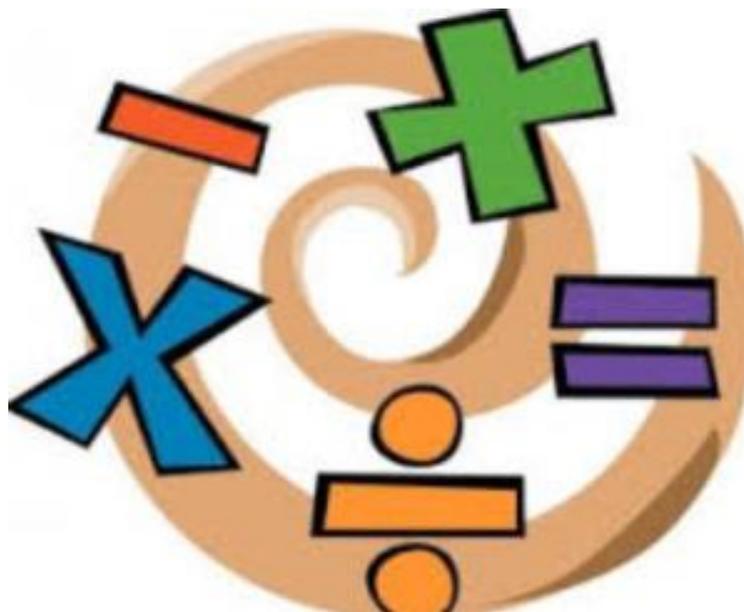


Welcome



Formative *Assessment Process*
Driving Student Centered Math Instruction

Housekeeping



- Cell Phones
- Restrooms
- Breaks (around 9:50-10 and 2:35-2:45)
- Sign In
- Parking Lot
- Lunch (11:30 – 12:30)
- Collegial Respect
- Have Fun!

Welcome



Formative *Assessment Process*

 Driving Student Centered Math Instruction



Develop a conceptual understanding of the Formative Assessment Process and its benefits.



Compose and share a definition or quote capturing the essence of what formative assessment is.



Explore ways in which formative assessment attributes and practices move learning forward.



Participants will:
-construct a progression of learning (landscapes).
-discuss observed formative assessment practices.



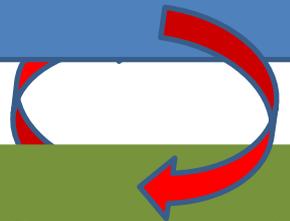
Plan next steps in embedding learning into practice.



Vertical teams will discuss how the formative process, through mathematics focused instruction, supports each student in learning.



How to embed formative assessment practices into daily math instruction.



Context of Learning:
 x and \div
 $+$ and $-$



Develop a conceptual understanding of the Formative Assessment Process and its benefits.



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Explore ways in which formative assessment attributes and practices move learning forward.



Participants will:
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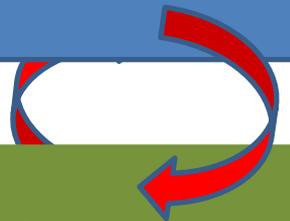
Plan next steps in embedding learning into practice.



PLCs will discuss how the formative process, through mathematics focused instruction, supports each student in learning.



How to embed formative assessment practices into daily math instruction.



Context of Learning:
 x and \div
 $+$ and $-$

Formative Assessment Defined

Formative assessment is a **deliberate process** used by teachers and students **during instruction** that provides actionable feedback that is used to **adjust** ongoing teaching and learning strategies to improve students' self-assessment, reflection and attainment of curricular learning targets/goals.

A template for an 'Exit Ticket' form. It features a title 'Exit Ticket' at the top, followed by three numbered sections (1, 2, 3) each with a horizontal line for writing. A 'Name' field is located on the right side. At the bottom, it says 'Created by the author: [unreadable]'.

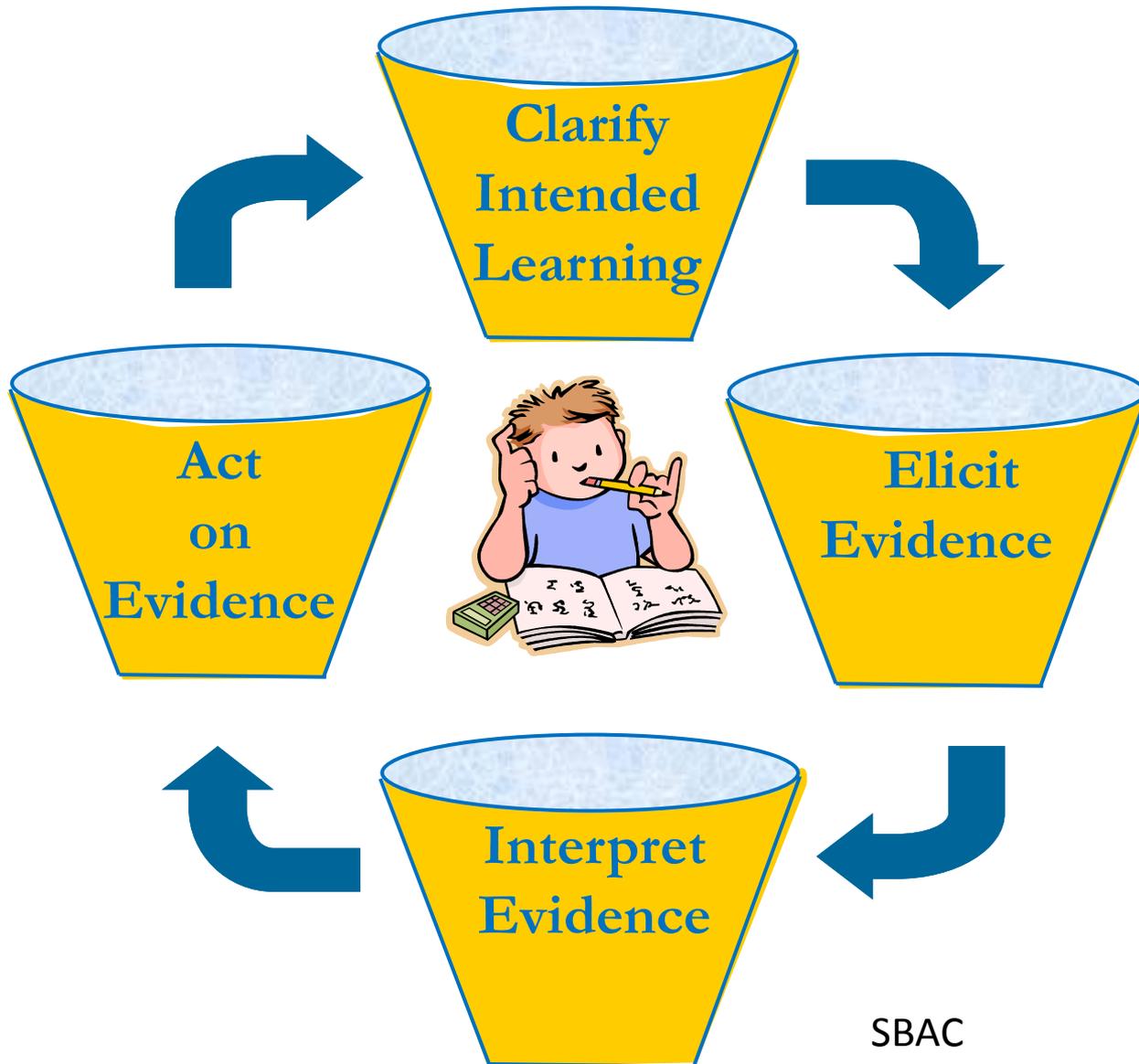
SBAC

Formative Assessment Defined

Formative assessment is a **deliberate process** used by teachers and students **during** **instruction** that provides actionable feedback that is used to **adjust** ongoing teaching and learning strategies to improve students' self-assessment, reflection and attainment of curricular learning targets/goals.

SBAC





Formative Assessment Process

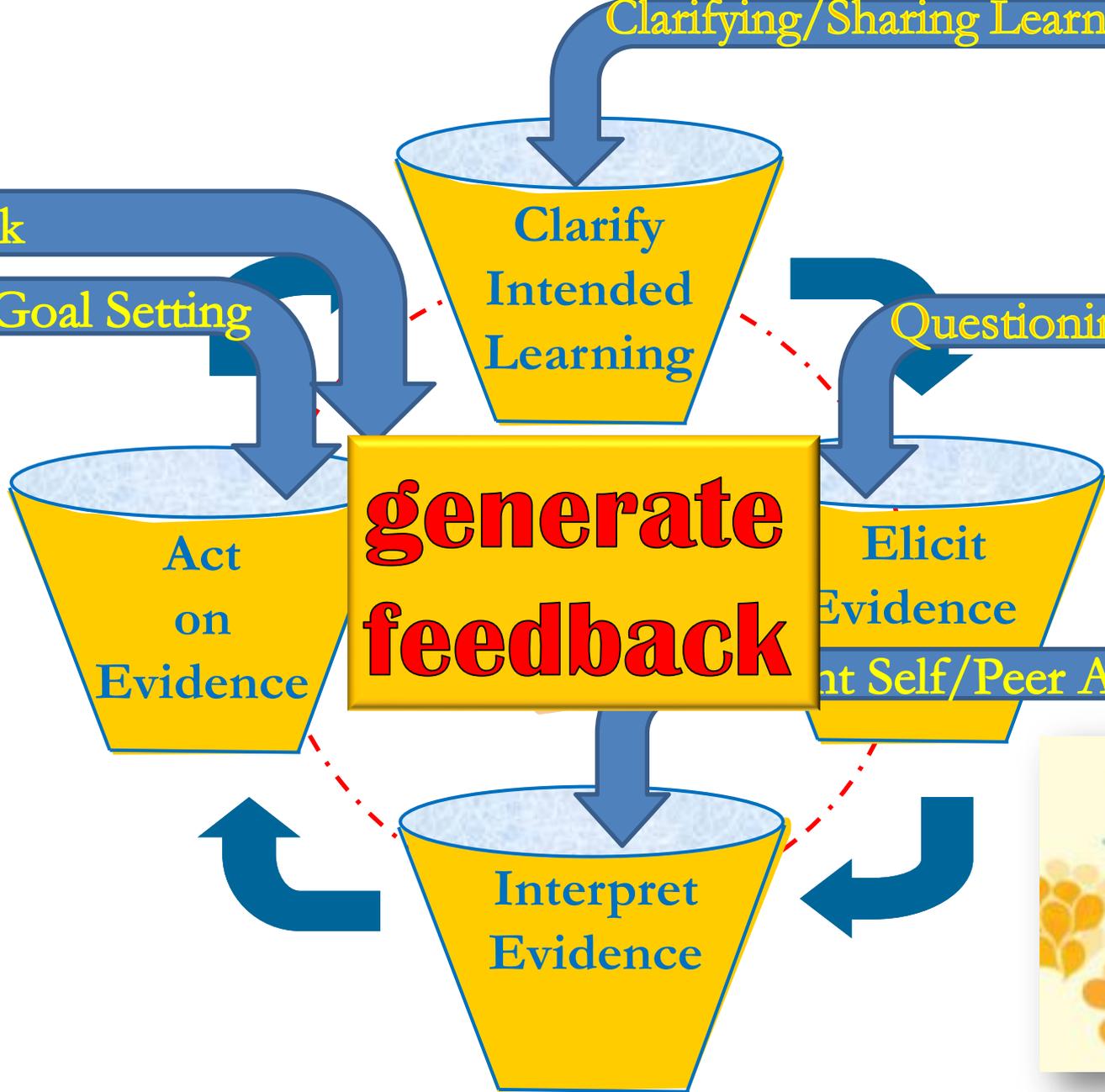
Clarifying/Sharing Learning Intentions

Feedback

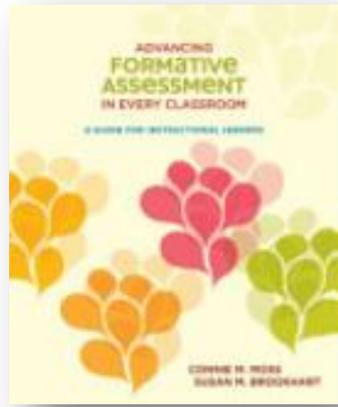
Student Goal Setting

Questioning/Discussion

Student Self/Peer Assessment



**generate
feedback**



Formative Assessment Process



SELF-REGULATED LEARNER

**Builds Students'
Metacognition**

**Increases Students'
Motivation**

Activity



Five "Key Strategies" for Effective Formative Assessment

Formative Assessment Definitions and Quotes

- Formative assessment is a deliberate process used by teachers and students during instruction that provides actionable feedback that is used to adjust ongoing teaching and learning strategies to improve students' self-assessment, reflection and attainment of curricular learning targets/goals. **SBAC**
- Formative assessment is a planned process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes. **FAST SCASS & Popham**
- "Formative assessment is not a series of quizzes or a "more frequent, finer-grained" interim assessment, but a continuous process embedded in adults' teaching and students' learning." **Margaret Heritage**
- "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." **(Brookhart & Moss, 2009, p.6)**
- "Formative assessment, therefore, is essentially feedback (Ramaprasad, 1983) both to the teachers and to the pupil about present understanding and skill development in order to determine the way forward" **(Harlen & James, 1997, p. 369).**
- "[Formative assessment] refers to assessment that is specifically intended to provide feedback on performance to improve and accelerate learning" **(Sadler, 1998, p. 77).**
- "An assessment is formative to the extent that information from the assessment is fed back within the system and actually used to improve the performance of the system in some way" **(William & Leahy, 2007, p. 31).**
- "Formative assessment is defined as assessment carried out during the instructional process for the purpose of improving teaching or learning... What makes formative assessment formative is that it is immediately used to make adjustments so as to form new learning" **(Shepard, 2008, p. 281).**
- Dylan William states, "The central idea of formative assessment, or assessment for learning, is that evidence of student learning is used to adjust instruction to better meet student learning needs." He describes formative assessment practices as students and teachers using evidence of learning to adapt teaching and learning to meet immediate learning needs, minute-to-minute and day-by-day **(Thompson & William, 2007).**

Read:

(Shoulder Partners)

A's Read: "Formative assessment: An enabler of learning"

B's Read: "Five 'Key Strategies'..."

After Reading:

- Shoulder partners will share key ideas from the articles.
- Read: "Formative Assessment Definitions and Quotes"
- Compose a definition or quote, capturing the essence of formative assessment.





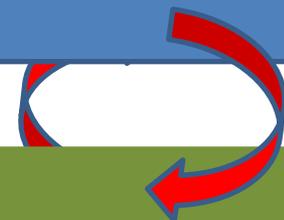
Develop a conceptual understanding of the Formative Assessment Process and its benefits.



Compose and share a definition or quote capturing the essence of what formative assessment is.

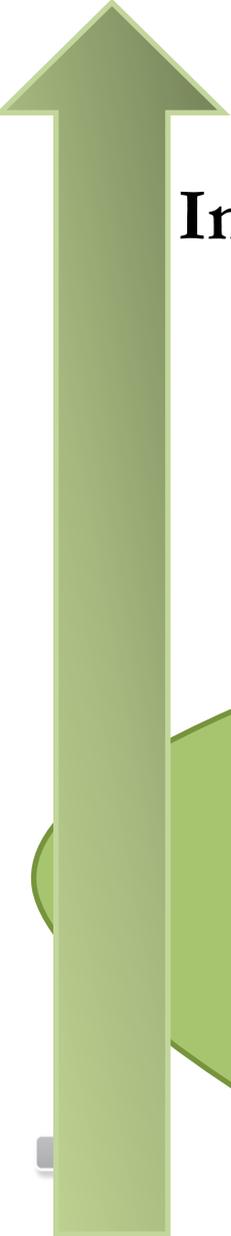


How to embed formative assessment practices into daily math instruction.



Context of Learning:
x and ÷
+ and -

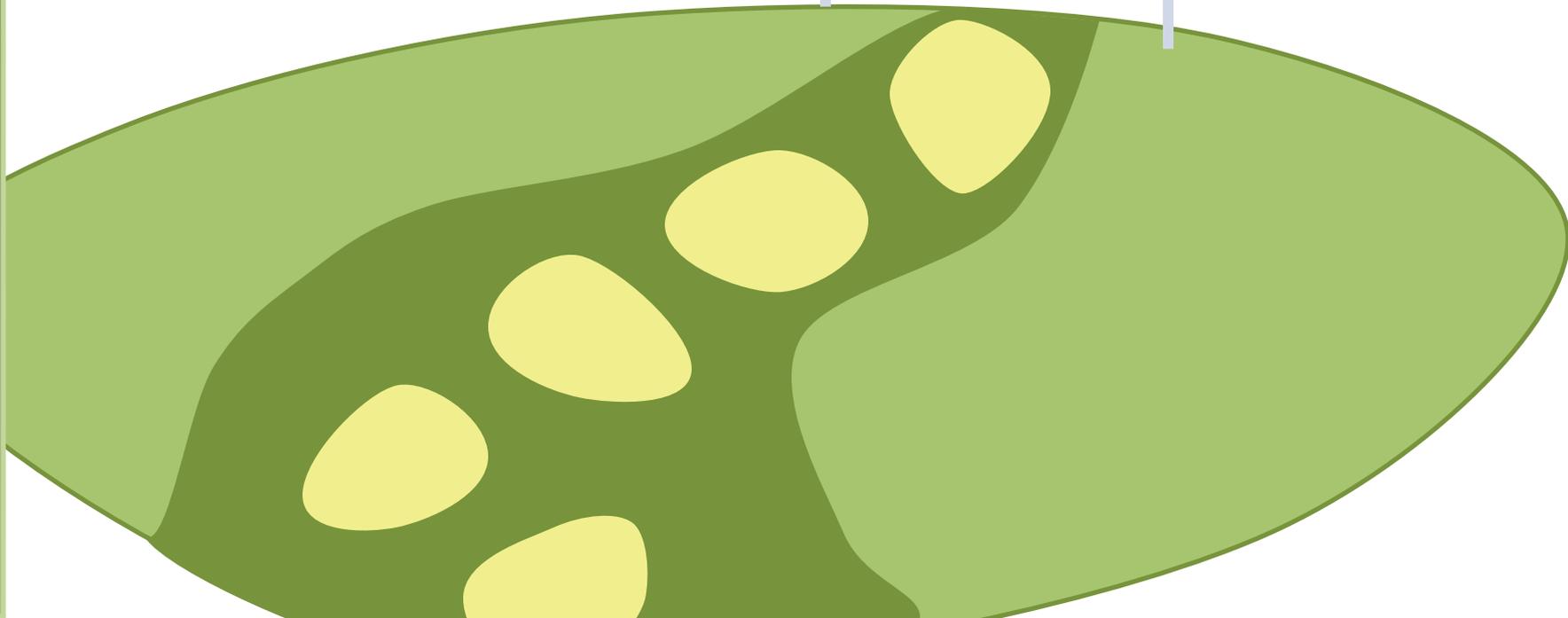
Benefits of Formative Assessment



Increasing Student
Achievement



College and
Career Readiness

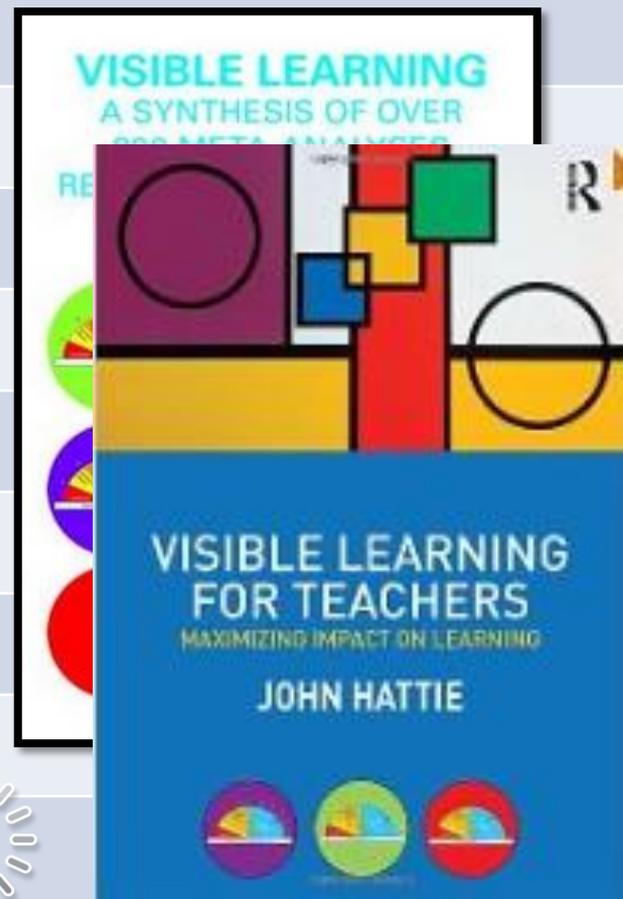


Factor	Effect Size
Mobility	-.34
Television	-.18
Retention	-.16
Class size	.21

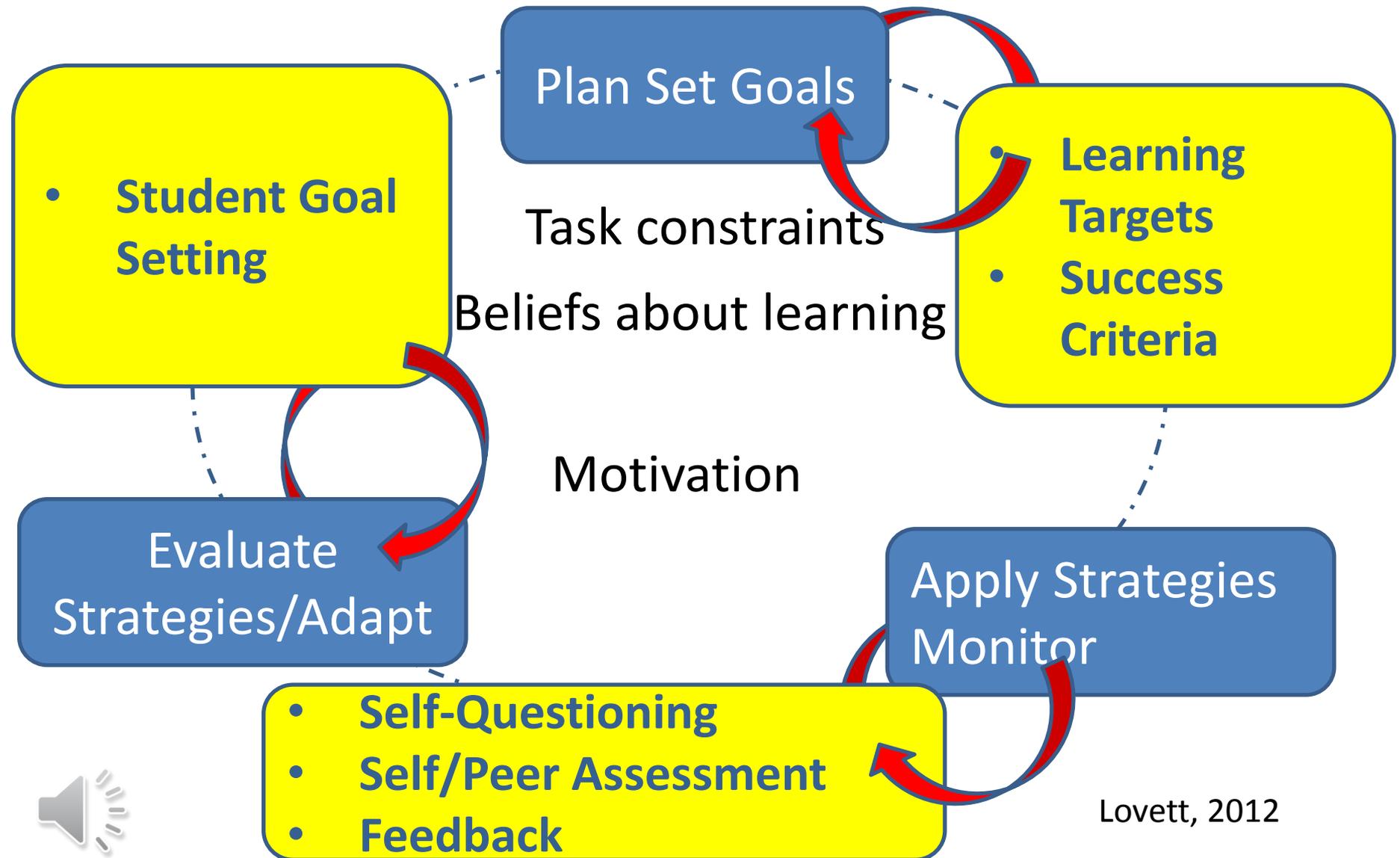
Hinge point = .40



Questioning (Teacher Questioning)	.48	★
Peer and Social Support/Peer Tutoring	.52/.55	★
Challenging goals	.56	★
Self-verbalization/self-questioning	.64	★
Meta-cognitive strategies	.69	★
Feedback (alone)	.75	★
Teacher Clarity (Learning Targets)	.75	★
Class Discussion	.82	★
Providing Formative Evaluation	.90	



The Ideal: Self-Regulated Learner



Other Benefits

- MTSS - Strengthens Tier instruction
- Supports Social and Emotional Learning
- Promotes Cultural Responsiveness
 - requiring the development and communication of high expectations for all students
 - targeting high-order, learner centered, rigorous pedagogies (Gorski, 2013)

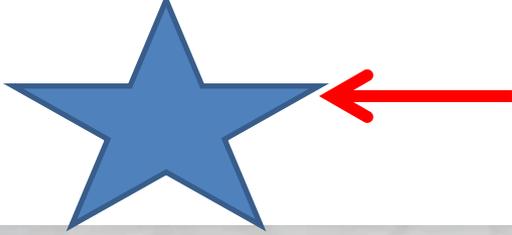


Benefits of Formative Assessment



With a shoulder partner, discuss benefits of formative assessment that resonated with you the most.





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Develop a conceptual understanding of the Formative Assessment Process and its benefits.

Explore ways in which FA attributes and practices move learning forward.

How to embed formative assessment practices into daily math instruction.

Compose and share a definition or quote capturing the essence of what formative assessment is.

-Participants will construct a progression of learning (landscape).
-Participants will discuss FA practices observed.

Context of Learning:
x and ÷
+ and -

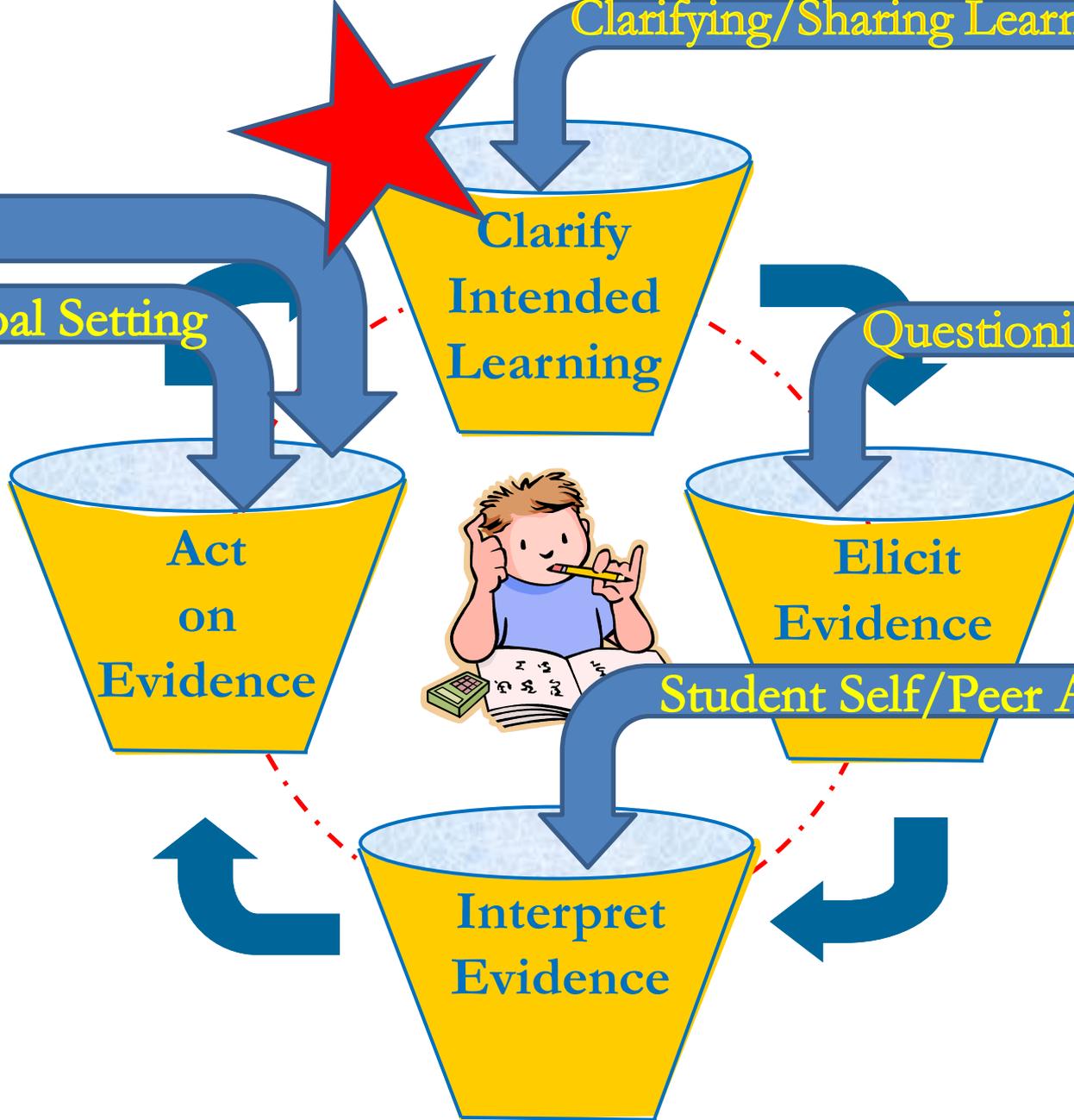
Clarifying/Sharing Learning Intentions

Feedback

Student Goal Setting

Questioning/Discussion

Student Self/Peer Assessment



Formative Assessment Process





“For formative assessment, teachers not only must be clear about what they want students to learn (the **lesson objective** or intended **outcome** for students who “get it”); they also must know typical student **steps** and **missteps** toward this goal (the typical learning progression).”



References

- Brookhart, S., and Moss, C. (2009). Advancing Formative Assessment in Every Classroom, A Guide For Instructional Leaders. Alexandria, VA. ASCD.
- Bay-Williams, Karp, Lovin, Van de Walle. (2014). Teaching Student-Centered Mathematics – Second Edition. USA. Pearson, Inc.
- Fosnot, Catherine, and Dolk, Maarten. (2001). *Young Mathematicians at Work. Constructing Multiplication and Division*. Heinemann, NH.
- Fosnot, Catherine, and Dolk, Maarten. (2001). *Young Mathematicians at Work. Constructing Addition and Subtraction*. Heinemann, NH.
- Greenstein, Laura. (2012). Assessing 21st Century Skills. United States of America: Corwin.
- Gorski, Paul. (2013). Reaching and Teaching Students in Poverty. Teachers College Press, New York, NY
- Hattie, J. (2009). Visible Learning A Synthesis of Over 800 Meta-Analyses Relating to Achievement. Abingdon, Oxon, Routledge.
- Van de Walle et all. (2014). Teaching Student-Centered Mathematics. Pearson Education, United States of America.
- Wiliam, D. 2011. Embedded Formative Assessment. Bloomington, IN. Solution Tree Press.