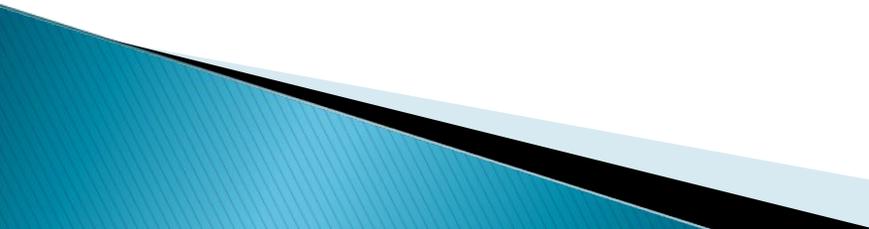


**Assessment:  
How will I know?  
How will they know?  
It's more than just a grade!**

Presentation to Field's Math Ed Forum  
Saturday, April 26, 2014

Shirley Dalrymple  
shirleydalrymple@hotmail.com



# Growing Success Policy Doc.

Assessment, Evaluation, and Reporting  
in Ontario Schools

*First Edition*

*Covering Grades 1–12*

# Fundamental Principles

The primary purpose of assessment and evaluation is to improve student learning.

▶ Seven fundamental principles. Teachers use practices and procedures that:

- are fair, transparent, and equitable for all students;
- support all students, including those with special education needs, those who are learning the language of instruction (English or French), and those who are First Nation, Métis, or Inuit;
- are carefully planned to relate to the curriculum expectations and learning goals and, as much as possible, to the interests, learning styles and preferences, needs, and experiences of all students;

...cont'd

# Fundamental Principles cont'd

- are communicated clearly to students and parents at the beginning of the school year or course and at other appropriate points throughout the school year or course;
  - are ongoing, varied in nature, and administered over a period of time to provide multiple opportunities for students to demonstrate the full range of their learning;
  - provide ongoing descriptive feedback that is clear, specific, meaningful, and timely to support improved learning and achievement;
  - develop students' self-assessment skills to enable them to assess their own learning, set specific goals, and plan next steps for their learning.
- 

# Learning Skills are Important!





# Learning Skills are Important! Cont'd

Sticky note pile-up!

The image shows a chalkboard with several colorful sticky notes and labels. At the top, the word "GROUPWORK" is written in large, colorful letters. Below it, there are seven numbered points in different colored boxes, each describing a skill for effective group work. The points are:

1. Every group member contributes, shares, works together, and cooperates so they can combine their knowledge to achieve the group goals.
2. Show respect to every member of the group
3. Each group member plays a variety of roles to develop skills
4. Group members actively listen to one another's ideas. (Read aloud, talk out ideas)
5. Communicate with each other effectively
  - a. Make eye contact
  - b. Speak clearly
  - c. Express ideas concisely
  - d. Give positive and constructive feedback
6. Be willing to compromise
7. Take leadership, show initiative, contribute your best in a friendly manner

Labels on the board include "TEAMWORK" (pink), "RESPECT" (light blue), and "RESPONSIBILITY" (pink). A pink sticky note in the top right corner reads "Mrs. Dalrymple MF1P1 Period 1" with a smiley face icon. The board is decorated with various colored geometric shapes like squares, triangles, and diamonds.

# Assessment “for” Learning

- ▶ The ongoing process of gathering and interpreting evidence about student learning for the purpose of determining where students are in their learning, where they need to go, and how best to get there. (Growing Success)

**Assessment “for” Learning directly answers my question :**

**“How can I help my students do better tomorrow?”**

# Assessment “as” Learning

- ▶ The process of developing and supporting student metacognition. Students are actively engaged in this assessment process, that is they monitor their own learning; (Growing Success)

**Assessment “as” Learning** directly answers the student’s question :

**“How can I do better tomorrow?”**

# Assessment for and as Learning

- ▶ **First weeks of the semester**
- ▶  – establishing a positive classroom dynamic
- ▶  – laying the groundwork for assessment
- ▶  – starting a math talk learning community
  
- ▶ **Who are my students? How do they learn?**
  
- ▶ **The big ideas**  – What do I want them to know?
- ▶  – How will I know what they know?
- ▶  – How will I help them to move forward?
- ▶  – Evaluation: determining a mark from my assessments

# Assessment “for” Learning

*Find out what they know!*

*Find out what they think!*

## Graffiti – 5 Processes



Selecting  
Tools and  
Computational  
Strategies

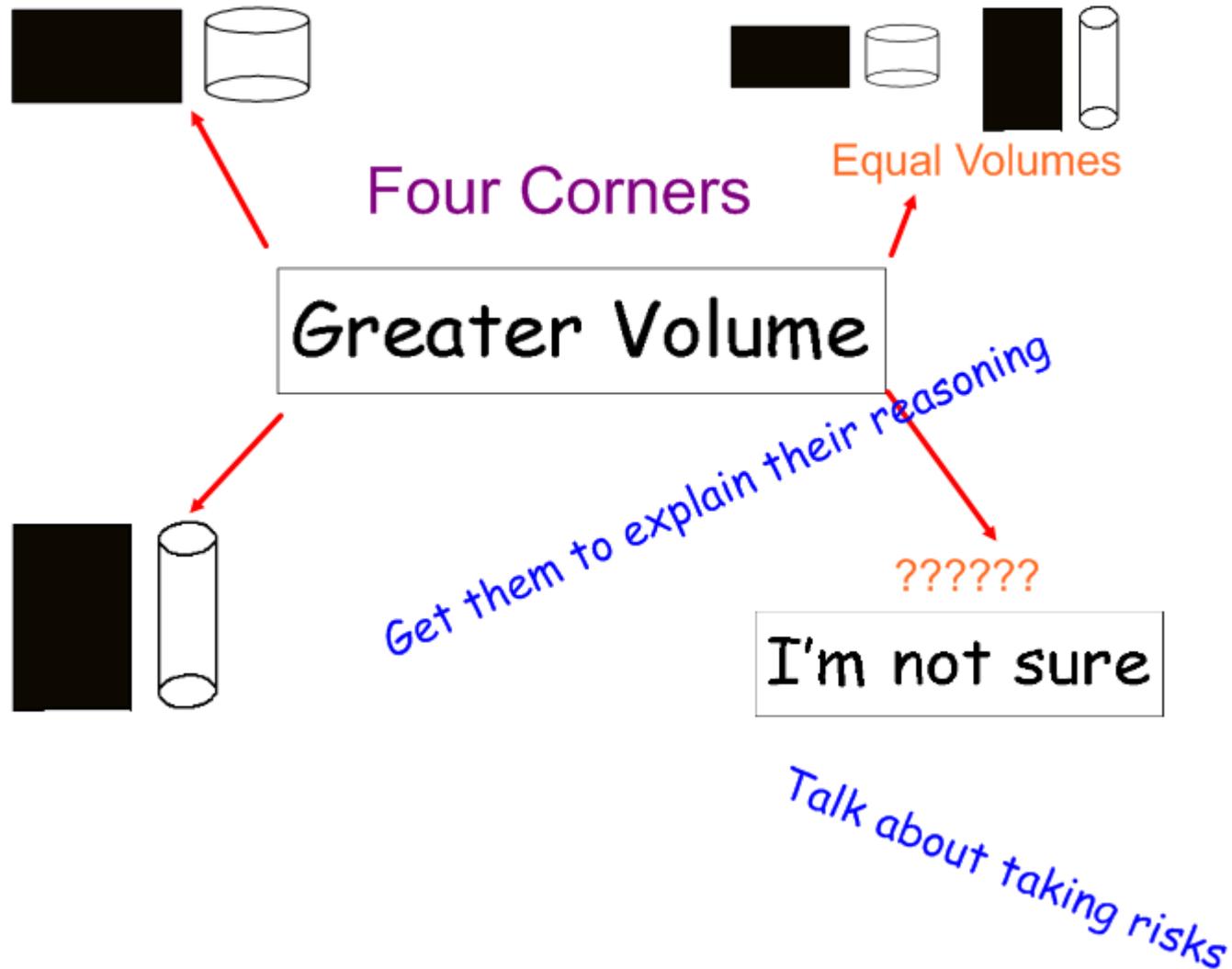
Reflecting

Connecting

Representing

Reasoning  
and Proving

# Assessment “for” Learning cont’d



# Assessment “for” Learning cont’d

Pose a question: What did you learn from today’s activity? What are you still wondering about?

Exit Cards

Date \_\_\_\_\_ Name \_\_\_\_\_

*It's not always what you think!*

# Assessment “for” Learning cont’d

Do you think the Pythagorean relationship will work for other shapes, for example semi-circles?

Yes



No



**(Let's Investigate)**

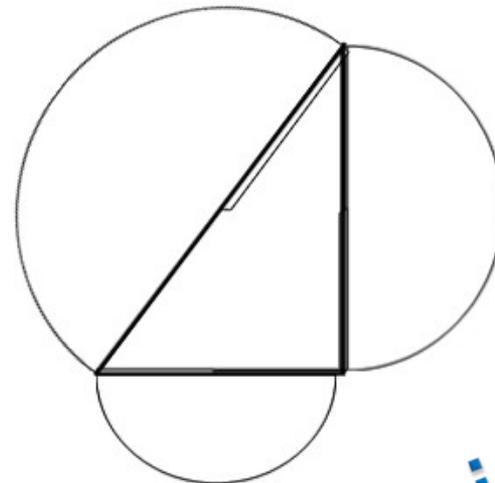
Triples

3 4 5

5 12 13

8 15 17

20 21 29



**Problem Solving**

# Assessment “for” Learning cont’d

## Problem Solving

- ▶ Anticipation Guide
- ▶
- ▶ Instructions
- ▶ Check **Agree** or **Disagree**, in ink, in the **Before** category beside each statement before you start the Growing Dilemma task.
- ▶ Compare your choice with your partner.
- ▶ Revisit your choices at the end of the investigation.

Before		Statement	After	
Agree	Disagree		Agree	Disagree
		1. If you double the length of a square, then the perimeter also doubles.		
		2. If you double the length of a square, then the area also doubles.		
		3. If you double the length of a square, then the length of the diagonal also doubles.		
Before		Statement	After	

# Assessment “as” Learning

## Quiz Record Sheet

Date	Knowledge	Mark

Date	Application	Mark

## Clicker Quizzes



# Assessment “as” Learning cont’d

- ▶ Learning Goals are posted and checked
- ▶ Success criteria are created, posted, and checked
- ▶ Thumbs up/sideways/down



- ▶ Fist of five



- ▶ Practice assessments –tests, tasks, journals

# Balanced Assessment

- ▶ Teaching with manipulatives means assessing with manipulatives
- ▶ Teaching with technology means assessing with technology



# Assessment “of” Learning

- ▶ The process of collecting and interpreting evidence for the purpose of summarizing learning at a given point in time, to make judgments about the quality of student learning ...to assign a value to represent that quality. (Growing Success)

**Assessment “of” Learning directly answers my question :**

**“How can I communicate my students' achievement?”**

# Assessment “of” Learning cont’d

- ▶ Students need a variety of ways to show you what they know and can do

13

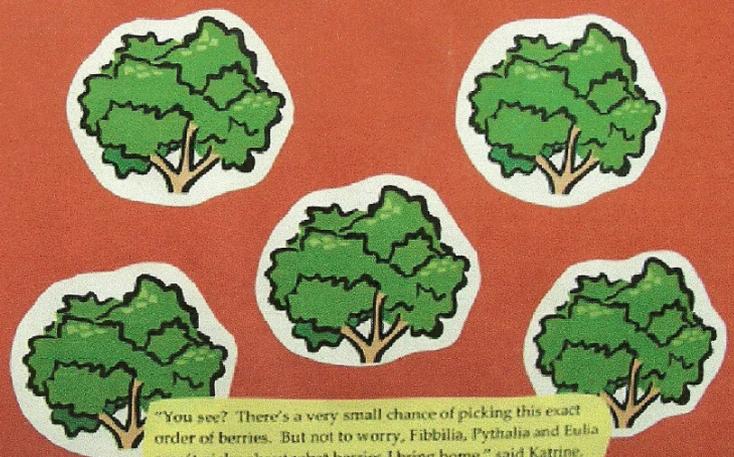
The Tuesday prior to her fateful 16<sup>th</sup> birthday, Katrine successfully completed writing out the first 1000 rows of Pascal's triangle. To reward her for this remarkable achievement, Fibbonia, Pythalia, and Eulia decided to celebrate. They sent the young girl out to pick berries while they prepared a party for her.

In the woods, the princess happily walked through the berry patch, and was joined by nearby birds, rabbits and deer. She thought of math, and was filled with so much joy that she decided to share her thoughts with her animal friends.

"There grew three types of berries in this patch; rasperryberries, strawterryberries, and bluezerryberries. Aren't they just lovely? They're among the largest and most delicious in this patch where, there are 22 rasperryberries, 58 strawterryberries, and 34 bluezerryberries. If I pick 4 rasperryberries, 5 strawterryberries, and 3 bluezerryberries, how many different combinations of berries can I pick?"

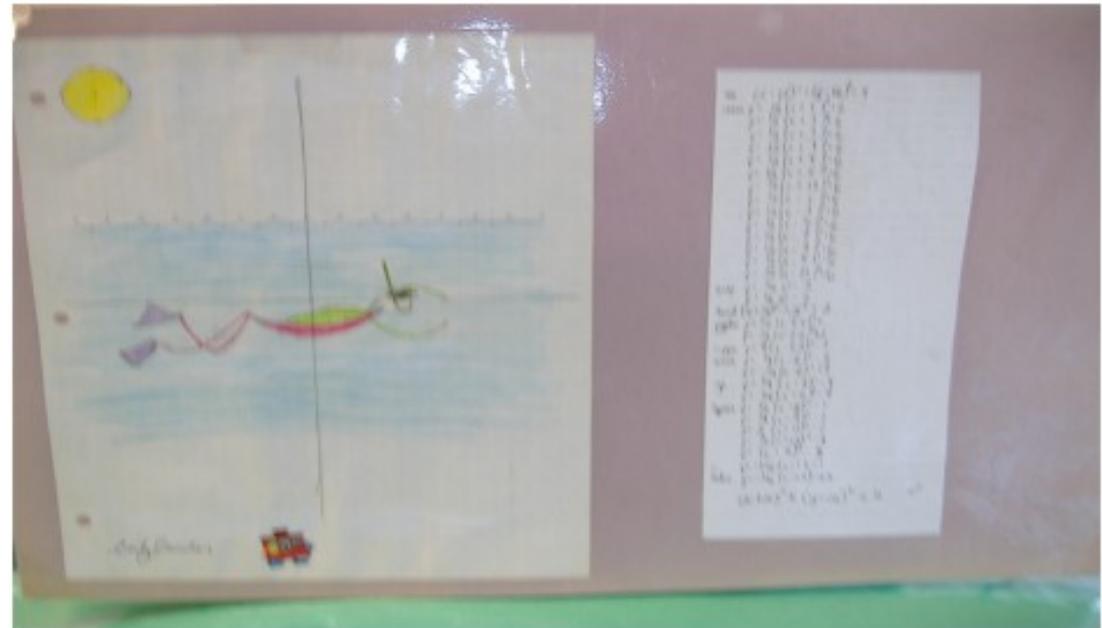
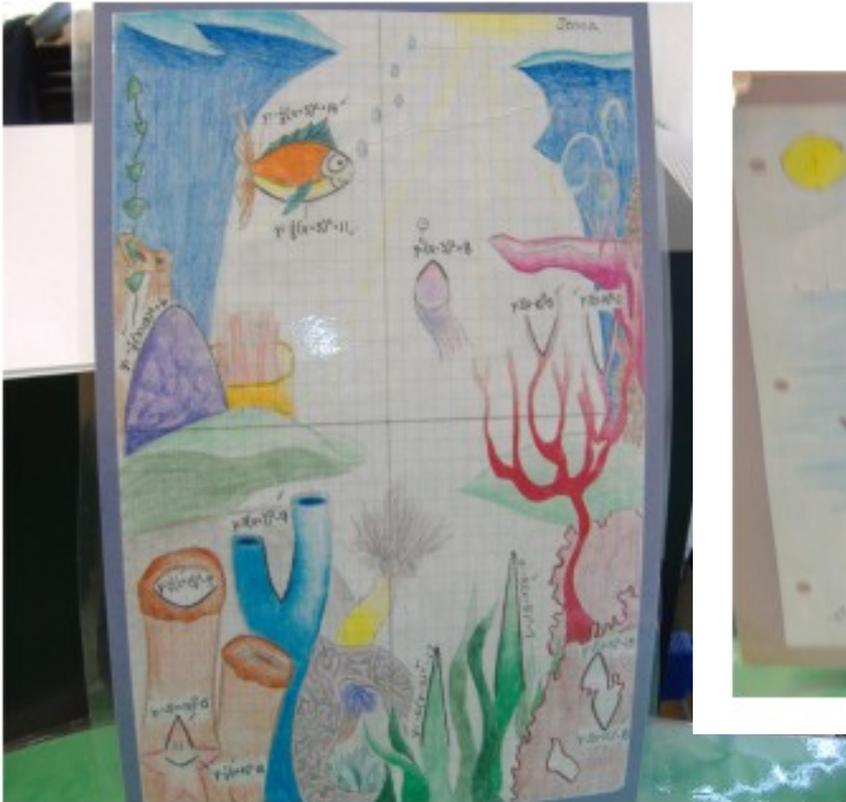
$$P(4 R, 5 S, 3 B) = \frac{22 \times 21 \times 20 \times 19 \times 18 \times 17 \times 16 \times 15 \times 14 \times 13 \times 12 \times 11 \times 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{58 \times 57 \times 56 \times 55 \times 54 \times 53 \times 52 \times 51 \times 50 \times 49 \times 48 \times 47 \times 46 \times 45 \times 44 \times 43 \times 42 \times 41 \times 40 \times 39 \times 38 \times 37 \times 36 \times 35 \times 34 \times 33 \times 32 \times 31 \times 30 \times 29 \times 28 \times 27 \times 26 \times 25 \times 24 \times 23 \times 22 \times 21 \times 20 \times 19 \times 18 \times 17 \times 16 \times 15 \times 14 \times 13 \times 12 \times 11 \times 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}$$

"You see? There's a very small chance of picking this exact order of berries. But not to worry, Fibbonia, Pythalia and Eulia aren't picky about what berries I bring home," said Katrine.

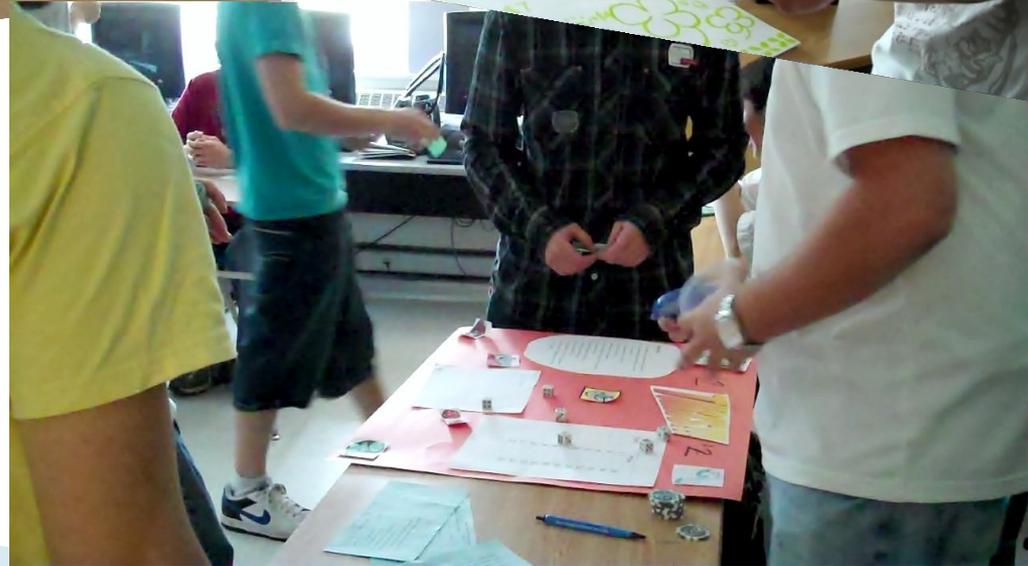


# Assessment “of” Learning cont’d

- ▶ Students need a variety of ways to show you what they know and can do



# Assessment “of” Learning cont'd



# Assessment of Learning cont'd

Mrs. Dalrymple: Final Marks MDM4U

Student \_\_\_\_\_

Knowledge %	Application %	Communication %	Thinking %	Term Mark	Project	Game Fair	Exam	Final Mark
				70%	15%	5%	10%	

Items not handed in:  Quiz Book  Scrapbook  Data Analysis Report  Games Fair

Mrs. Dalrymple: Final Marks MPM1D

Student \_\_\_\_\_

Knowledge %	Application %	Communication %	Thinking %	Term Mark	Line	geo	EQAO	Exam	Final Mark
				70%	desig	proj	5%	15%	
					5%	5%		/100	

Items not handed in:  Quiz Book  Geometry Project  Line Design

# Professional Development

- ▶ In the beginning with the change in curriculum:
  - Worked hard to understand and use the categories of the achievement chart – on my own, with my department, with other teachers, as well as attending/presenting many workshops on assessment
- ▶ Our department focus on the “Communication” and “Thinking” categories: we tried same tasks, we used rubrics and marked some tasks together, created summative tasks for each grade to move away from such heavy emphasis on tests and the final exam

# Professional Development cont'd

- ▶ Shared what I was learning and doing with others
- ▶ Through my board I helped facilitate a Professional Learning Community with a focus on Assessment for teachers from 7–12 where we shared ideas, tried new ways of assessing, shared the results and learned together
- ▶ Leader of my school assessment committee
- ▶ Invited visitors into my class to observe what I was trying to accomplish – this helped to clarify my thinking and made me very reflective about my assessment practices

# Professional Development cont'd

Reflect constantly about my work

