**Estimation Big Ideas:**

**What is reasonable?** Developing a habit of looking at a situation and asking yourself, “What is reasonable?” is foundational to so much of what we do in math. It is the way we make estimates, but it is also how we check solutions or think critically about data in the real world. It is a perfect critical thinking guiding question.

\*here is where you can connect to the idea of a reasonable, knowledgeable, or educated guess.

**Using a referent:** if I can’t measure or count, could I compare to something helpful? For example, if I am given a small portion to count or measure, can I use this small portion to help me estimate? If I can’t understand a number that is given to me, might I compare it to something that I can picture? (e.g.: What is 1 mg? It is helpful to know that it is the mass of a grain of salt. What is 38,000? It is helpful to know that this is the population of Port Moody)

**Using a reasonable range:** Consider what might be too small? What might be too large? Where would my estimate be on a number line between too small and too large?

**Using benchmark or friendly numbers**: Helpful benchmarks include halfway points on number lines or friendly tens, hundreds, and thousands. You use benchmarks and friendly numbers to split up empty number lines so that you might estimate the position of numbers on number lines.

**Rounding numbers:** Very much like using benchmarks and closest friendly numbers. Rounding is made very simple if students feel confident with relating numbers on a number line.

Estimation websites and resources: <https://numeracylab.edublogs.org/> (choose “number sense” and then “estimation”)

First People’s considerations from the curriculum:

* Seaweed drying and baling. This link might be helpful to provide insight: <https://www.fnha.ca/Documents/Traditional_Food_Fact_Sheets.pdf>
* Estimating time using environmental cues.
* Estimating temperature using environmental cues.