

## BUILDING AN

## UNDERSTANDING OF

MULTIPLICATION


Whole ciass Lessons and GUided Math Groups Active engagement and Games Intervention and Enrichment EXit Tickets


## I Plan ~ You Teach

## Helping you live your life AND

be the math teacher that gets results
are you Ready for Help?
Click the links for Lesson Plans that $\quad 4^{\text {th }}$ Grade Math align with TEXAS TEKS!

2 2nd $^{\text {Grade Math }}$ Lesson Plans Lesson Plans
$3{ }^{\text {rd }}$ Grade Math Lesson Plans

## $5^{\text {th }}$ Grade Math Lesson Plans

## I SEE YOU~

- struggling each week to write lesson plans that meet the rigor of the TEKS.
- searching endlessly for resources that will help kids learn math while being challenged and engaged.
- staying late everyday after school working on plans and creating everything from scratch.
You are exhausted from working with students all day, and still have to prep, write and create.

I SEE YOU~
SACRIFICING your time with your family and friends
to ensure success for ALL of OUR Children.
Want to know when sales are happening? Click links to follow
(P)
©iPohly INC
0

5

Unit 3: Building an Understanding of Multiplication

| Nane | 1 | 2 |  |  | 4 | 5 | 6 |  | 7 | 8 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | - |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | - |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

Unit 3: Building an Understanding of Multiplication

| Nome | 10 | 1 |  |  | B |  |  | 15 | 16 |  | $\square$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

Name $\qquad$ Building an Understanding of Multiplication

| LT | Statement | 1 | 2 | 3 | 4 | Evidence |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | I can determine the total number of objects <br> combined or arranged in arrays up to IO by <br> IO. |  |  |  |  |  |
| 2 | I can represent multiplication facts by using <br> repeated addition. |  |  |  |  |  |
| 3 | I can represent multiplication facts by using <br> equal-sized groups. |  |  |  |  |  |
| 4 | I can represent multiplication facts by using <br> arrays. |  |  |  |  |  |
| 5 | I can represent multiplication facts by using <br> area models. |  |  |  |  |  |
| 6 | I can represent multiplication facts by using <br> equal jumps on a number line. |  |  |  |  |  |
| 7 | I can represent multiplication facts by using <br> skip counting. |  |  |  |  |  |
| 8 | I can recall facts to multiply up to IO by IO <br> with automaticity. |  |  |  |  |  |
| 9 | I can solve one-step involving multiplication <br> within l00 using strategies based on objects. |  |  |  |  |  |


| 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: |
| I have no idea how to <br> do this. | I can do this with <br> some help. | I can do this by <br> myself | I can teach someone <br> to do this. |

Name $\qquad$ Building an Understanding of Multiplication

| LT | Statement | 1 | 2 | 3 | 4 | Evidence |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | I can solve one-step involving multiplication within 100 using strategies based on pictorial models, including arrays, area models, and equal groups. |  |  |  |  |  |
| II | I can solve one-step involving multiplication within 100 using strategies based on properties of operations. |  |  |  |  |  |
| 12 | I can solve one-step involving multiplication within 100 using strategies based on recall of facts. |  |  |  |  |  |
| 13 | I can represent and solve one-step multiplication problems within 100 using arrays. |  |  |  |  |  |
| 14 | I can represent and solve one-step multiplication problems within 100 strip diagrams. |  |  |  |  |  |
| 15 | I can represent and solve one-step multiplication problems within 100 using equations. |  |  |  |  |  |
| 16 | I can describe a multiplication expression as a comparison such as $3 \times 24$ represents 3 times as much as 24 . |  |  |  |  |  |
| 17 | I can determine the area of rectangles with whole number side lengths. |  |  |  |  |  |


| \| | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: |
| I have no idea how to <br> do this. | I can do this with <br> some help. | I can do this by <br> myself | I can teach someone <br> to do this. |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 1 \\ 3.4 D \end{gathered}$ | Determine the total number of objects when equally-sized groups of objects are combined or arranged in arrays up to IO by 10 . | Match arrays to equation | Build arrays and count them. <br> Statement: $\qquad$ equal groups of $\qquad$ $\qquad$ <br> Use repeated addition for modeling | Use arrays that have one factor larger than IO. |
| $\begin{gathered} 2 \\ 3.4 E \end{gathered}$ | Represent multiplication facts by using a variety of approaches such as repeated addition | Model facts using repeated addition | Build facts in multiple ways: <br> Repeated addition <br> - Equal groups <br> - Arrays <br> - Area models <br> - Equal jumps on a number line and skip counting. <br> Puzzle game for facts. | Begin modeling with base IO blocks for products of a number and 10 or products of a number and 100 .$\qquad$ $\times 10$$\qquad$ $\times 100$ |
| $\begin{gathered} 3 \\ 3.4 Е \end{gathered}$ | Represent multiplication facts by using a variety of approaches such as equal-sized groups. | Model facts using equal groups |  |  |
| $\begin{gathered} 4 \\ 3.4 E \end{gathered}$ | Represent multiplication facts by using a variety of approaches such as arrays. | Model facts using arrays |  |  |
| $\begin{gathered} 5 \\ 3.4 E \end{gathered}$ | Represent multiplication facts by using a variety of approaches such as area models | Model facts using area models |  |  |
| $\begin{gathered} 6 \\ 3.4 E \end{gathered}$ | Represent multiplication facts by using a variety of approaches such as equal jumps on a number line | Model facts using equal jumps on a number line |  |  |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7 \\ \text { 3.4E } \end{gathered}$ | Represent multiplication facts by using a variety of approaches such as skip counting. | Model facts using skip counting | See LT 2-6 | See LT 2-6 |
| $\begin{gathered} 8 \\ 3.4 E \end{gathered}$ | Recall facts to multiply up to IO by IO with automaticity | Teacher observation, timed testing | Reteach strategies. <br> Focus on Numerical <br> Fluency and <br> relationships. | $\begin{aligned} & ----\times 10 \\ & ----\times 100 \end{aligned}$ |
| $\begin{gathered} 9 \\ 3.4 K \end{gathered}$ | Solve one-step involving multiplication within IOO using strategies based on objects | Create a visual representation that communicates a solution strategy for the problem using objects | Give simple multiplication word problems. Have students understand the basic multiplication structure of a problem. Model using:; <br> - Objects <br> - Arrays <br> - Area models <br> - Equal groups <br> - Properties <br> - Strategies for recall | Move to two step problems involving addition or subtraction and multiplication Using: <br> - Objects <br> - Arrays <br> - Area models <br> - Equal groups <br> - Properties <br> - Strategies for recall |
| $\begin{gathered} 10 \\ 3.4 K \end{gathered}$ | Solve one-step involving multiplication within IOO using strategies based on pictorial models, including arrays, area models, and equal groups; | Create a visual representation that communicates a solution strategy for the problem using a pictorial model. |  |  |
| $\begin{gathered} \\| \\ 3.4 K \end{gathered}$ | Solve one-step involving multiplication within 100 using strategies based on properties of operations | Create a visual representation that communicates a solution strategy for the problem based on the properties of operations |  |  |
| $\begin{gathered} 12 \\ 3.4 \mathrm{~K} \end{gathered}$ | Solve one-step involving multiplication within IOO using strategies based on recall of facts. | Solve one-step involving multiplication within 100 using strategies based on recall of facts. |  |  |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 13 \\ 3.5 B \end{gathered}$ | Represent and solve one-step multiplication problems within IOO using arrays | Create a visual representation that communicates a solution strategy for the problem using arrays. | Give simple multiplication word problems. Have students understand the basic multiplication structure of a problem. Model using; <br> - Arrays <br> - Strip diagrams <br> - equations | Move to two step problems involving addition or subtraction and multiplication Using: <br> - Arrays <br> - Strip diagrams <br> - equations |
| $\begin{gathered} 14 \\ 3.5 B \end{gathered}$ | Represent and solve one-step multiplication problems within 100 strip diagrams | Create a visual representation that communicates a solution strategy for the problem using a strip diagram. |  |  |
| $\begin{gathered} 15 \\ 3.5 B \end{gathered}$ | Represent and solve one-step multiplication problems within IOO using equations. | Create a visual representation that communicates a solution strategy for the problem using equations. |  |  |
| $\begin{gathered} 16 \\ 3.5 \mathrm{C} \end{gathered}$ | Describe a multiplication expression as a comparison such as $3 x$ 24 represents 3 times as much as 24 . | Describe a multiplication expression as a comparison | Build concrete models of comparison statements. Use a strip diagram. | None |
| $\begin{gathered} 17 \\ 3.6 \mathrm{C} \end{gathered}$ | Determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row. | Determine the area of rectangles with whole number side lengths in problems using multiplication | Practice with area models. <br> Count squares and write a fact. <br> Gradually remove the squares so the student must rely on the fact. | Use problems given the area and one side to find the missing side. |


| Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
| :---: | :---: | :---: | :---: | :---: |
| Word Splash <br> Preview unit vocabulary | Mini Lesson <br> LT 2, 3, 6, 7 <br> Repeated addition <br> Number line <br> Skip counting <br> Equal groups | Mini Lesson <br> LT 4, I <br> Arrays <br> Determine amount | Mini Lesson LT 5, I7 <br> Area models <br> Determine area | Game: Pictionary LT I-7, I7 <br> Review all concrete models |
| GM: <br> Reteach Unit 2 | GM: <br> LT 2, 3, 6, 7 | GM: <br> LT 4, I | GM: <br> LT 5, I7 | GM: <br> Reteach 1-7, 17 |
| Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
| Math Huddle LT 9, IO, II, I2, I7 Problem Solving | Mini Lesson LT II <br> Properties of Multiplication | Independent <br> Practice <br> LT 9, IO, II, I2 | Mini Lesson <br> LT I <br> Strip Diagram | Independent <br> Practice <br> LT I3, I4, I5 |
| GM: <br> Reteach I-7, I7 | GM: <br> LT 9, IO, II, I2 | $\begin{aligned} & \text { GM: } \\ & \text { LT 9, } 10,111,12 \end{aligned}$ | GM: <br> LT I3, 14, 15 | GM: <br> LT I3, IU, I5 |
| Day II | Day 12 | BUILDING AN UNDERSTANDING OF MULTIPLICATION |  |  |
| Mini Lesson <br> LT 16 <br> Comparisons | Independent <br> Practice <br> LT 16 |  |  |  |
| GM: <br> LT 16 | GM: <br> Reteach |  |  |  |

## tporily Eqc.

Thank you for your dowhloqd!

I hope this helps your students!


A portion of the materials contained in this publication were created with the use of 1,2,3 Math Fonts. And Math Clipart
Graphics by


Copyright (C) iPohly INC. All rights reserved by author. This product is to be used by the original downloader only. Copying for more than one teacher, classroom, department, school, or school system is prohibited. This product may not be distributed or displayed digitally for public view. Failure to comply is a copyright infringement and a violation of the Digital Millennium Copyright Act (DMCA). Clipart and elements found in this PDF are copyrighted and cannot be extracted and used outside of this file without permission or license. Intended for classroom and personal use ONLY.


## Whole class Lessons and Guided Math Groups Active engagement and Games Intervention and Enrichment EXit TicketS

