A Treasure Hunt through the… Alaska Mathematics Standards

Directions: Knowing where to find information is just as important as knowing the information. A question can be answered easily and effectively when one knows how to use the available tools. Using the Alaska Mathematics Standards and Organization documents, search with others at your table (in groups of 2, 3, or 4) to navigate through this new document and find the answers to the following questions…

1. What are the 8 standards for Mathematical Practice?

   1. Make sense of problems and persevere in solving them.
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and critique the reasoning of others.
   4. Model with mathematics.
   5. Use appropriate tools strategically.
   6. Attend to precision.
   7. Look for and make use of structure.
   8. Look for and express regularity in repeated reasoning.

2. In the Standards for Mathematical Practice section, what follows each Practice?

   Grade-span descriptors that are meant to help students, parents, and educators to picture how these practices might be demonstrated by students.

3. What five Domains are listed for Kindergarten?
   1. Counting and Cardinality
   2. Operations and Algebraic Thinking
   3. Number and Operations in Base Ten
   4. Measurement and Data
   5. Geometry

4. Which Domain is the same through grades K -12? Geometry

5. What new Domain is introduced in Grade 3? Number and Operations - Fractions

6. In what grade is the Domain in question 5 above completed? 5th

7. What is found at the beginning of each grade level and high school domain?

   K-8: Instructional Focus and overview of the critical areas
   9-12: narrative of the domain

8. What four critical areas should instructional time be focused on in Grade 2?

   Extending understanding of base-ten notation, building fluency with addition and subtraction, using standards units of measure, and describing and analyzing shapes (pages 16-17)

9. What is one standard Grade 4 students must know and be able to do with data?

   Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. (page 40)

10. Function begins in grade 8. What do students need to know and be able to do with functions?

    Define, evaluate, and compare functions; and use functions to model relationships between quantities (clusters on page 58–59)

11. Locate the high school standards in the document. How are the 9-12 Standards organized?

    1. Number and Quantity
    2. Algebra
    3. Functions
    4. Modeling
    5. Geometry
    6. Statistics and Probability

12. What is unique about the high school "Modeling" domain?

    There are no individual standards as there are for the other domains. The standards with connections to modeling are indicated by an asterick (*) throughout the other domains.

13. What does the (+) symbol mean in the 9-12 sections?

    These are standards that students would learn to take advanced courses – many of these.

14. Locate the Glossary for the Alaska Mathematics Standards. List any new terms to you.

    Answers will vary.

15. What is an 'Ah ha!' you have about the Alaska Standards? An 'Oh No!'?

    Ah ha! Answers will vary.

    Oh No! Answers will vary.