

# INVESTIGATING AND EXTENDING STUDENT THINKING

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INSTITUTE DAY 2018

# PLEASE FIND YOUR TABLE

## A

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Terry Green  
Alice Sajdera  
Alyssa Rosenfeld  
Sharon Hobbs

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Diane Mitton  
Erin Dotson  
Kathy O'Connell  
Cathlin LaRocco  
Donna Lubin  
Rob Ford

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Margaret McGaffigan  
Greg Kalesnik  
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Colleen Pearce  
Nicole Putnam

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Julie Barkin  
Jenny Nam  
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Blake Siskavich  
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Shirley Daniels  
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Lynn Fagan  
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Jessica Killian  
Gwen Blumberg  
Mara Salis  
Cindy Matthes

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Becca Fasciano  
Becky Eston  
Hilary Skelton  
Eileen Dirrane  
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Elaine Herzog  
Keith Johnson  
Sharon Horenstein

# CORE QUESTION: HOW CAN THINKING ROUTINES HELP TEACHERS INVESTIGATE AND EXTEND STUDENT THINKING?

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## AGENDA

- Introduction to investigating and extending student thinking
- Visible Thinking Routines
- Practicing Routines
  - Experience
  - Translate
- Applying this to our unique contexts
- Closing

## OBJECTIVES

- We will learn about how Thinking Routines can support the acts of investigating and extending student thinking.
- We will experience Thinking Routines from the perspective of a learner.
- We will identify ways that Thinking Routines could work in our unique contexts.

# NORMS FOR OUR SESSION

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- Be cognizant of our volume when working in groups
- Support one another in making connections to our own context



# INVESTIGATING

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## “CLINICAL RESEARCH” APPROACH

- Formative assessment through diagnostic questions
- Analysis of formative assessment
  - Error analysis
- Feedback, Reteach/Re-engage/Regroup, Move On, Extend

CONSTANTLY GIVING STUDENTS  
OPPORTUNITIES TO MAKE THEIR  
THINKING—AND THEIR OWN  
INVESTIGATION—VISIBLE

# EXTENDING

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- Extension refers to learning opportunities that reengage students by increasing the “*depth* of understanding, *breadth* of understanding, and *relevance* to the student and to the world in which he or she lives” (Clendening & Davies, 1983; italics in original).
- Key characteristics of effective extension:
  - Incorporates student choice
  - Based on student interests
  - Increases the rigor and depth (not the workload)

-from RBT's course materials for  
Coaching for High-Impact Teacher Teams

# VISIBLE THINKING

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- “Visible Thinking is a flexible and systematic research-based approach to integrating the development of students' thinking with content learning across subject matters. An extensive and adaptable collection of practices, Visible Thinking has a double goal: on the one hand, to cultivate students' thinking skills and dispositions, and, on the other, to deepen content learning. By thinking dispositions, we mean curiosity, concern for truth and understanding, a creative mindset, not just being skilled but also alert to thinking and learning opportunities and eager to take them.” –Project Zero



# WHAT IS VISIBLE THINKING?

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- Read the six key principles that anchor Visible Thinking on pages 1 and 2 of the Making Thinking Visible article.
- Highlight/underline one phrase that you feel is particularly significant.
- Each person in your group shares the phrase they chose and one sentence about why that stood out to them.



# THINKING ROUTINES

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- We have routines for all sorts of things – managing student behavior and interactions, organizational routines, rules for communication and discourse – so why not also have routines for learning?
- “Thinking Routines are simple structures that can be used across various grade levels and content. What makes them routines, versus merely strategies, is that they get used over and over again in the classroom so that they become part of the fabric of classroom culture. The routines become the ways in which students go about the process of learning.”

-from Project Zero

# WHY THINKING ROUTINES WORK

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The routines work to promote the development of student thinking and the classroom culture because each:

- Is goal oriented in that it targets specific types of thinking
- Gets used over and over again in the classroom
- Consists of only a few steps
- Is easy to learn and teach
- Is easy to support when students are engaged in the routine
- Can be used across a variety of contexts
- Can be used by the group or by the individual

# TYPES OF THINKING ROUTINES

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- Core routines
- Understanding Routines
- Fairness Routines
- Truth Routines
- Creativity Routines
- [Video Introduction to Thinking Routines](#)



# ARTFUL THINKING

from: [pzartfulthinking.org](http://pzartfulthinking.org)

## ARTFUL THINKING PALETTE



## ARTFUL THINKING PALETTE





# TODAY'S ROUTINES AND TOPIC

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- 3-2-1 Bridge
- See, Think, Wonder
- Question Sorts
- Color, Symbol, Image, Word
- Generate, Sort, Connect, Elaborate
- Headlines

# 3-2-1 BRIDGE

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- 3 thoughts/ideas
- 2 questions
- 1 analogy

At your table share:

- 6 thoughts/ideas
- 5 questions
- 3 analogies

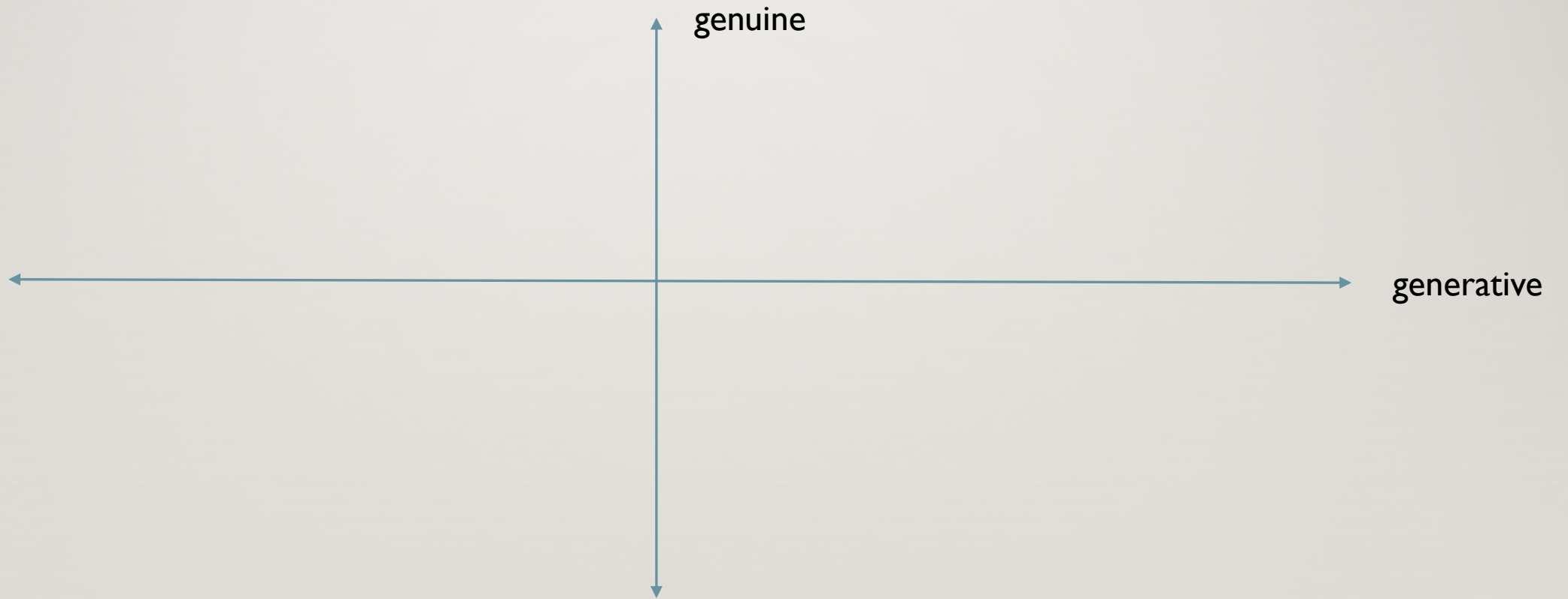
# SEE, THINK, WONDER

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- What do you see?
- What do you think about that?
- What does it make you wonder?

# QUESTION SORTS

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# COLOR, SYMBOL, IMAGE, WORD (CSIW)

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## **COLOR**

What color captures the essence of this passage?

## **SYMBOL**

What is one symbol that could represent the essence of this passage?

## **IMAGE**

Draw the most powerful moment or scene for you in the passage.

## **WORD**

What is the one most important word from this passage?

# GENERATE, SORT, CONNECT, ELABORATE

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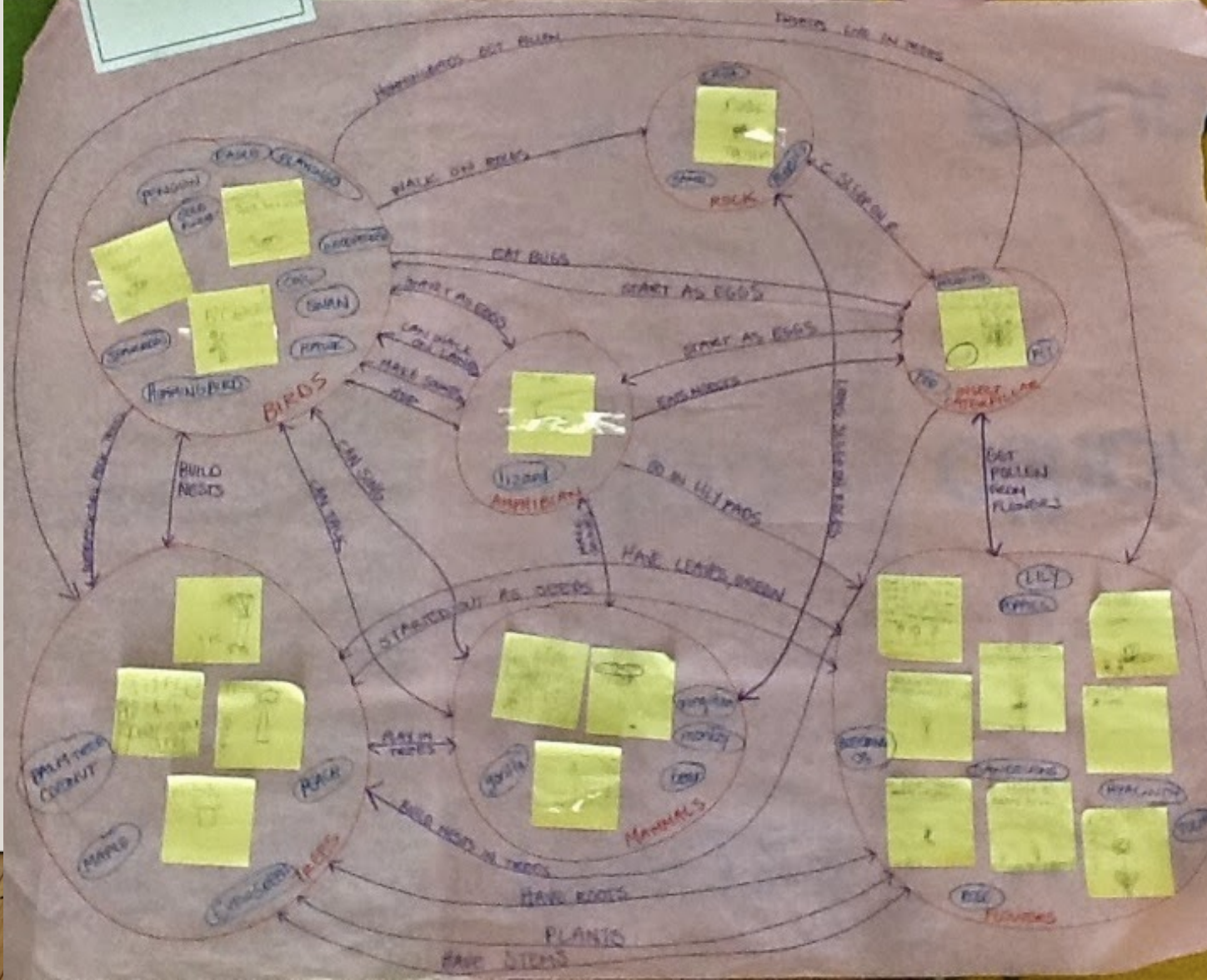
1. Select a topic, concept, or issue for which you want to map your understanding.
2. **Generate** a list of ideas and initial thoughts that come to mind when you think about this particular topic/issue.
3. **Sort** your ideas according to how central or tangential they are. Place central ideas near the center and more tangential ideas toward the outside of the page.
4. **Connect** your ideas by drawing connecting lines between ideas that have something in common. Explain and write in a short sentence how the ideas are connected.
5. **Elaborate** on any of the ideas/thoughts you have written so far by adding new ideas that expand, extend, or add to your initial ideas.
6. Continue generating, connecting, and elaborating new ideas until you feel you have a good representation of your understanding.



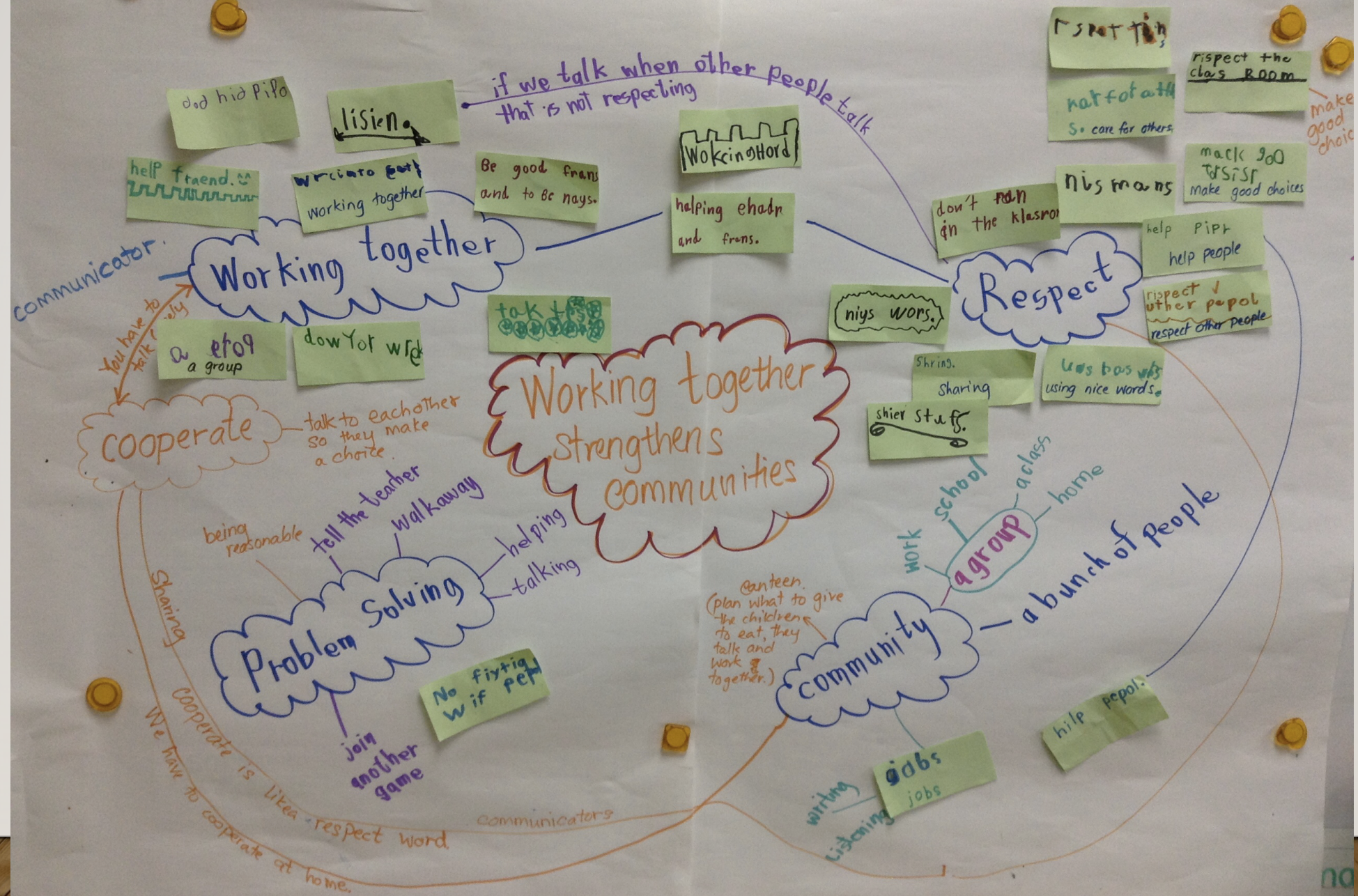
# Sharing the Planet

Central Idea:  
Animals experience changes throughout their life cycle.  
Lines of Inquiry:  
- Life cycles of animals  
- Needs for growth and survival  
- Changing appearance

FIRST GRADES IN 217 (A1)  
GENERATE → SORT → LABEL → CONNECT → ELABORATE











# PROMPT

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- What enabled the Holocaust and how can we prevent genocide from occurring in the future?



# 3-2-1 BRIDGE

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Your new responses to the topic:

- 3 thoughts/ideas
  - 2 questions
  - 1 analogy
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- Pair Share/Turn and Talk: Explain how your new responses connect to your initial responses.



# HEADLINES

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- If you were to write a headline that captured your thinking, what you would want to remember, or what you'll be taking from this session what would that headline be?