Math

PRE-ASSESSMENT 5

Finding Each Student's Pathway

SAMPLE MATERIAL INSIDE

FINDING EACH STUDENT'S PATHWAY

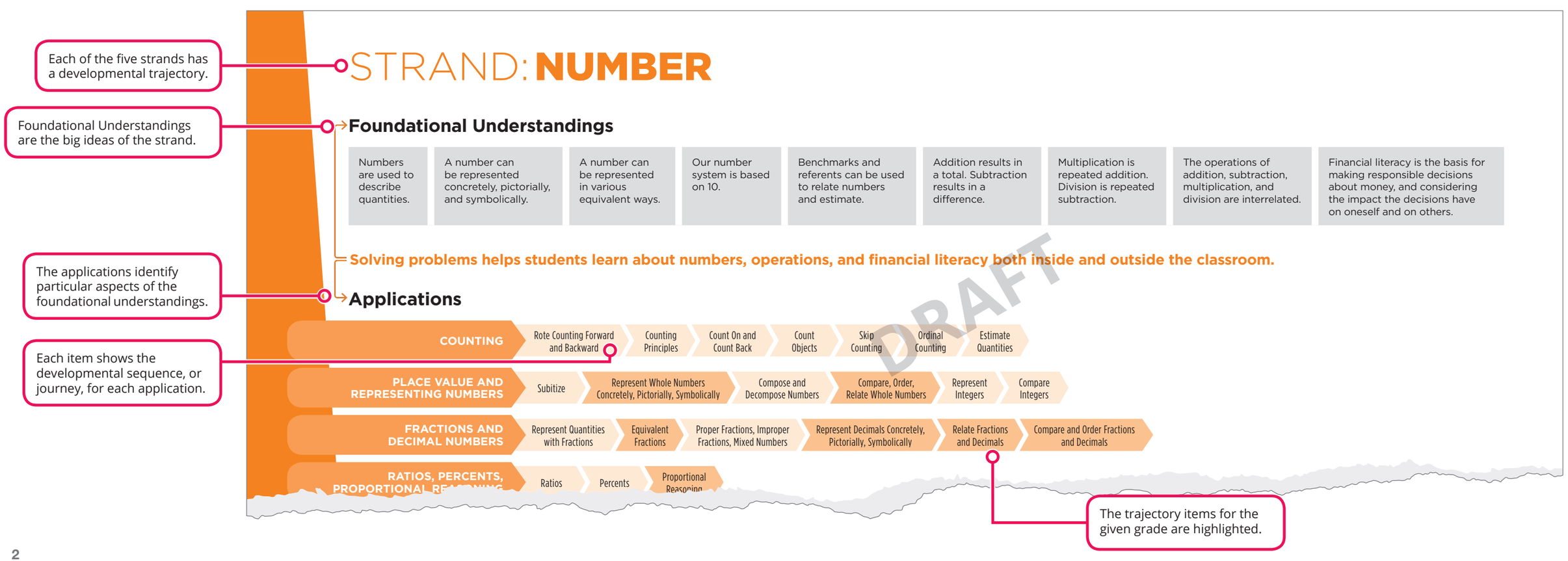
Math Pre-assessment is a uniquely designed resource to help educators understand and customize each student's math education. The resource is developed by a team of expert math educators and backed by research. *Math Pre-assessment* enables educators to compare a student's math understanding to their curriculum, identify gaps in understanding and ensure each student is ready for new curriculum material all with this easy to use assessment tool.

Each pre-assessment is created from a DEVELOPMENTAL TRAJECTORY. These developmental trajectories are research-supported pathways that students go through to understand mathematics concepts and skills as they move along a learning continuum.

Key Features

- Provides the developmental trajectories to give a whole picture of math development from grade 1–6.
- Assesses whether students have the procedural knowledge and conceptual understandings for the grade specific curriculum.
- Pre-assessments identify where a student is on the developmental trajectory.
- Includes next steps for instruction, gap closing or intervention.
- Tracking tools are provided to keep a record of student readiness.

Developmental Trajectory



Answering The Question:
"Are My Students Ready?"

PRE-ASSESSMENT → **ANALYSIS CHART** → **NEXT STEPS**

- Each item on the trajectory has a pre-assessment
- Pre-assessments are a single page and take little classroom time
- Easy to administer and score

- Includes suggested answers, rationale and next steps

NEXT STEPS

- STOP: student needs gap closing
- CAUTION: student may have partial understanding or small gaps
- GO: student is ready to learn the grade level curriculum expectation or outcome

Resource Overview Grades 1–6

Developmental Trajectories
For each of the 5 Strands

Math Pre-assessments
For each item on the trajectory

Scoring Guide and Analysis Charts
Provided for each pre-assessment

Online Teaching Centre
Digital access

Initial question reaches back to prerequisite learning.

Assessment question focused on trajectory item.

Name _____ Date _____

Fractions and Decimals

MATERIALS
- pencil crayons

1. Colour the strip to show the fraction.
   a) $\frac{2}{10}$ b) $\frac{7}{10}$

2. Colour the strip to show the decimal.
   a) 0.2 b) 0.7

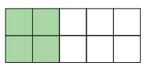
3. Write each fraction using words.
   a) $\frac{2}{10}$ _____ b) $\frac{7}{10}$ _____

4. Write each decimal using words.
   a) 0.2 _____ b) 0.7 _____

5. Write each fraction as a decimal.
   a) $\frac{2}{10}$ = _____ b) $\frac{7}{10}$ = _____

6. Write each decimal as a fraction.
   a) 0.1 = $\frac{\square}{\square}$ b) 0.5 = $\frac{\square}{\square}$ c) 0.8 = $\frac{\square}{\square}$

7. a) The 10-frame is shaded to show $\frac{2}{5}$. Which decimal is equivalent to $\frac{2}{5}$? Circle it.
   A. 0.2 B. 0.4 C. 0.6 D. 0.8
   b) Explain how you decided.



Analysis Chart pages XX–XX

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ANALYSIS CHART

Identifies the Strand, the Application(s) and the item(s) for the application.

Student needs gap closing.

Answer provided.

Recommended intervention.

Contains the "Look Fors" and an explanation for why the question is included.

Sample answer provided.

Look at: Identify possible items on the trajectory to close gaps.

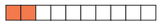
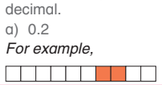
Provide experience: suggestions for scaffolding understanding of concepts and skills identified in the question.

Student is ready to learn the trajectory item.

Student has partial understanding and small gaps.

Fractions and Decimals: Pre-assessment page xx

NUMBER | **Fractions and Decimal Numbers**
Relate Fractions and Decimals

QUESTIONS	RATIONALE	SCORING	NEXT STEPS
1. Colour the strip to show the fraction. a) $\frac{2}{10}$ *For example,*  b) $\frac{7}{10}$ *For example,* 	Students represent fraction tenths pictorially. Connecting fractions and visual representations emphasizes the meaning of fractions.	incorrect 	Provide experience: • modelling tenths using fraction circles, fraction strips, and decimal strips For deeper intervention, go to *Leaps and Bounds 3/4*, pages 74–75.
2. Colour the strip to show the decimal. a) 0.2 *For example,*  b) 0.7 *For example,* 	Students represent decimal tenths pictorially. Using the same model to represent fractions and decimals reinforces the relationship between them.	incorrect	Provide experience: • relating the parts of the fraction (numerator, denominator) and model (such as whole strip and coloured part) and the parts of a decimal (place values, decimal point) and what they show
3. Write each fraction using words. a) $\frac{2}{10}$ = two tenths b) $\frac{7}{10}$ = seven tenths 4. Write each decimal using words. a) 0.2 = two tenths b) 0.7 = seven tenths	Students represent fraction and decimal tenths using words. Recognizing that equivalent fractions and decimals are read and written in words the same way reinforces the understanding that the fractions and decimals are different names for the same number.	incorrect	Provide experience: • discussing examples of things that have more than one name (for example, a person may be Mr. Smith, Bobby, or Dad; pop is also called soda or a soft drink) and brainstorming reasons why a thing might have different names
5. Write each fraction as a decimal. a) $\frac{2}{10}$ = 0.2 b) $\frac{7}{10}$ = 0.7	Students relate fraction and decimal tenths. Developing familiarity and ease with both fraction and decimal forms of numbers is essential in developing an awareness of different ways to record numbers.	incorrect	Provide experience: • describing real-life parts of a whole or group or measurements, using both fractions and decimals

QUESTIONS	RATIONALE	SCORING	NEXT STEPS
6. Write each decimal as a fraction. a) 0.1 = $\frac{1}{10}$ b) 0.5 = $\frac{5}{10}$ c) 0.8 = $\frac{8}{10}$	Students write fractions and decimals using symbols. Expressing numbers in different forms establishes an understanding of connections between representations.	incorrect	Look at: • representing quantities with fractions • representing decimals concretely, pictorially, symbolically
7. a) Which decimal is equivalent to $\frac{2}{5}$? Circle it. A. 0.2 B. 0.4 C. 0.6 D. 0.8 B b) Explain how you decided. *For example, I compared the number of shaded squares in the 10-frame, and $\frac{2}{5}$ is the same as $\frac{4}{10}$, so $\frac{2}{5}$ = 0.40.*	Students use a pictorial representation to relate fraction fifths to decimal tenths, and explain how they did this. Knowing the decimal equivalents of common fractions, such as half, quarter, fifth, and eighth, is preparation for learning in later grades that the relationship between equivalent fractions is multiplicative.	incorrect inadequate explanation correct	Provide experience: • using a decimal tower and fraction tower to identify equivalent fractions and decimals Provide experience: • showing a partner and describing to the partner the steps taken in solving problems Provide experience: • relating common fractions ($\frac{1}{2}$, fifths) to decimal tenths • discussing when it is more helpful to use a fraction tenth (such as to describe pizza slices or part of a group) or a decimal tenth (such as when adding tenths), and why

Math Pre-Assessment Order Information

Title	ISBN
Math Pre-Assessment Grade 1	
Book + Online Teaching Centre (Ontario)	9780176830892
Book + Online Teaching Centre (WNCP)	9780176833497
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