



Grades 1-7

Student Numeracy Assessment and Practice (SNAP)

Teacher Guide

The Student Numeracy Assessment and Practice (SNAP) is a numeracy assessment used in the Okanagan Skaha School District for students in grades K-7. Originally created by educators in Chilliwack, it has been adapted by SD 67 Numeracy Helping Teachers with input from classroom teachers.

The SNAP aligns with BC Curricular Competencies and number sense content, using colour coding to indicate connections. The assessment data helps teachers select effective number sense activities and routines to support student learning. Once students' needs are identified, teachers can use daily high-yield routines and small-group or whole-class instruction to strengthen their number sense. Many helpful activities & resources to support instruction can be found at [67learns.com](https://www.67learns.com).

The SNAP format remains consistent for grades 2-7, though the specific number concepts—drawn from the BC Math Curriculum—vary by grade level.

When introducing your students to SNAP, project the SNAP student page to allow students to follow along as you **explicitly teach and model** each component of the assessment. As the SNAP is used within a school, students will become more familiar with the tool and will need less instruction.

In Grade one, teachers should administer the SNAP one-on-one to best observe students. If necessary, teachers should provide students with counters or materials to complete the decompose sections. Students who are unable to write their numbers in the counting section should be asked to orally count forward and backward for the teacher to observe their counting skill. Teachers may choose to scribe the real-life example for their grade one students at the beginning of the year in order to achieve adequate understanding.

MATERIALS NEEDED:

1. SNAP recording sheet for each student.
2. Rubric page – either one for each student or just one copy for your reference as the scale is on the bottom of each SNAP.

Grade	Prescribed Numbers for Assessment	Fall	Spring
1	Number concepts to 20	12	15
2	Number concepts to 100	34	86
3	Number concepts to 1 000	327	568
4	Number concepts to 10 000	3904	6138
5	Number concepts to 1 000 000	345,826	762 346
6	Number concepts to thousandths to billions	906,456	45.892
7	Integers concepts	534.21	-75

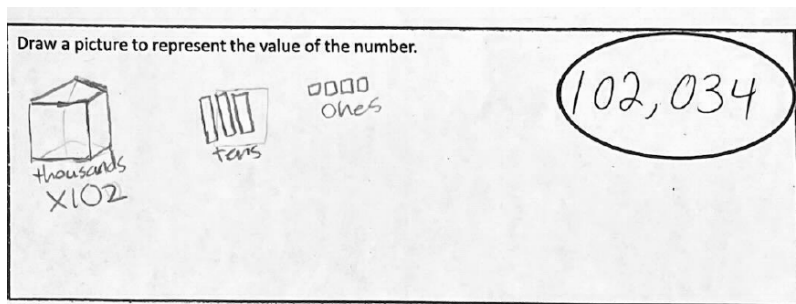
The SNAP can be used as a number sense practice tool using any number, but for teachers entering scores into Ed Plan Insight, please refer to the chart above for numbers.

DIRECTIONS FOR ADMINISTERING THE SNAP

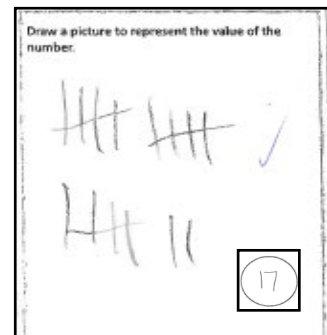
DRAW/REPRESENT

Ask the students to draw a picture that show the value of the number. Students might use base ten blocks, ten-frames or money to represent their number. With smaller numbers, they might use tally marks, dice or pictures of items to show understanding. **For Grades 1- 3 the student must show two different representations.**

A few examples:



Grade 5 student has included labels to clearly show value of number using place value



Grade 1 uses tally marks to show value of 17

COUNTING

Ask the students to begin at the selected number and count forwards and backwards skip counting by the number provided on the assessment. By the end of grade 3, it is expected that students can count flexibly from any starting point between 0-1000. Please refer to the chart below for numbers for counting by grade level.

Grade	Number Sense	
	Fall	Spring
1	Forward and backward by 1	
2	Forward 2, 10, Backward 1s	Forward by 2, Backward by 10
3	Forward by 5, Backward by 10	Forward by 20, Backward by 3
4	Forward by 6 Backward by 4	Forward by 300 Backward by 25
5	Forward by 25, Backward 5	Forward by 250 backward by 30
6	Forward by 250, Backward by 30	Forward by .12 backward by .6
7	Forward by .12, Backward by 14	Forward by 12, backward by 20

102	Count backwards by 10 (1, 2, 5 or 10) from the number.
100	86
98	76
96	66
94	56
92	46
90	36
88	26
86	16
Count forwards by 2 (1, 2, 5 or 10) from the number.	8

Grade 2 student counts forward and backward beginning at the prescribed number.

346,026	Count backward by 5 number.
346,001	345,826
345,976	345,821
345,951	345,816
345,926	345,811
345,901	345,806
345,876	345,801
345,851	345,796
345,826	345,791
Count forward by 25	345,786

Grade 5 student counts forward and backward beginning at the prescribed number.

DECOMPOSE:

Ask the students to create 3 equations that equal the given number. Students who are demonstrating full proficiency will be using grade appropriate operations in their equations. See below for “what to look for” consider the previous grade as well.

Grade	What to look for at the end of the year:
1	<ul style="list-style-type: none"> Any three correct equations Use of zero or 1 to achieve target number
2&3	<ul style="list-style-type: none"> Shows an understanding of making 10 and use of doubles and friendly numbers. Understanding of making zero to achieve a sum ($124-124+64=64$) Evidence of use of a pattern in any group of equations.
	<ul style="list-style-type: none"> Using more than 2 terms shows evidence of understanding of place value ($300+300+2+2=604$, or $200+200+4=604$) Evidence of making hundreds ($560+40+4=604$)
4	<ul style="list-style-type: none"> Using more than 2 operations (x, + and -) (e.g. $500 \times 4 + 3000 + 25 = 50$)
5	<ul style="list-style-type: none"> Using all 4 operations (not in the same equation- this can be encouraged when giving directions) Uses more than 2 terms Shows evidence of understanding of place value and makes friendly numbers to achieve target
6	<ul style="list-style-type: none"> Uses all operations (might include use of fractions or decimals)
7&8	<ul style="list-style-type: none"> Uses all operations, (might include use of fractions, integers, decimals or exponents) Demonstrates evidence of how negative numbers work Uses order of operations, brackets and including common fractions ($1/4$ and $1/2$)

Examples:

Decompose the number in three ways to make three equations.

- $301 + 83 = 384$
- $300 + 90 - 10 + 4 = 384$
- $200 + 100 + 80 + 1 + 1 + 1 = 384$

Grade 3

Decompose the number in three ways to make three equations.

- $2997 - 10 = 2987$
- $2000 + 987 = 2987$
- $1000 + 1907 + 80 = 2987$

Grade 4

Decompose the number in three ways to make three equations.

Grade 1: In this example, a student uses numerals and pictures to help decompose the number in the Fall of Grade One. Both are accurate, however by the end of grade one, students will decompose using an equation.

REAL-LIFE EXAMPLE:

Ask the student to provide a real-life example of the number that demonstrates an understanding of the value of number. For instance, “My house number is 26.” does not show an understanding of value; “We have 26 students in our class.” shows an understanding of “how much” 26 is. Students do not need to provide an exact example, rather a reasonable one.

Write a real-life example that shows the value of the number.

There were about 4507 vee's fans at the game last weekend!

Grade 4 example using a local context

Write a real-life example that shows the value of the number.

Today at 8am it was -12° , and throughout the day it dropped 17° . By 2pm it was -29° .

Grade 7 example using integers

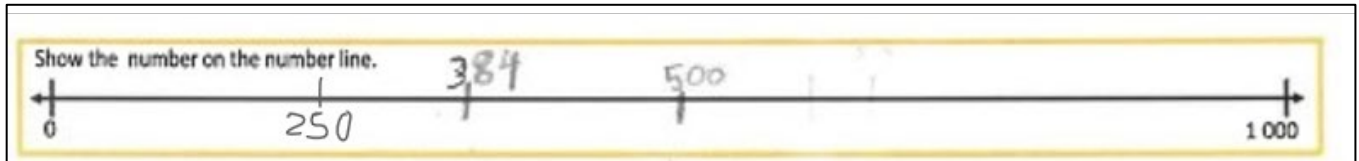
NUMBER LINE:

For grades 2-5, the endpoints to the number line are provided. To demonstrate full proficiency, students will add appropriate benchmarks to their number line to help situate the number.

Grade 2	25, 50, 75
Grade 3	250, 500, 750
Grade 4	2 500, 5 000, 7 500
Grade 5	250,000, 500,000, 750 000
Grade 6	Appropriate for number given
Grade 7	Appropriate for number given

Students should not add ALL numbers to a number line (e.g. all numbers between 0 and 20, if those are the endpoints or for larger numbers every decade or hundred or thousand etc.). It is possible that they do not need all the benchmarks listed. They do need to have a beginning, middle and end benchmark as well as one at the quarter point of their number. For example, if the number is 384, their number line should have 0, 250, 500 and 1000.

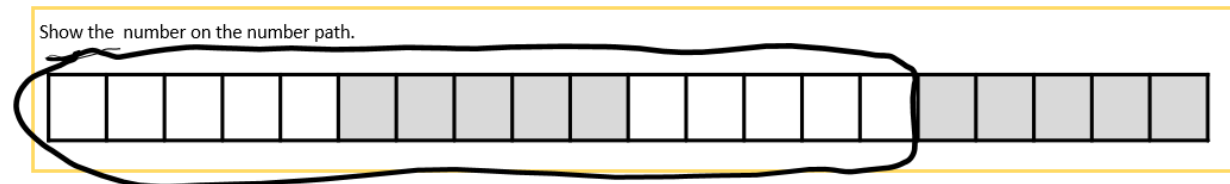
Example:



Grade 3: Indicated the center benchmark as well as the quarter benchmark in the lower half where the number is placed.

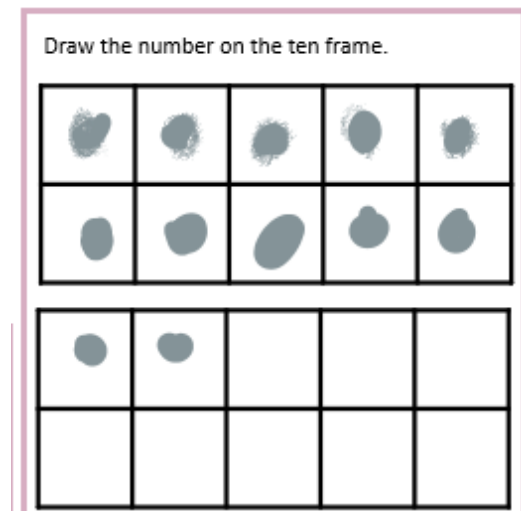
NUMBER PATH (Grade 1):

Ask students to circle the correct number of boxes on the number path. The boxes should be connected in one group. When working one-one, check to see if they are using benchmarks of 5 and 10 circle their number. Students at this age should be thinking of the number 15 as a whole quantity, not as the 15th position.



TEN FRAMES (Grades 1):

Students must represent their number on a ten-frame. This reflects the importance of the ten-frame model. Students should be familiar with using this model to develop number sense, represent numbers and add and subtract numbers.



REFLECTION (Grades 4-7):

Reflection score is not entered into Ed Plan. Reflections are an important component of our curriculum as they allow students to link ideas and construct meaning from their experiences. Students should have opportunities to reflect on their learning at the end of every lesson. Providing guiding questions for students is helpful to develop their proficiency with this skill:

- What strategies did you find useful with this task?
- What were your strengths and stretches?
- What are you proud of?
- What would you like to learn more about?
- I am working on...
- What I learned about myself as a mathematician is...

Reflect:
 This was ~~pretty~~ easy for me to do because I have done this before with bigger numbers before. I feel like the "decompose the number in three ways to make three equations" part took the longest because it just took a while to do. The easiest part of this is when I had to count backwards by 20 from the number, because there was a easy pattern.

Reflect:
 I think the most useful tool I used was my skip counting, it helped because knowing my times tables really well helped me alot with the counting forwards and backwards.

Two Grade 7 students reflect on their strengths after completing the SNAP

Overall Score: After marking, teachings will total the overall score. This number will be added to the final column in Ed Plan Insight.

Communicating & Representing: Draw 1 2 3 Words 1 2 3 Expanded Form 1 2 3	Understanding & Solving: Decompose 1 2 3	Connecting & Reflecting: Real-Life 1 2 3	Reasoning & Analyzing: Counting Forward 1 2 3 Counting Backwards 1 2 3 Number Line 1 2 3
1 – Emerging 2 – Developing 3 – Proficient		Total = 21	



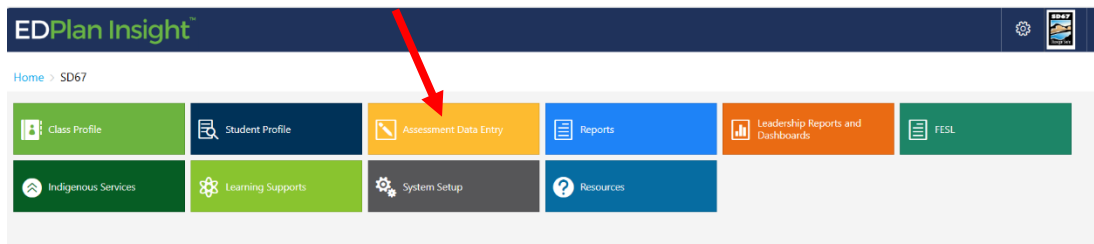
ENTERING DATA INTO EDPLAN INSIGHT

After marking your assessments, enter the corresponding numbers into each category on Ed Plan Insight.

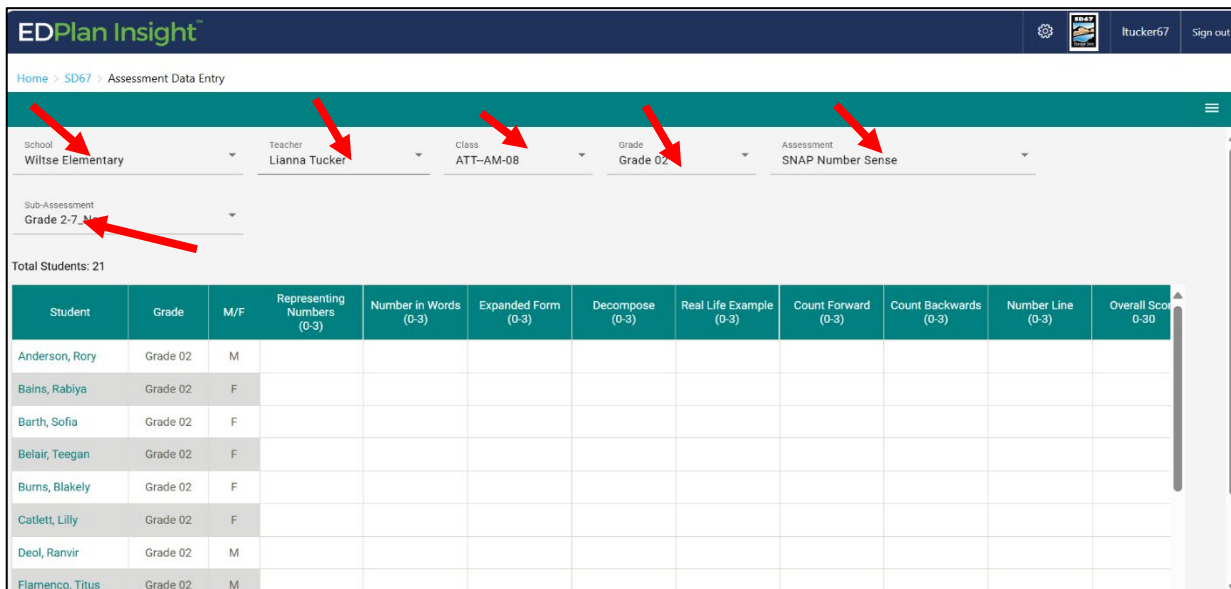
Login to your Ed Plan Insight account using your provided login credentials.

Website: portal4.edplaninsight.ca/sd67/

1. Select "Assessment Data Entry"



3. Select your school & name. Under **Class** select "Attendance" and "grade" (split grades will enter data for each grade separately.) **Select Assessment:** Number Sense Snap and then **Sub-Assessment:** "2-7 Fall" or "2-7 Spring"



The assessment categories will automatically appear once the sub-assessment is selected.

4. Enter SNAP data into corresponding categories by typing in the student score. The categories appear in the same order as the scoring at the bottom of the student recording page. Student names will auto-populate in the far-left column. You can enter scores later if any students are absent. Enter total score into overall column- it does not automatically total the score.

Total Students: 21

Student	Grade	M/F	Representing Numbers (0-3)	Number in Words (0-3)	Expanded Form (0-3)	Decompose (0-3)	Real Life Example (0-3)	Count Forward (0-3)	Count Backwards (0-3)	Number Line (0-3)	Overall Score 0-30
[Redacted]	Grade 02	M	3	3	3	3	3	3	3	3	24
[Redacted]	Grade 02	F	2	1	2	1	2	3	2	1	14
[Redacted]	Grade 02	F	3	3	3	3	2	3	3	3	23
[Redacted]	Grade 02	F	1	1	1	2	2	2	2	2	13
[Redacted]	Grade 02	F	2	3	3	2	2	3	3	3	21
[Redacted]	Grade 02	F									
[Redacted]	Grade 02	M									
[Redacted]	Grade 02	M									

As the teacher inputs data, colours will appear to correspond with emerging, developing proficient scores.

The form includes sections for:

- Student Name, School, and Date
- Test Instructions
- Directions
- Directions for the student
- Directions for the teacher
- A table for recording scores for various skills:

Representing Numbers (0-3)	Number in Words (0-3)	Expanded Form (0-3)	Decompose (0-3)	Real Life Example (0-3)	Count Forward (0-3)	Count Backwards (0-3)	Number Line (0-3)
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3

Name: _____

Fall Grade 1 Number Sense (0 - 20) SNAP

Count **forwards**
from the number.

Draw the number on the ten frame.

Count **backwards**
from the number.

Draw a picture to represent the value of the number.

Talk about or draw a real-life example that shows the value of the number.

Show the two numbers that come before and after.

Decompose the number in three ways to make three equations.

Show the number on the number path.

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<p>Communicating & Representing:</p> <p>Draw 1 2 3</p> <p>More/Less 1 2 3</p> <p>Ten Frames 1 2 3</p>	<p>Understanding & Solving:</p> <p>Decompose 1 2 3</p>	<p>Connecting & Reflecting:</p> <p>Real-Life 1 2 3</p>	<p>Reasoning & Analyzing:</p> <p>Counting Forward 1 2 3</p> <p>Counting Backwards 1 2 3</p> <p>Number Path 1 2 3</p>
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