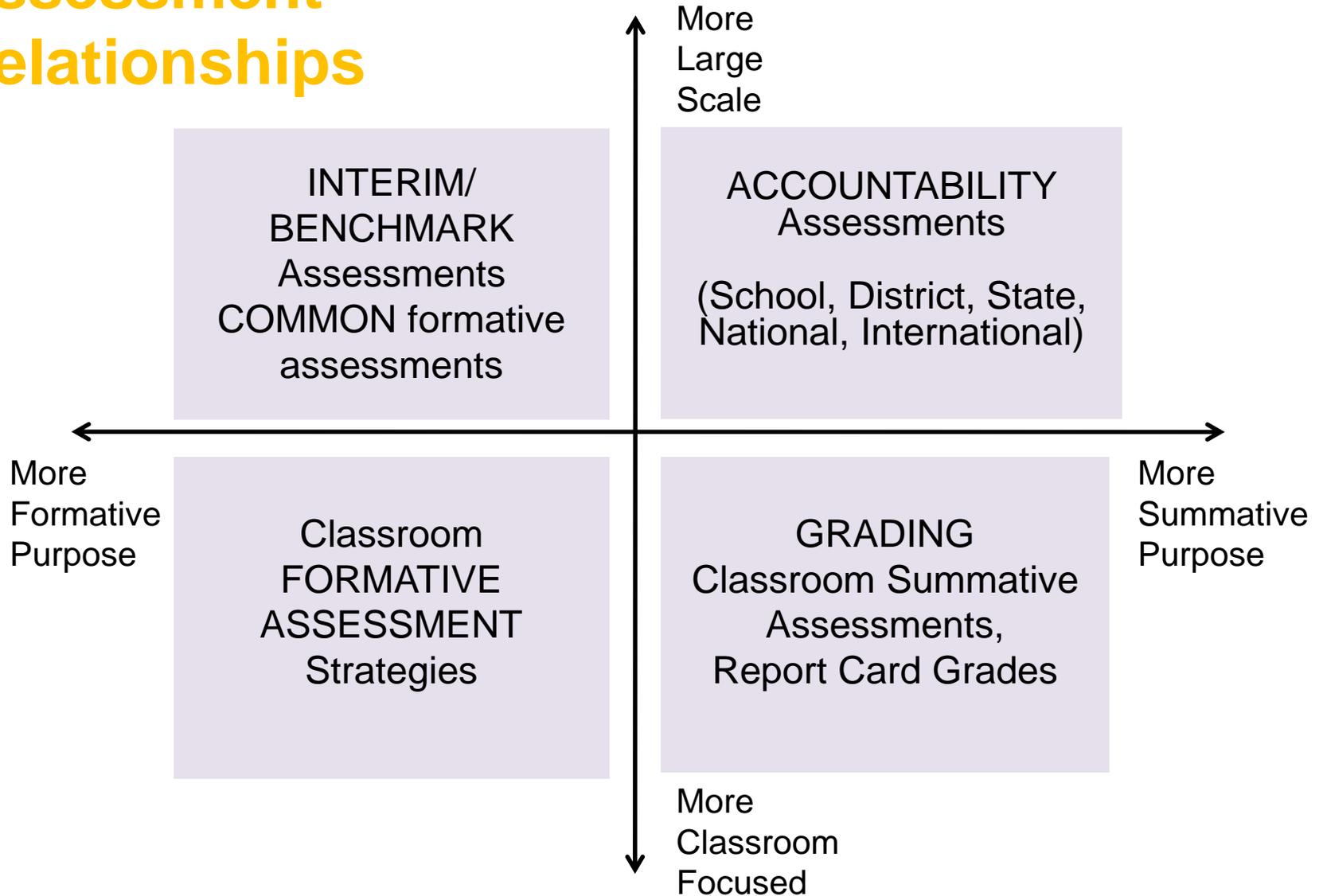


# **Formative Assessment**

**Sue Brookhart**  
**August 27, 2014**

# OVERVIEW

# Assessment Relationships



# Formative Assessment

Formative assessment is an **active and intentional learning process** that partners the **teacher and the students** to **continuously and systematically gather evidence of learning** with the express goal of improving student achievement.

*Moss & Brookhart, 2009, p. 6*

# Formative Assessment

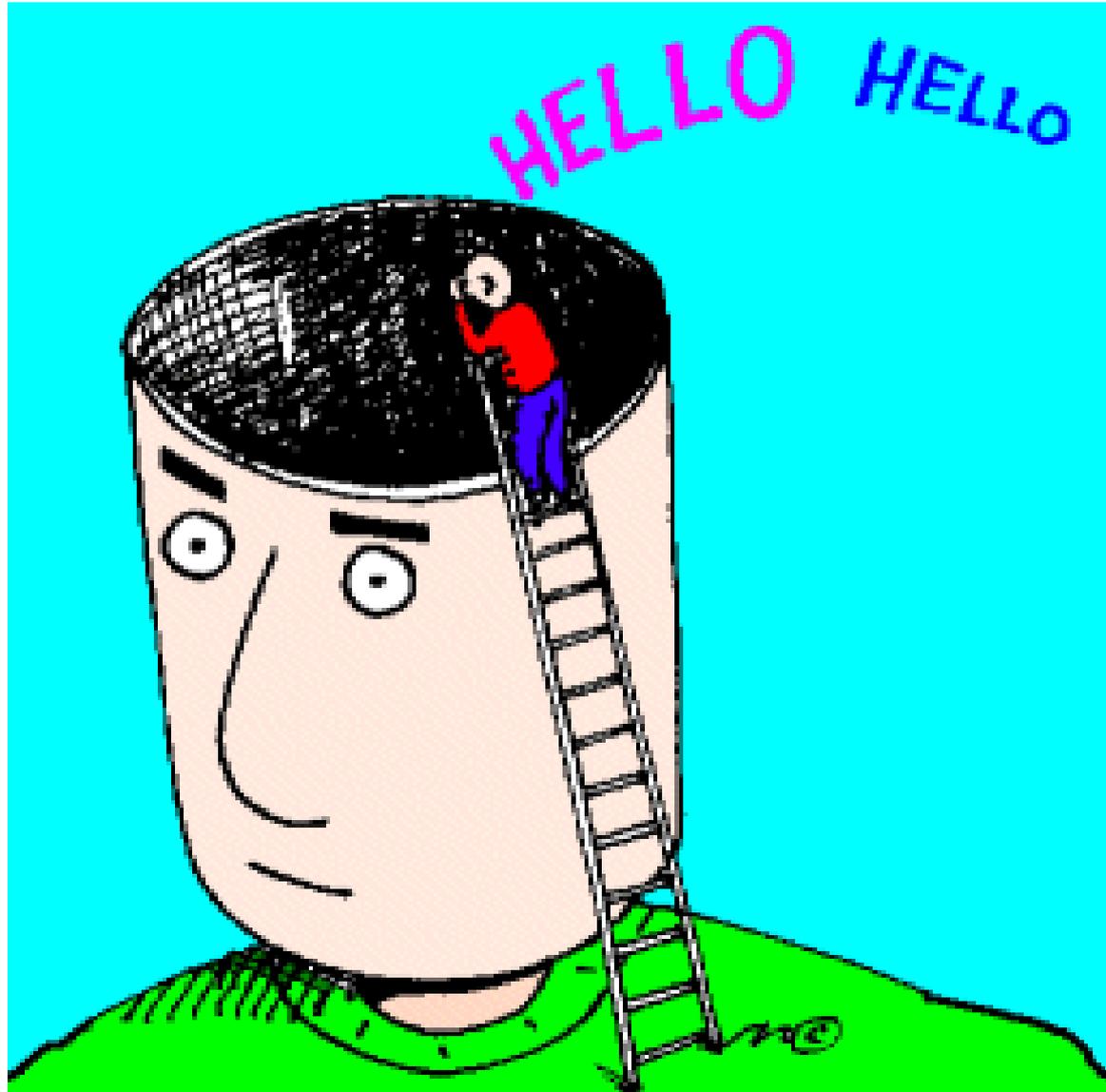
## Sadler's paradigm

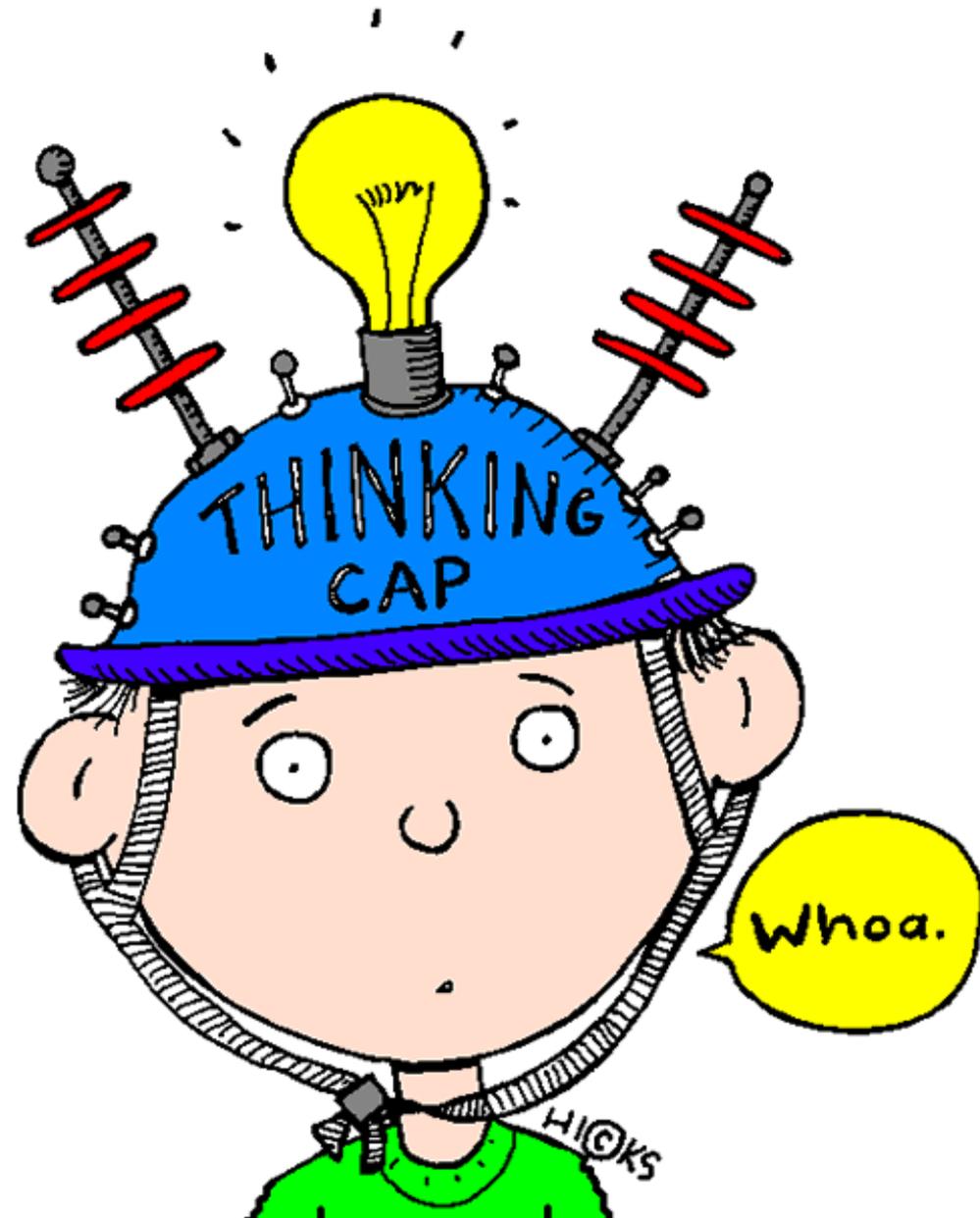
- Appraise work against criteria
- Decide where improvement is needed
- Take action to improve

## Sometimes written

- Where am I going?
- How close am I now?
- What do I need to do to improve?







# Teachers who are

## Expert in Formative Assessment

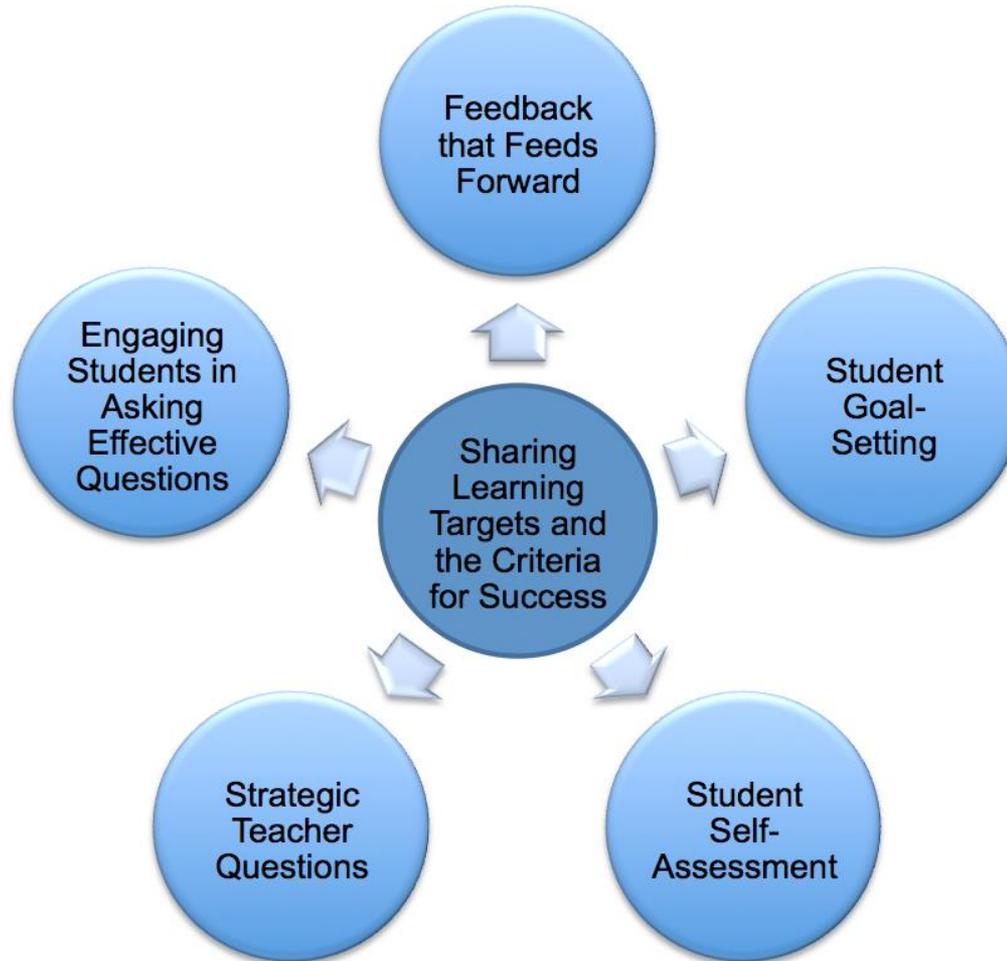
- Collect evidence of student thinking (quality of thinking)
- Interpret student responses in terms of what students were thinking
- Consider what feedback or immediate next step in instruction will address the specific needs

## Not expert in Formative Assessment

- Collect evidence of student performance (quantity of thinking)
- Evaluate the correctness of responses
- Re-teach topics based on percent correct

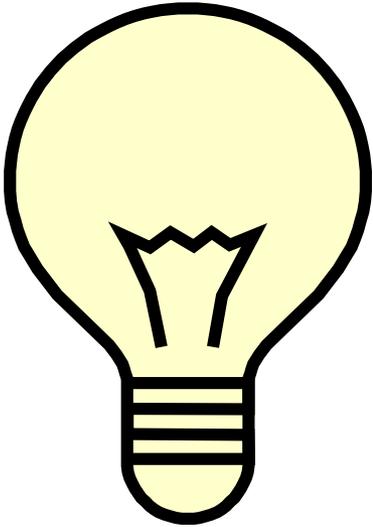
[Minstrell, Anderson, & Li (2009); Hattie (2009); Hattie & Timperley (2007); Kroog, Ruiz-Primo, & Sands (2014)]

# Six Strategies



# LEARNING TARGETS

# Learning Targets & Criteria

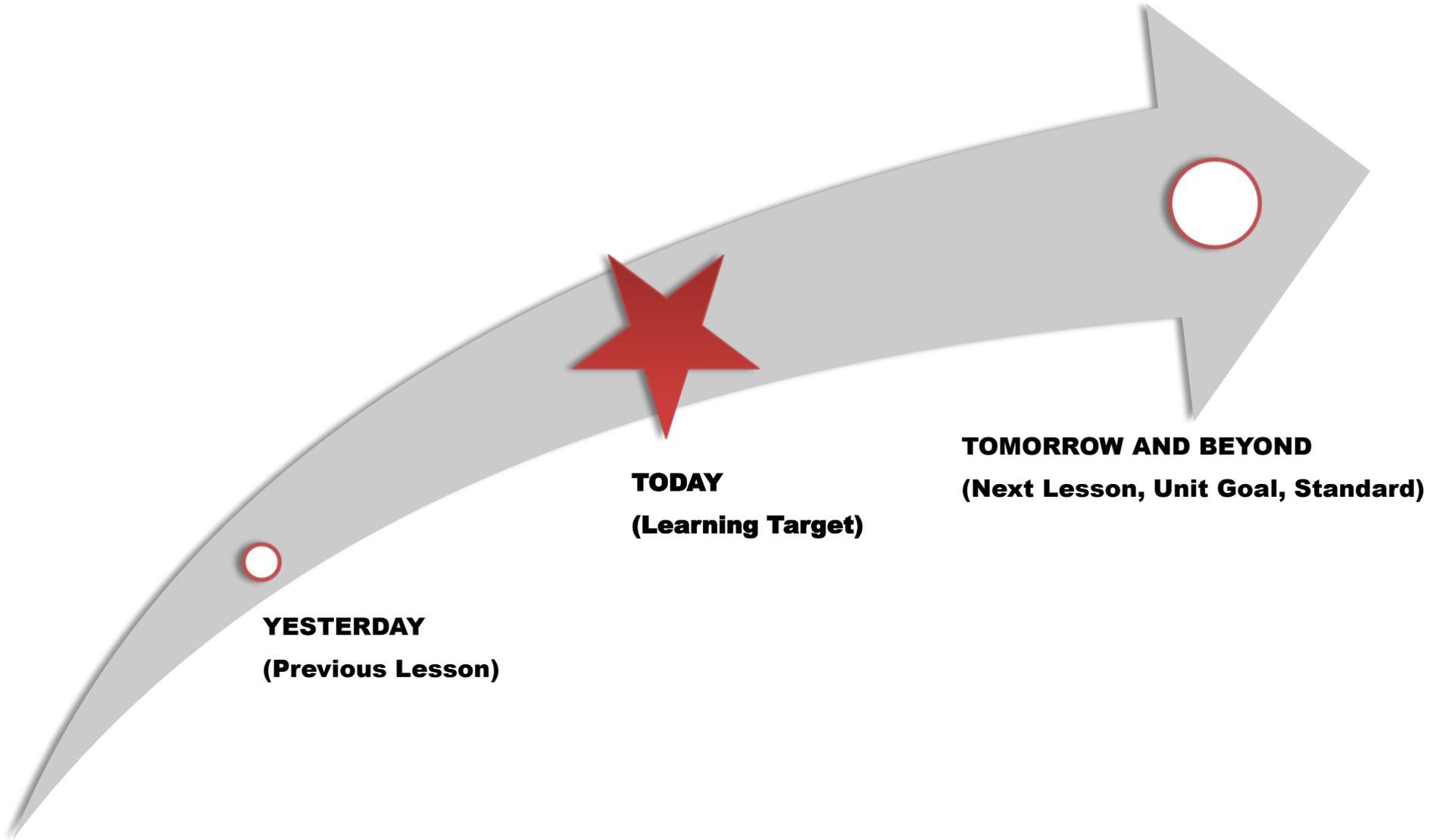


The first thing students need to learn is what they are supposed to be learning.



I can explain six formative assessment strategies.

# Potential Learning Trajectory



# A Learning Target

- Describes exactly what the student will learn in today's lesson
- In developmentally appropriate language students can understand
- From the point of view of a student who has yet to master the content, skill or process that makes up the learning target.

# A Learning Target

- Is connected to the performance of understanding for today's lesson – what students will do, make, say or write to deepen their understanding, assess their own learning, and produce evidence of where they are in relation to the learning target.

# A Learning Target

- Contains student look-fors that students can use to judge how close they are to the target in language that describes mastery of the target, rather than in grading or scoring language (letters, points, number right, percentage correct, etc.)

**Kindergarten  
Mathematics**



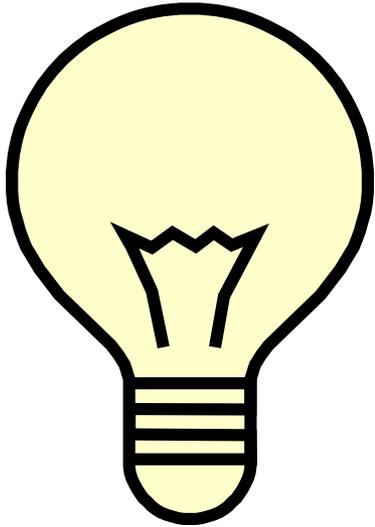


I can identify character attributes from reading a piece of text.



**FEEDBACK**

# Feedback that Feeds Forward



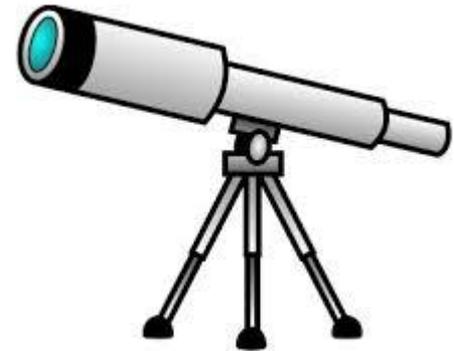
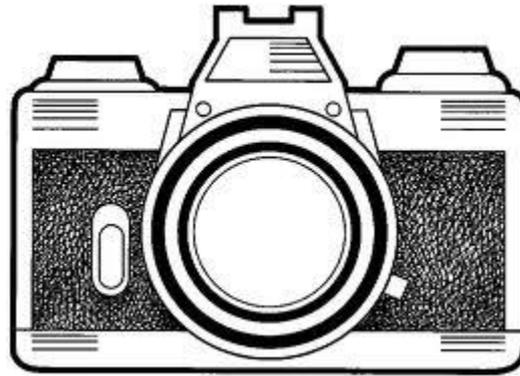
Describe the work's strengths and make one suggestion for a next step.

# Feedback that Feeds Forward

- Describes the work's strengths first.
- Makes at least one suggestion for a next step.
- Uses different amounts of scaffolding for different students' needs
  - Remind students of the learning target
  - Ask detailed, focused questions/suggestions
  - Provide examples of how to do it

[Brookhart (2008); Hattie & Timperley (2007); Shute (2008)]

# Three views of feedback



# Characteristics of Effective Feedback



- Is it descriptive?
- Is it timely?
- Does it contain the right amount of information?
- Does it compare the work to criteria?
- Does it focus on the work?
- Does it focus on the process?
- Is it positive?
- Is it clear?
- Is it specific (but not too specific)?
- Does its tone imply the student is an active learner?

*Dear Librarian,* what book?

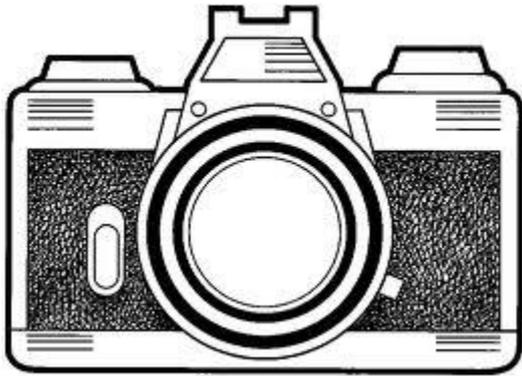
I want you to <sup>u</sup>by this book again  
because it is a <sup>u</sup>very funny book and  
it has <sup>is</sup>mystereys in it. That's why  
I want you to buy it. <sup>u</sup>Add more.

*Sincerely,*

I want you to buy this book again  
because it is a very funny book and  
it has mysteries in it. That's why  
I want you to buy it.

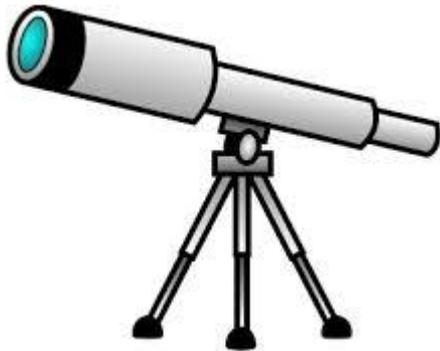
These are two good reasons.  
Can you add the name of  
the book and explain why  
these reasons are important?  
For example, "I feel \_\_\_\_\_  
when I read funny stories"  
or "Mysteries are great  
because \_\_\_\_\_."

# Characteristics of Effective Feedback



- What did the student learn from the feedback?
- What did the teacher learn from the feedback?

# Characteristics of Effective Feedback



- What next step(s) should the teacher and student take to use this feedback for learning?

11<sup>th</sup> grade  
English

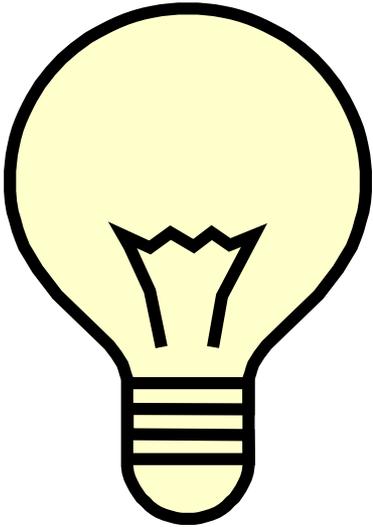
*specifying* -- This story is  
It's called A rose for emily because  
A rose represents love and emily wanted to  
find love. An example is how emily's father  
never let her date anyone so she never found  
love. explain

Another reason it could be called  
A rose for emily is because whenever people  
die others bring roses to mourn their death. So  
the rose could represent her death and how  
it affected others. explain

~~your~~ Your examples are good  
and specific. You have  
a little sentence, but it could be  
a little stronger if you specify  
what you are referring to (see above).  
When you explain your example  
in correlation to the response  
ask yourself if your reader  
will have any questions then  
answer those questions (usually  
why and how)

# **STUDENT GOAL SETTING AND SELF-ASSESSMENT**

# Student Goal-Setting



A goal is  
something  
specific  
that the student  
is trying to learn.

# Student Goal-Setting

- A goal is what the student is trying to learn or achieve
- Goal-setting is a cognitive process that is part of student self-regulation
  - Setting the goal (“just right”)
  - Selecting the strategy
  - Monitoring performance

[Pintrich & Zusho (2002);  
Zimmerman & Schunk (2011)]

# Goal-directed Language

- “What are you trying to learn?” *not* “What are you doing?”
- “What resources do you need to work toward your goal?” *not* “What did you find in the library?”
- “What were you thinking as a writer when you described the noise?” *not* “Why did you write that?”

# Example

## Grade 4 Speech Therapy

Speech Sound

th

4th grade

This student is an active participant during all activities.

She was able to reach her speech goal. We are now working toward using sound in conversation. (2nd goal)

My Speech Therapy Progress  
You will color each section as you progress with your speech sound.

2nd goal → I use my sound correctly when I talk.

I use my sound correctly when I read.

1st GOAL → I use my sound in sentences.

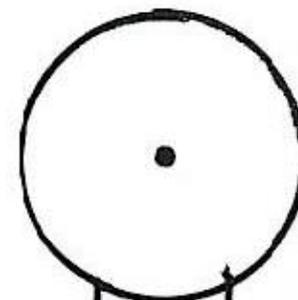
I use my sound in phrases.

I use my sound in the middle of words.

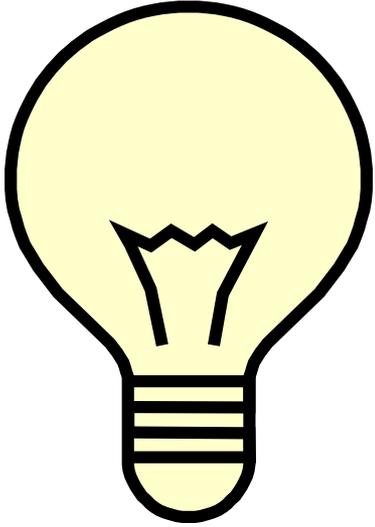
I use my sound in the end of words.

I use my sound in the beginning of words.

I can say my sound by itself.



# Student Self-Assessment



Students review  
their own work  
in light of criteria  
and decide on  
a next step.

# Student Self-Assessment

- Teach self-assessment skills
  - Students develop their own criteria or rubrics or are given criteria or rubrics by the teacher.
  - Students use criteria or rubrics to assess their own work.
  - Teachers give students feedback on the quality of their self-assessments.
  - Teachers give students opportunities to practice self-assessment and revise regularly.

## Self-Assessment

Skill	On this assignment, I successfully completed this skill on...			
	All problems	Most problems	Some problems	None of the problems
Wrote the given information		✓		
Identified the unknown	✓			
Converted Celsius temperatures to Kelvin		✓		
Wrote the Charles' Law equation			✓	
Rearranged the equation to solve for the unknown	✓			
Wrote all numbers with correct units	✓			

## Example

## High School Chemistry

1. A balloon filled with helium has a volume of 2.30 L on a warm day at 311 K. It is brought into an air-conditioned room where the temperature is 295K. What is its new volume?

$$V_1 = 2.3L \quad T_1 = 311K$$
$$V_2 = \quad \quad T_2 = 295K$$

$$V_2 = \frac{(2.3L)(295K)}{311K} = \underline{2.18L}$$

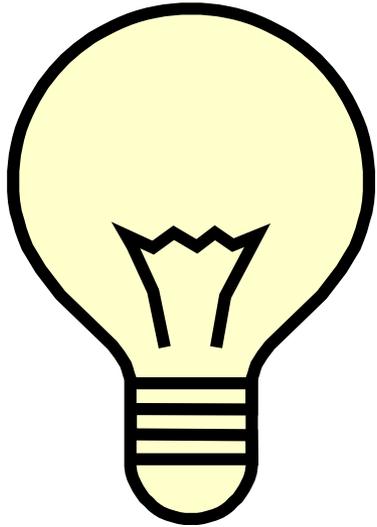
2. The balloon in question #1 is dipped into liquid nitrogen at  $-196^\circ\text{C}$ . What is its new volume?

$$V_1 = 2.3L \quad T_1 = 311K$$
$$V_2 = \quad \quad T_2 = 333K$$

$$V_2 = \frac{(2.3L)(333K)}{311K} = \underline{2.57L}$$

# **TEACHER AND STUDENT QUESTIONING**

# Teacher Questioning



Use strategic  
questions  
that elicit  
student thinking.

# Teacher Questioning

- USE OPEN-ENDED QUESTIONS to make thinking visible



[Higgins, Hall, Baumfield, & Moseley (2005); Abrami et al. (2008)]

# Calling on Students

- Call on students randomly
  - If they don't verbalize, they don't internalize.



# Calling on Students

- Use methods that “call on” all students to answer questions
  - Whiteboards
  - Letter cards (or response systems)



# Calling on Students

- Extend WAIT TIME
  - “No hands up” time
  - Think-pair-share

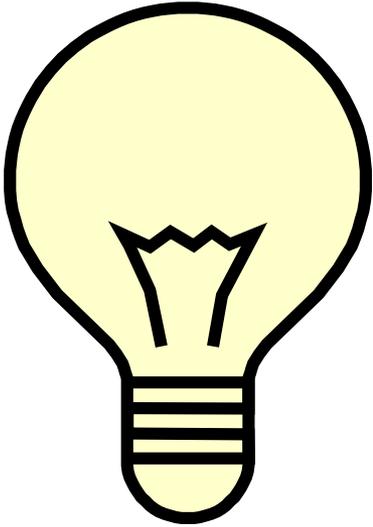


# Example

<https://www.youtube.com/watch?v=Cemddec-ilo>

Preschool reading

# Student Questioning



Teach students  
to ask effective  
questions.

# Example

Grade 5 Title I Reading

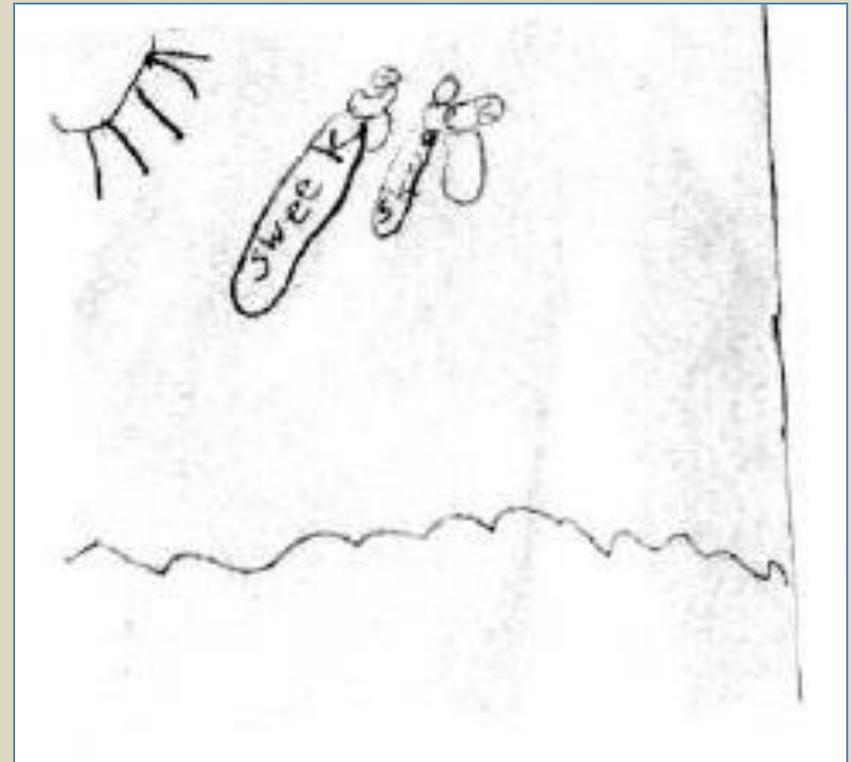
Why did they lay  
eggs, PY

---

How did the PY  
snake climb  
in power cables

---

Why did the snake  
eat the snake  
bird eggs PY



# Student Questioning

- Use question starters
- Use prompts to help students respond to each other
  - “What do you think about ...?”
  - “What do you want to add to ...?”
  - “What did you notice about ...?”
- Help students to help each other
  - Think-pair-share

# Example High School Contemporary Issues

## Questions for Senator White

Senator White will be visiting our class on May 19, 2009. Write 3 – 5 questions for the Senator after reviewing his website at [www.senatoronwhite.com](http://www.senatoronwhite.com). You should also take into account the many state issues we have discussed over the last few weeks.

1. One of your legislative accomplishments, is the law requiring incoming college freshman be vaccinated against meningitis. Was there any personal experiences leading to your great interest in this?
2. Promoting legislation to provide property tax relief to Pennsylvania homeowners will help many people in this district. Do other Senators feel the same?
3. Besides creating new jobs, what other things do you believe will help strengthen our economy?