## Grade 3, Module 3, Topic F

## $3^{\text {rd }}$ Grade Math

Module 3: Multiplication and Division with Units of 0, 1, 6-9, and Multiples of 10

## Math Parent Letter

This document gives parents and students a better understanding of the Eureka math concepts that are taught in the classroom. Module 3 of Eureka Math covers Multiplication and Division with Units of 0, 1, 6-9 and Multiples of 10. This newsletter will discuss Module 3, Topic F.

Topic F. Multiplication of Single-Digit Factors and Multiples of 10

## Vocabulary Words

- array
- associative property
- tape diagram


## Things to Remember!!!



This array shows 3 ones $\times 4=12$ ones. $30 \times 4$ is just 3 tens $\times 4$ which is equal to 12 tens, or 120 . We can move the dots over to the tens place. to show this, because the only thing that changes is the unit.

$$
\begin{aligned}
2 \times 20 & =2(2 \times 10) \\
& =(2 \times 2) \times 10 \\
& =4 \times 10 \\
& =40
\end{aligned}
$$

## Objective of Topic F

1 Multiply by multiples of 10 using the place value chart.
Use place value strategies and the associative property nx
$2(\mathrm{~m} \times 10)=(\mathrm{n} \times \mathrm{m}) \times 10$ (where n and m are less than 10$)$ to multiply by multiples of 10 .

3
Solve two-step word problems involving multiplying single-digit factors and multiples of 10 .

## Focus Area- Topic F

Multiplication of Single-Digit Factors and Multiples of 10
In Lessons 19-21 students will use the place value chart to multiply multiples of 10 . For example, to solve $2 \times 40$, they begin modeling $2 \times 4$ in the ones place. Students relate this to multiplying $2 \times 4$ tens, locating the basic fact in the tens column. They see that when multiplied by 10 , the product shifts one place value to the left.

In Lesson 19, students will multiply by multiples of 10 using a place value chart.

$2 \times 5=$ $\qquad$

In Lesson 20, students will use the associative property to multiply multiples of 10 .

a. $(2 \times 4) \times 10$
$=(8$ ones $) \times 10$
$\qquad$

There are 60 seconds in 1 minute. Use a tape diagram to find the total number of seconds in 5 minutes and 45 seconds.


There are 345 seconds in 5 minutes and 45 seconds.

In Lesson 21, students will solve two-step word problems involving multiplying single-digit factors and multiples of 10

