Unpacked South Dakota State Mathematics Standards

Purpose: In order for students to have the best chance of success, standards, assessment, curriculum resources, and instruction must be aligned in focus, coherence, and rigor. Unpacked standards documents are intended to help align instruction to the focus, coherence, and rigor of the South Dakota State Mathematics Standards. The standards have been organized in clusters as they are not so much built from topics, but rather woven out of progressions. Not all content in a given grade is emphasized equally in the mathematics standards. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. To say that some things have greater emphasis is not to say that anything in the standards can safely be neglected in instruction. Neglecting standards will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade.

Domain: Measurement and Data	Grade Level: 1

1.MD.B Cluster: Work with time and money

The primary focus of this cluster is establishing the relationship between parts to their whole in the form of minutes to hours and pennies to nickels and dimes.

This is an ADDITIONAL cluster. *Students should spend the large majority of their time (65-85%) on the major work of the grade. Supporting work and, where appropriate, **additional work should be connected to and engage students in the major work of the grade.*

1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

1.MD.5 Identify nickels and understand that five pennies can be thought of as a nickel. Identify dimes and understand ten pennies can be thought of as a dime. Count the value of a set of coins comprised of pennies, nickels, and dimes.

Aspects of Rigor: (Conceptual, Procedural, and/or Application) *.*

Conceptual Understanding	*Procedural Fluency*	*Application*
Recognize how minutes and hours are represented by the hands on an analog clock or the numbers on a digital clock Understand the relationship between the hour and minutes **(1.MD.3)**	Tell and write the time in hours and half hours **(1.MD.3)**	
Understand the relationship between pennies and nickels Understand the relationship between pennies and dimes **(1.MD.5)**	Count the value of a set of coins made up of a combination of pennies, nickels, and dimes **(1.MD.5)**	

Enacting the Mathematical Practices - Evidence of Students Engaging in the Practices

1. **Make sense of problems and persevere in solving them.**
    - Recognize that an object can be used to name a unit of length
    - Express length with a whole number, even when the unit lengths are not a perfect whole.
2. **Reason abstractly and quantitatively.**

- Reason about the data and solving problems with the information from the data: what has the most, least, relationships, etc.
3. **Construct a viable argument and critique the reasoning of others.**
   - Ask and answer questions about data
   - Explain reasoning (measurement, time, money, and data)
4. **Model with mathematics.**
   - Use data to solve everyday problems
5. **Use appropriate tools strategically.**
   - Use standard and non-standard measurement tools to express length
6. **Attend to precision.**
   - Measure end-to-end without gaps
   - Organize and represent data
7. **Look for and make use of structure.**
   - Tell time with specific vocabulary such as "half past the hour"
   - Know five pennies are the same as a nickel and ten pennies are the same as a dime
   - Use tally marks to keep track when counting data sets
8. **Look for and express regularity in repeated reasoning.**
   - Use a clock to tell time and notice that 60 minutes makes one hour

Vertical and Horizontal Coherence and Learning Progressions

Previous Learning Connections	*Current Learning Connections*	*Future Learning Connections*
Kindergarten learners do not have specific standards for time: however, in the course of a day they are exposed to concepts of time such as the morning, or afternoon, etc. Learners recognize that a penny has the value of one, and they can count up to 20 pennies. **(K.MD.4)**	First grade learners are partitioning circles into halves and making the connection to the clock will help them understand the half hour. **(1.G.3)** Learners are counting by 1's, 5's and 10's and relating that to counting money. A major learning target for first grade is working with tens and ones. Learners notice the connection between tens and ones with dimes and pennies. **(1.NBT.2)**	Second grade learners tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.**(2. MD.7)** It is not until 3rd grade that learners begin to tell and write time to the nearest minute and measure time intervals in minutes. This is also when learners begin to solve word problems involving addition and subtraction of time intervals in minutes, for example, by representing the problem on a number line diagram. **(3.MD.1)** Second grade learners are using what they know about all coins to solve word problems and use the dollar and cents signs appropriately. **(2.MD.8)**

Vocabulary *(Key Terms Used by Teachers and Students in this Cluster):*

- Hour
- Half-hour/half-past/12:30
- Minutes
- Digital clock
- Analog clock
- Hour hand
- Minute hand
- Pennies
- Nickels
- Dimes

Relevance, Explanations, and Examples:

NOTE: When teaching how to tell time to the half hour, make sure to note that the hour hand is also moving halfway to the upcoming hour