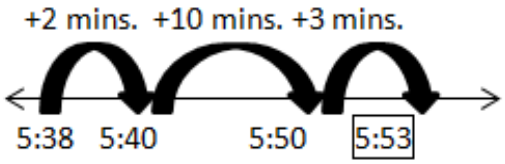
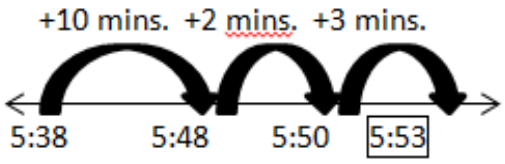
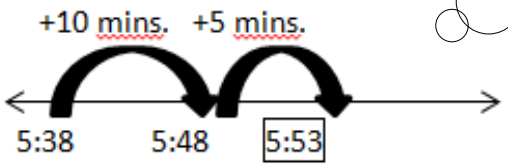
Grade 3 Important Math Information

Elapsed Time, Area, and Perimeter

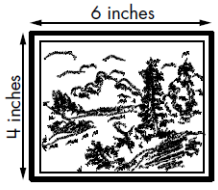
Dear Family,

We are beginning a new unit of study called *Elapsed Time, Area, and Perimeter*. In this unit of study we will focus on the concepts of elapsed time, perimeter, and area. There are three components of an elapsed time situation-- starting time, elapsed time, and ending time. We will learn about perimeter (the distance around a figure) and deepen our understanding of area (the number of unit squares needed to cover a flat surface of a figure). We will be solving perimeter and area problems. The specific learning goals your student will be working toward are listed below with examples of student work showing understanding of each learning goal.

Learning Goal: Solve word problems involving elapsed time in minutes.

Example Problem	**Example Student Solutions**
Lori is baking cookies for a party. She puts the cookies in the oven at 5:38 p.m. The cookies need to bake for 15 minutes. What time will the cookies be done?	**Number Line**  **OR**  **OR**  The cookies will be done at 5:53. *"The cookies went into the oven at 5:38, that's the start time. 15 minutes will elapse while they are baking. It doesn't matter how the 15 minutes is broken up. Any way I break up the 15 minutes will result in an end time of 5:53.*

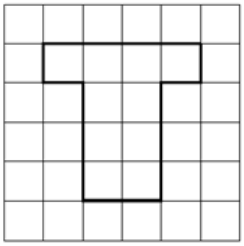
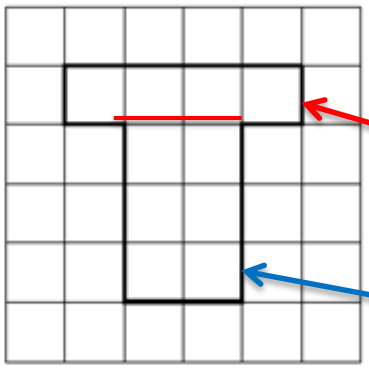
Learning Goal: Solve real world and mathematical perimeter problems, including problems involving area.

Example Problem	**Example Student Solutions**
What is the perimeter of this photograph?  	*'The opposite sides have the same measurements. To find the perimeter, I need to add all of the sides."* 4+6=10 4+6=10 10+10= 20 inches **OR** 6+6=12 4+4=8 12+8= 20 inches

Learning Goal: Understand the concepts of area and measure area by counting unit squares.

Example Problem	Example Student Solutions
Find the area of the rectangle. 	 2 + 2 + 2 + 2 + 2 + 2 **OR** 2 x 6 = 12 The area is 12 square units. *"**Area** can be measured by counting the total square units. You can also skip count 6 2's or 2 6's. You can also multiply 2 rows of 6 or 6 columns of 2."*

Learning Goal: Find area of rectangles and composite figures by multiplying.

Example Problem	Example Student Solutions
What is the area of the composite figure? 	 *"I found the **area** of each rectangle and added the two areas together."* **1 x 4 = 4** **4 + 6 = 10** **3 x 2 = 6** The area is 10 square units.

Mathematical Thinking and Practices Learning Goal:
Find and use efficient strategies that always work.

Things you can do at home to support your student throughout this unit of study:

Measure the length of items around the house like a table, carpet, or a couch.

Find the perimeter of a small table and a larger table. How much larger is the perimeter of the large table compared to the small table?

Measure the area of rooms in your house if you have square floor or ceiling tiles. How many squares are there? If you don't have square tiles, measure how many square pieces of paper it would take to cover the kitchen table, area rugs, or other rectangular items.

Go to the library and read these books:

- How Tall, How Short, How Far Away? by David Adler
- Spaghetti and Meatballs for All! by Marilyn Burns
- Measuring Penny by Loreen Leedy
- How Big is a Foot? by Rolf Myller.