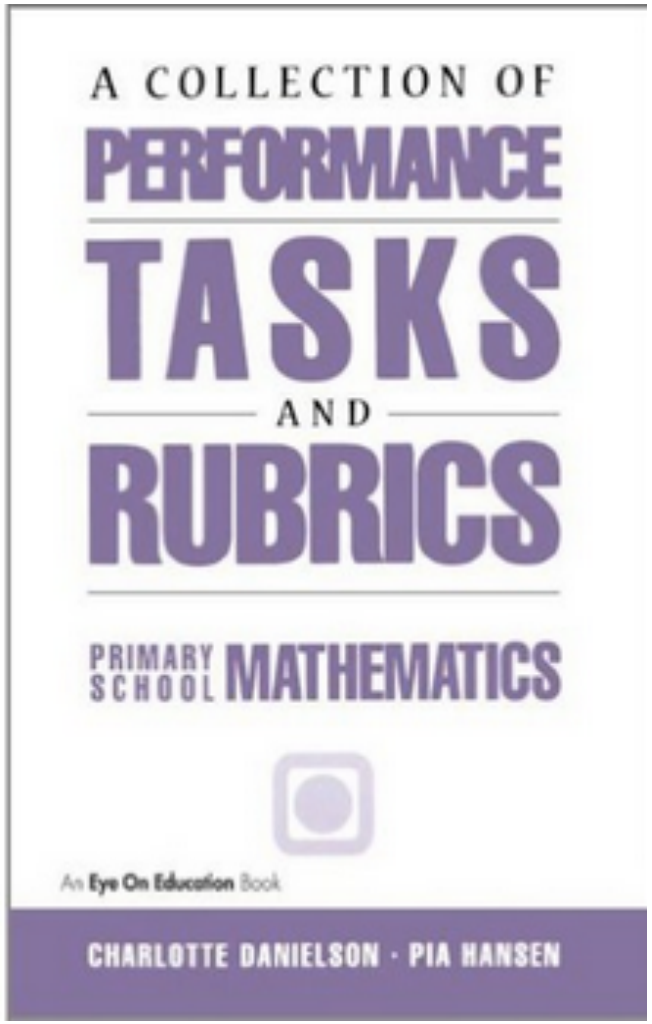
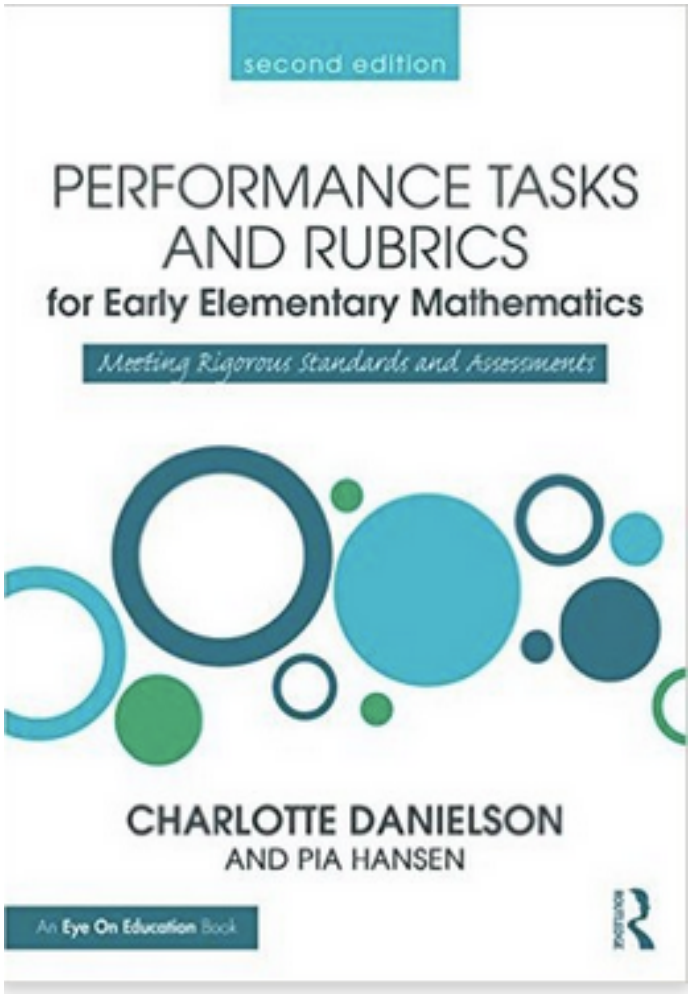
Opportunities & Experiences

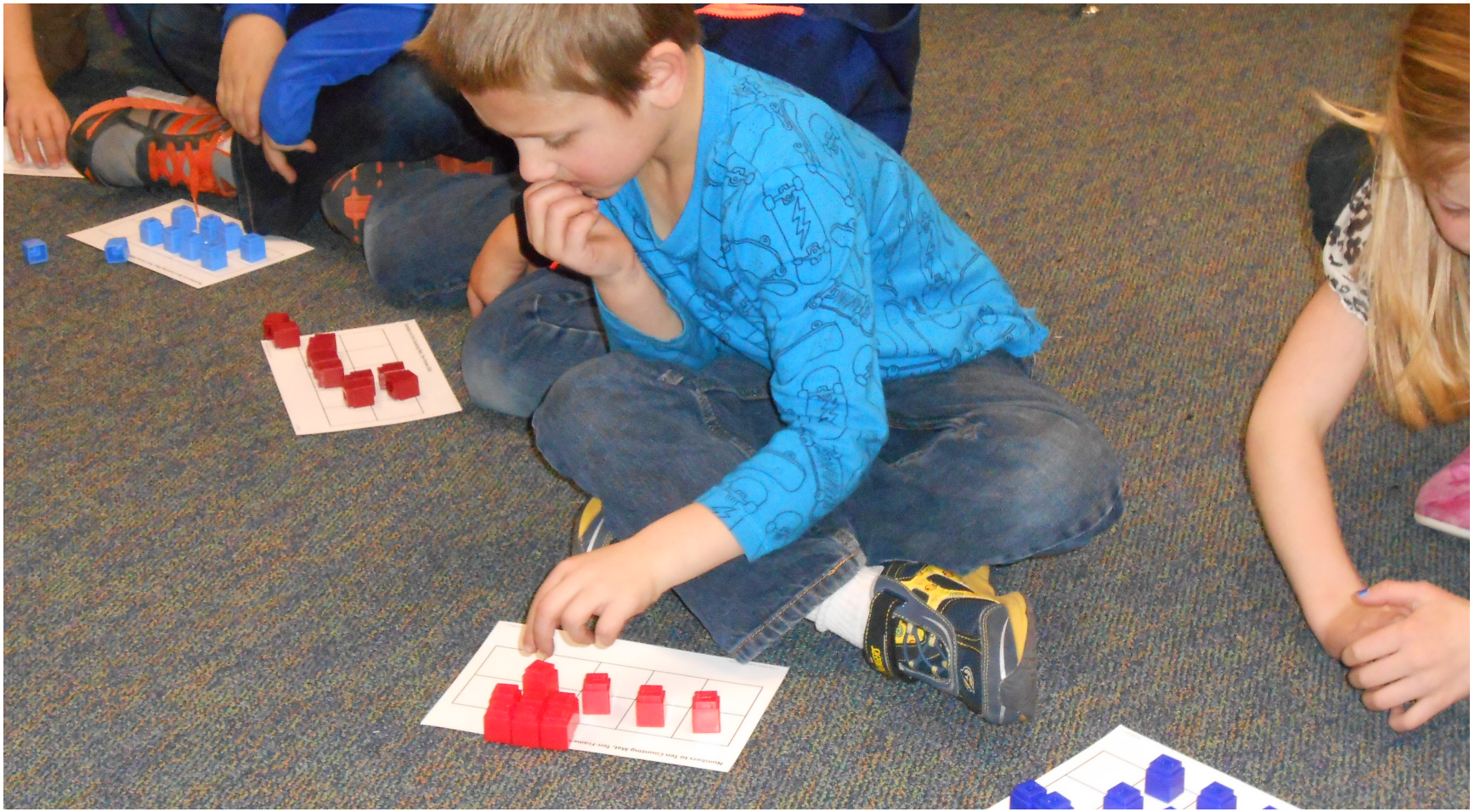




Primary students can…

- engage in rich tasks that promote problem solving and reasoning,
- join in at multiple entry points,
- represent and share their solution strategies

What's a performance task?



Some of your ideas?

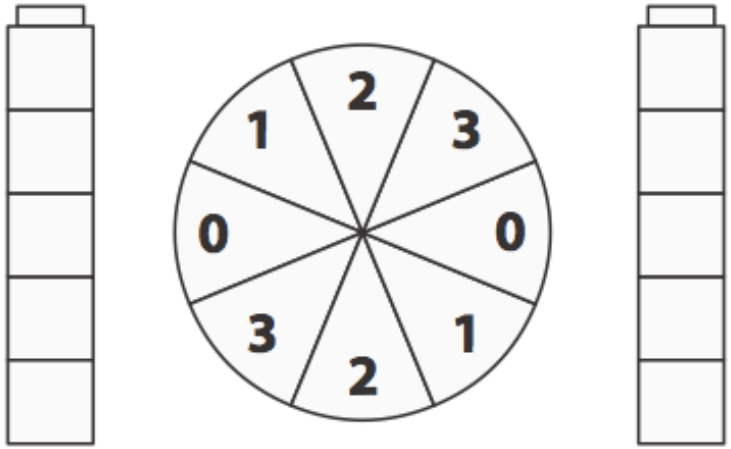
- Authentic, engaging, active, worthwhile
- Aligned to standards in content, cognitive demand and math practices
- Open ended, “low floor-high-ceiling”, access for all students
- Based on what the student actually knows and can do
- Continuous and inseparable from instruction

What are some of the challenges?

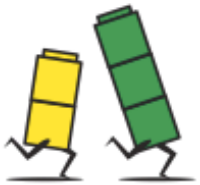
- Reading directions
- Following directions
- Explaining thinking, orally and…
- Writing
- Modeling
- And for the teacher… managing a classroom of students!

Could a game be a task?

Beat You to Five Game Board



1 2 3 4 5



Does the activity. . .

- promote good instructional practices?
- provide valuable evidence on student proficiency with the standards?
- include reasonable expectations for student background information and skills?
- Differentiate the learning?

Webb's Depth of Knowledge

Recall-recall of a fact or procedure

Basic Application of a Skill/Concept

use of information, concepts or procedures involving two or more steps

Strategic Thinking

requires reasoning or sequencing; complex solutions with more than one pathway

Extended Thinking

requires investigation and time to process multiple conditions of a problem or task

Make your evidence match!

The assessment should be at or above the Depth of Knowledge of the standard.

- Identify the language in the standard and use that language in the prompt given to students
- Use the same language in the scoring guide or rubric

Word problems standards K-1

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. (K.OA.A.2)

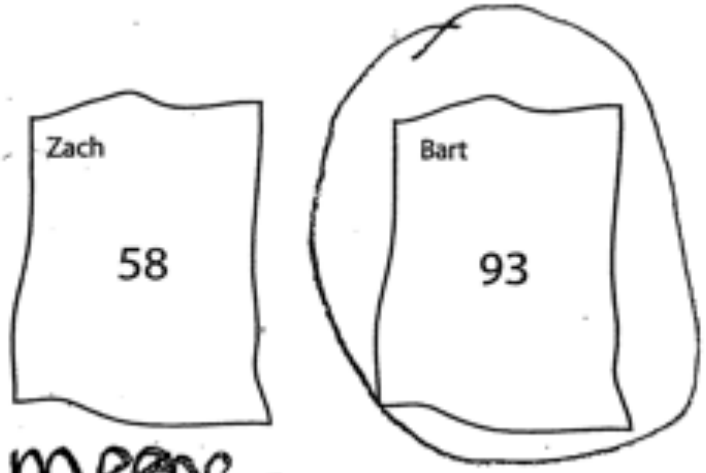
Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (1.OA.A.1)

Word problems standard Gr 2

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (2.OA.A.1)

10 The boys are playing tricks. Zach hid 58 sticks under one towel. Bart hid 93 sticks under another towel. Who hid more sticks, Zach or Bart? How many more? Show your work.

No mater how much you teach I have No ide what how meny mor means



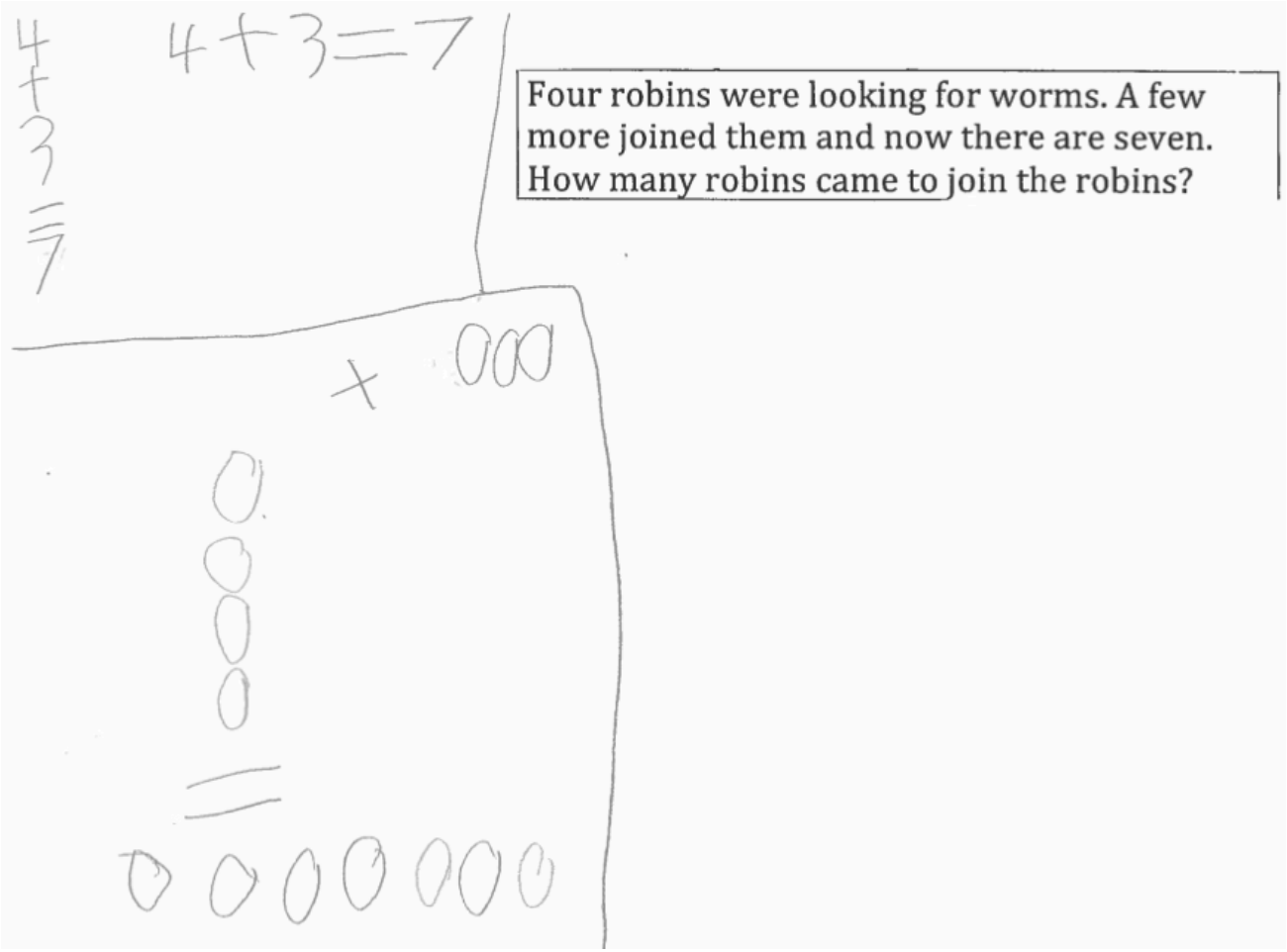
? hid ? more sticks than ?

What would we look for?

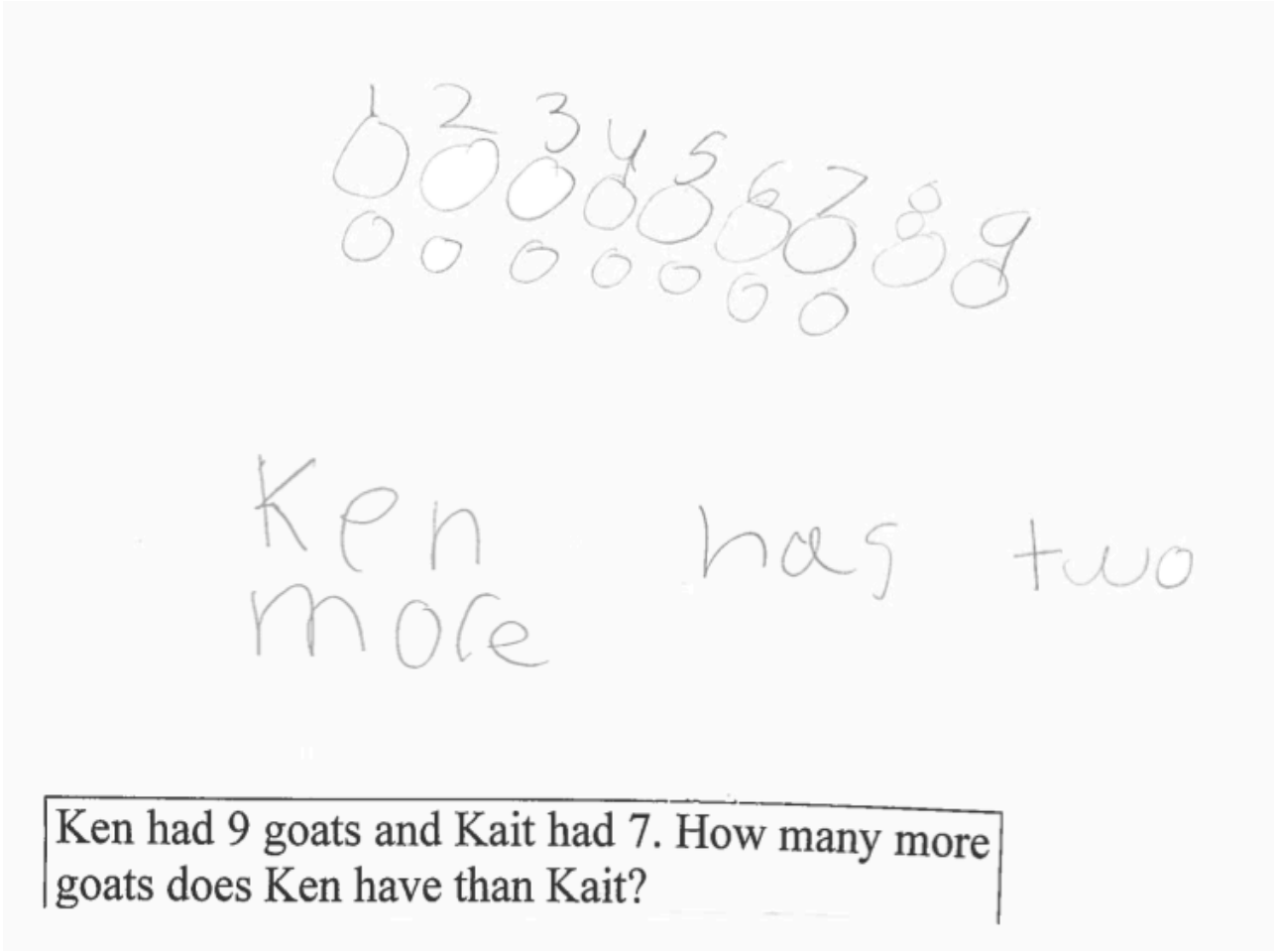
The farmer had 6 chicks, but he can only find 4. How many are missing?

$$\begin{array}{r} 6 \\ -\ 2 \\ \hline 4 \end{array}$$

Pictures, numbers &/or words?



Equations required?



Rubrics & Scoring Guides

Task specific or more general?

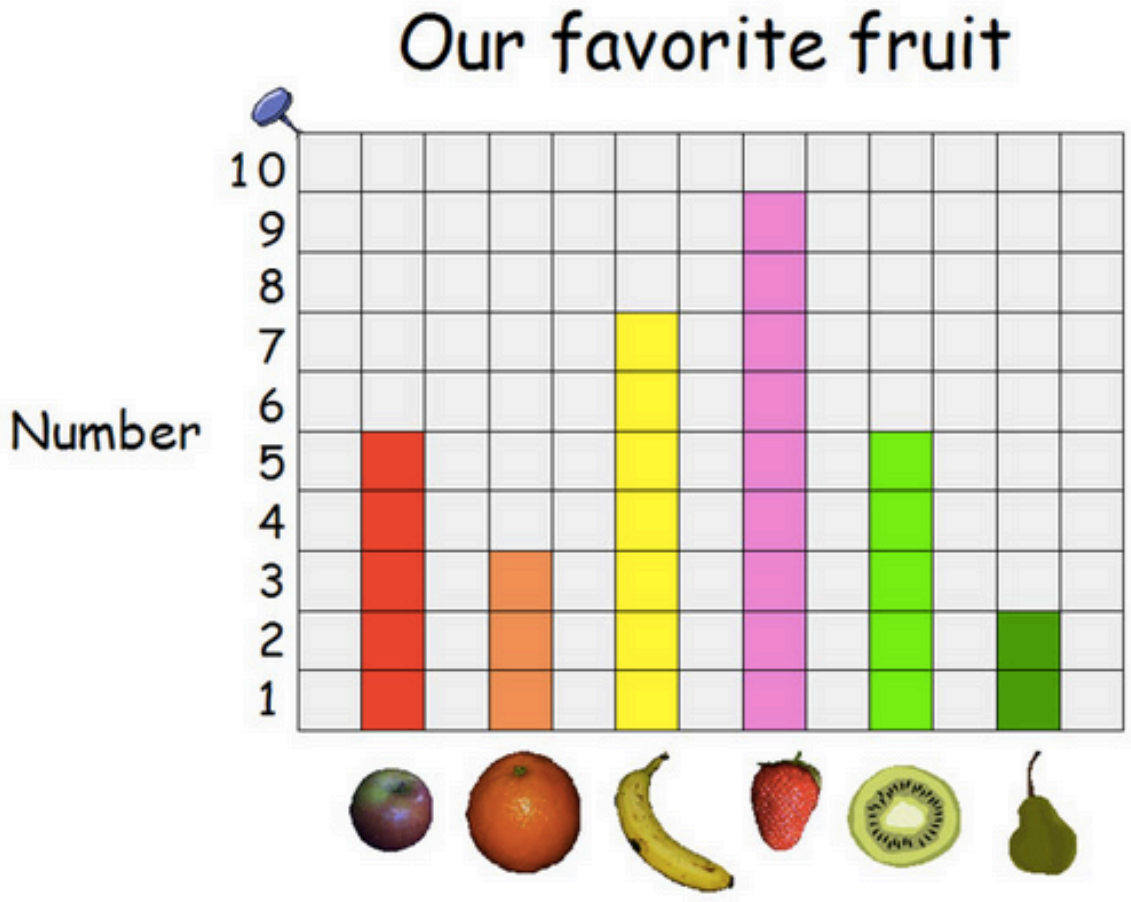
Valid and reliable? Working for agreement

- ✓ Is proficient at grade level?
- ✓ Is advanced above grade level?

Looking at criteria

- ✓ Organization & problem solving approach
- ✓ Mathematical accuracy/computation strategies
- ✓ Communication and presentation

Data Collecting Task



Looking at student work

Review the task

- Collect class data on your question
- Create a bar graph with a title and labels
- Share 2 observations about your data

What evidence is present that illustrates student thinking?

Identify the evidence and determine the level of performance/proficiency.

Be ready to share!

Rubric for Practices

Standards of Student Practice in Mathematics Proficiency Matrix

	Students:	(I) = Initial	(IN) = Intermediate	(A) = Advanced
1a	**Make sense of problems**	Explain their thought processes in solving a problem one way. PS	Explain their thought processes in solving a problem and representing it in several ways. QW	Discuss, explain, and demonstrate solving a problem with multiple representations and in multiple ways. GE
1b	**Persevere in solving them**	Stay with a challenging problem for more than one attempt. QW	Try several approaches in finding a solution, and only seek hints if stuck. GE	Struggle with various attempts over time, and learn from previous solution attempts SS
2	**Reason abstractly and quantitatively**	Reason with models or pictorial representations to solve problems. GE	Are able to translate situations into symbols for solving problems. GE	Convert situations into symbols to appropriately solve problems as well as convert symbols into meaningful situations. ER
3a	**Construct viable arguments**	Explain their thinking for the solution they found. ST	Explain their own thinking and thinking of others with accurate vocabulary. QW	Justify and explain, with accurate language and vocabulary, why their solution is correct. GE
3b	**Critique the reasoning of others.**	Understand and discuss other ideas and approaches. PS	Explain other students' solutions and identify strengths and weaknesses of the solution. QW	Compare and contrast various solution strategies and explain the reasoning of others. GE
4	**Model with Mathematics**	Use models to represent and solve a problem, and translate the solution to mathematical symbols. GE	Use models and symbols to represent and solve a problem, and accurately explain the solution representation. QP	Use a variety of models, symbolic representations, and technology tools to demonstrate a solution to a problem. SS

Would this task…

- meet the math practices?
- promote higher level thinking skills or problem-solving strategies?
- engage and motivate students?
- be a good fit with your curriculum?

https://www.youcubed.org/tasks/

Reflection

Take a moment to discuss with a neighbor what types of assessments you are currently using in your classroom and district?

- What is the DOK of your assessments?
- Do you know what standards are linked to each assessment item?
- Do the students/families know what standards, concept and models are being taught?