Standards Aligned SystemPennsylvania Department of Education

**Attend to precision.**

\*Develop their mathematical communication skills.

\*Use clear and precise language in their discussions with others and in their own reasoning.

**Kindergarten**

**Grade Level Emphasis**

**PA Core Standards**

**Standards for Mathematical Practice**

***Tool Developed by***

**Central Intermediate Unit # 10**

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**MP 2**

**MP 8**

**MP 3**

**Look for and express regularity**

**in repeated reasoning**.

\*Notice repetitive actions in counting and computation, etc. For example, they may notice that the next number in a counting sequence is “one more.” When counting by tens, the next number in the sequence is “ten more” (or one more group of ten.)

\*Continually check their work by asking themselves, “Does this make sense?”

**Look for and make use of structure.**

\*Begin to discern a pattern or structure. For instance, students recognize the pattern that exists in the teen numbers; every teen number is written with a 1 (representing one ten) and ends with the digit that is first stated. They also recognize that 3 + 2 = 5 and 2 + 3 = 5.

**Use appropriate tools**

**strategically.**

\*Begin to consider the available tools (including estimation) when solving a mathematical problem.

\*Decide when certain tools might be helpful.

\*Decide that it might be advantageous to use linking cubes to represent two quantities.

\*Compare the two representations side-by-side.

**Model with Mathematics.**

\*Experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc.

\*Connect the different representations and explain the connections.

\*Use all of these representations as needed.

**Construct viable arguments**

**and**

**critique the reasoning of others.**

\*Construct arguments using concrete referents, such

as objects, pictures, drawings, and actions.

\*Begin to develop their mathematical communication skills as they participate in mathematical discussions involving questions like, “How did you get that?” and, “Why is that true?”

\*Explain their thinking to others and respond to others’ thinking.

**Reason abstractly and quantitatively.**

\*Begin to recognize that a number represents a specific quantity.

\*Connect the quantity to written symbols.

\*Create a representation of a problem while attending to the meanings of the quantities (quantitative reasoning).

**Make sense of problems and persevere in solving them.**

\*Begin to build the understanding that doing mathematics involves solving problems and discussing how they solved them.

\*Explain to themselves the meaning of a problem and look for ways to solve it.

\*Use concrete objects or pictures to help them conceptualize and solve problems.

\*Check their thinking by asking

themselves, “Does this make

sense?” Or they may try

another strategy.

**MP 1**

**MP 7**

**MP 5**

**MP 6**

**MP 4**