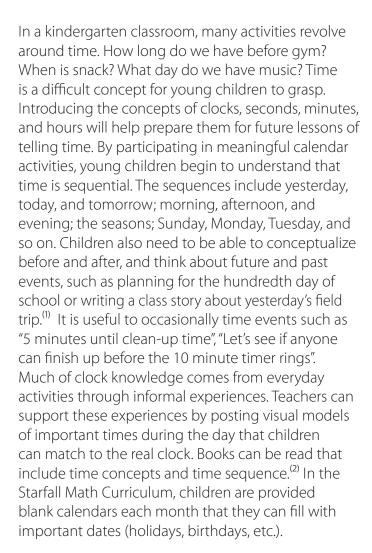
Unit 13 Research



Linear representations help children begin to understand and conceptualize that a day is a unit of time and to talk about it with increasing clarity. For example, to count the number of days they have been in kindergarten, children can add a link to a paper chain each day, or number a pattern of colored Post-it notes and place them on the classroom number line, or add a connect cube to a stack of cubes. The teacher can emphasize time-linked vocabulary, such as before, after, later, earlier, as the children add the new link. Picture schedules illustrating the schedule of class activities are often used, or a poster with photos of the day's activities in sequence can be helpful to young children. Displaying documentation of shared class events, such as field trips or class science projects of planting beans or measuring the growth of a sweet potato vine, can lead to meaningful discussions



that involve time-linked vocabulary (first day, third day, last week, etc.). (3)

Kindergarten children should also be introduced to standard units of measure to compare temperatures and to learn how to use a thermometer to measure temperature. (4) They need to have experiences with hot, warm and cold things and hot, comfortable and cold weather. Children can examine thermometers and discuss their experiences with them (going to the doctor for a check-up, measuring outdoor and indoor air temperatures, controlling the thermostat on their furnaces and air conditioners, etc.). They can experiment with measuring the temperatures of the water after adding ice cubes and/or warm water to the water table or science center. Children can also record results as they continue to add ice or warm water. Teachers can place outdoor thermometers outside the classroom and have children record the temperature each day in the morning, noon, and end of the day.

- (1) NCTM (National Council of Teachers of Mathematics). (2000). Principles and standards for school mathematics. Reston, VA
- (2) McMillen, S., and Hernandez, B. (2008). Taking time to Understand Telling Time. *Teaching Children Mathematics*, 15 (4), 248 -255
- (3) NAEYC & NCTM (National Council of Teachers of Mathematics). (2002). Early childhood mathematics: Promoting good beginnings. A joint position statement of NAEYC and NCTM. www. naeyc.org/about/positions/mathematics.asp
- (4) Charlesworth, R. and Lind, K. (2013) *Math and Science for Young Children*. 7th ed, Wadsworth Publishing Company: Belmont, CA

UNIT 13

Unit 13 Frequently Asked Questions

Why does the Starfall Math Program introduce time and temperature, since these are not included in the Common Core standards?

The Common Core standards are just that, a core of standards, or a baseline. Every state and district is encouraged to add standards to the Common Core list in order to ensure a well-rounded curriculum. Since the concepts of time and temperature appear in many state standards, Starfall has chosen to include them in its effort to produce the best possible kindergarten math curriculum.