

## Publisher Questions to Western and Northern Canadian Protocol (WNCP) Mathematics Team

### Grade 1

1. Recently this Grade 1 outcome was removed: “5. Read and write the numeral, 0 to 100.”

However there are new indicators for the first outcome which cover what was in the deleted outcome: “Record a given numeral (0 to 100) symbolically when it is presented orally. Read a given numeral (0 to 100) when it is presented symbolically.” Could you please confirm whether the following assumption we’ve made is correct? ...Just because an outcome has been deleted doesn’t mean that the content is also deleted. The content is placed in the indicators so teachers know it’s still to be covered, but the emphasis is downplayed. Doing this allows the outcomes to focus on the big ideas.

**WNCP Response:** In reviewing the WNCP CCF, it was felt that “Read and write the numeral, 0 to 100” was more an achievement indicator than an outcome on its own so it was moved. This was part of the process of reviewing and editing the draft document.

2. In Grade 1 it appears that we can’t model numbers beyond 20 or talk about the meaning of the representation (e.g., 65 is 6 full ten frames and 5 more). If this is the case, why would we present numbers orally or show them symbolically? Is the reason so that students just use patterns to read and write numerals to 100?

**WNCP Response:** The act of modelling numbers is different from reading and writing numerals to 100. Modelling numbers can be done in many ways with a variety of materials. This is really getting at the student’s development of number sense and flexibility with numbers. Reading and writing numbers involves following a pattern and the numbers can only be written and read in one way. You could talk about the meaning of numbers greater than 20 but this is not to be assessed until Grade 2. Again, the focus of this curriculum is on the development of a deeper understanding of concepts so the scope of some outcomes has been narrowed to allow time for this to happen.

3. What use of technology is acceptable in Grades 1, 2, and 3? Can students be working with computers to support the math concepts they’re learning about, as long as we aren’t assessing their use of the technology? Does this also apply to the use of calculators?

**WNCP Response:** Technology could be used to explore patterns and make hypotheses at these grades; however, the use of technology is not what is to be

assessed. We have emphasized the importance of providing teachers with alternative strategies for teaching a concept and using technology could be **one** strategy provided to teachers. The focus must be on developing understanding of the concepts and not on the use of technology.

- 4. Is it acceptable to use geometric terms such as "sphere", "face", "prism" etc. when referring to 3-d objects so long as students are allowed to respond with natural language such as "round like a ball", the "flat part", "a box", etc.?**

**WNCP Response:** “Sphere,” “face,” and “prism” are not part of the Grade 1 curriculum; students are not expected to be able to use these terms in describing shapes.

#### **Grade 4**

- 5. Re: Grade 4 Number outcome 3**

**A new achievement indicator has been added: “Solve problems that involve addition and subtraction of more than 2 numbers.”**

**Is it expected that students will still solve problems involving addition and subtraction of 2 numbers?**

**What kinds of problems would involve subtraction of more than 2 numbers?**

**Does this mean two-step problems in which both operations are subtraction?**

**WNCP Response:** It is expected that students will solve problems involving the addition and subtraction of two numbers. It is also expected that students be given the opportunity to develop and apply strategies for adding more than two numbers.

#### **Grade 7**

- 6. The second achievement indicator for 7SP6 says this:**

**“Conduct a probability experiment for an outcome involving two independent events, with and without technology, to compare the experimental probability to the theoretical probability.”**

**Which technology are you thinking will be used?**

**WNCP Response:** Calculators and computers can be used to generate random numbers. There are many programs that will simulate the rolling of dice. Computer spreadsheets with a random function could be used or a computer program specifically designed to conduct probability experiments. There are many ways to use technology to achieve this outcome. The choice of a suitable one is up to the publisher.

- 7. In grade 7 Measurement students are asked to construct parallel lines and then are asked to explain how they know they are parallel. No where in the CCF do students learn about angle properties as they relate to parallel lines? Is it assumed that this will be dealt with in this outcome?**

**WNCP Response:** This is Grade 7 and the beginning of the development of this concept. Students need to construct meaning from what they already know. Students should be able to draw two lines that look parallel (with the instruments that they have) and explain that if they are always the same distance apart and never meet or intersect, then they are parallel. This shows that they know what parallel lines are and that they are defining them with the language they have at this time. If they go beyond this explanation, that is okay, but it should not be a requirement at this grade level.