

Pre-Assessment

Pre-assessment refers to the tools, strategies, or processes used to determine a student's current level of knowledge (outcomes, skills, or concepts) related to present or future instruction.

Why Use Pre-assessment?

Pre-assessment can increase the likelihood of student success by allowing teachers to match students' instructional needs with instructional strategies and planning. Effective pre-assessment helps define students' learning paths from their current level of understanding to the content/skills required to achieve specific grade-level outcomes.

Advantages of Pre-assessment

Pre-assessment helps teachers

- determine what an individual student understands/knows already
- identify gaps in learning in order to determine what needs reteaching/revisiting
- identify a starting point for instruction
- design learning experiences that meet students where they are
- streamline planning in order to make efficient use of instructional time

Types of Pre-assessment

Pre-assessment can take many forms, including

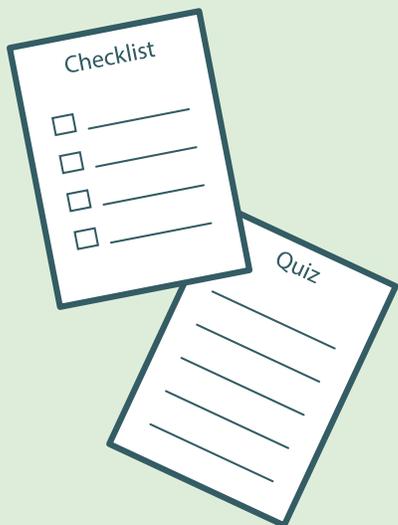
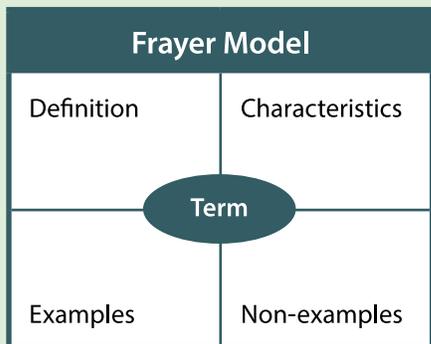
- checklists
- observations
- interviews
- paper-and-pencil tasks, quizzes
- graphic organizers (concept maps, Frayer model)
- KWL
- entrance/exit slips

Planning for Pre-assessment

In order to plan for pre-assessment, teachers need to

- know the intended grade-level learning outcomes and Big Ideas that will be the focus of the next teaching sequence
- identify prerequisite skills/knowledge that should be in place so that students are able to access the new learning successfully
- determine what information related to the prerequisite skills/knowledge and the new learning is the most useful to collect
- decide on the format for the pre-assessment so that it elicits the desired information in a concise and focused manner
- create the pre-assessment, making sure to define the criteria clearly

Note: It is important to talk to students about the purpose of the pre-assessment so that they understand that it will be used to design learning experiences that will help them be successful with the new material. This is especially true if the pre-assessment is in a more formal test or quiz format.



Example

Strand: Patterns and Relations **Topic:** Variables and Equations **Grade:** 4

Big Ideas

Mathematical situations and structures can be translated and represented abstractly using variables, expressions, and equations.

Equalities and inequalities are used to express relationships between two quantities.

The equal sign describes the balance that exists between the quantities on either side of it.

Grade 4 Outcomes (new learning)

4.PR.5. Express a problem as an equation in which a symbol is used to represent an unknown number.

4.PR.6. Solve one-step equations involving a symbol to represent an unknown number.

Prerequisite Skills

The student is able to

- demonstrate and explain the meanings of equality and inequality using manipulatives and diagrams (0 to 100)
- record equalities and inequalities symbolically using the equal symbol or the not-equal symbol
- solve one-step addition and subtraction equations involving symbols representing an unknown number

Pre-assessment Interview

Present the following equations. Have the student fill in the missing numbers.

$$16 + \square = 29 - 4$$

$$\triangle - 6 = 17 - 5$$

$$32 + 19 = \bigcirc + 20$$

$$100 = 64 + \hexagon$$

As the student works, ask questions such as the following:

- What is the question asking?
- What strategy did you use to solve the problem?

Criteria

The student is able to

- identify what the question is asking
- solve the equation maintaining the balance on either side of the equal sign
- explain the strategy used

Reflection and Discussion

- What types of pre-assessments are being used?
- How is the pre-assessment data used?
- What are some of the successes/challenges experienced with pre-assessments?
- What resources/supports might be needed?

Resources

These resources focus specifically on pre-assessment (also referred to as diagnostic assessment).

Nelson Education. *Leaps and Bounds toward Math Understanding* (Grades 1/2, 3/4, 5/6, 7/8). Toronto, ON: Nelson Education, 2011.

Pearson Canada. *Numeracy Nets: Quick Assessment Tasks, K–8*. Toronto, ON: Pearson Canada, 2008.