

MULTIPLICATION fact strategy practice

Anyone who has taught upper elementary math knows the importance of fluency with multiplication facts and how difficult complex problems are for students who lack an understanding and automation with multiplication facts. We know that computational fluency is multi dimensional with a need for speed, accuracy, flexibility, and efficiency. We also know that multiplication facts are best learned by strategy, rather than moving from $\times 1$, $\times 2$, $\times 3$, etc. I've designed this resources with this research in mind, and with the busy teacher in mind as well. I know first-hand how challenging it can be to prep individual math activities for students.

This resource is to be used as a tool kit to help your students achieve success with multiplication. This program is designed to have students work on one set of facts a week. Students are able to move at their own pace through their multiplication facts, and there is a focus on both fluency and automaticity. With this program, students are expected to complete seven multiplication activities each week. Students should complete the activities in the given order to allow for development and conceptual understanding. These activities should be completed in class to ensure that all students are following through with the lessons and to allow the teacher to monitor growth and accuracy. The activities can be part of a math warm-up, math rotation, or even a special 10 minute math fact block. The resources are organized by set of math facts, so you can print and prep each set of student practice pages easily, without shuffling through multiple pages to find exactly what you need.

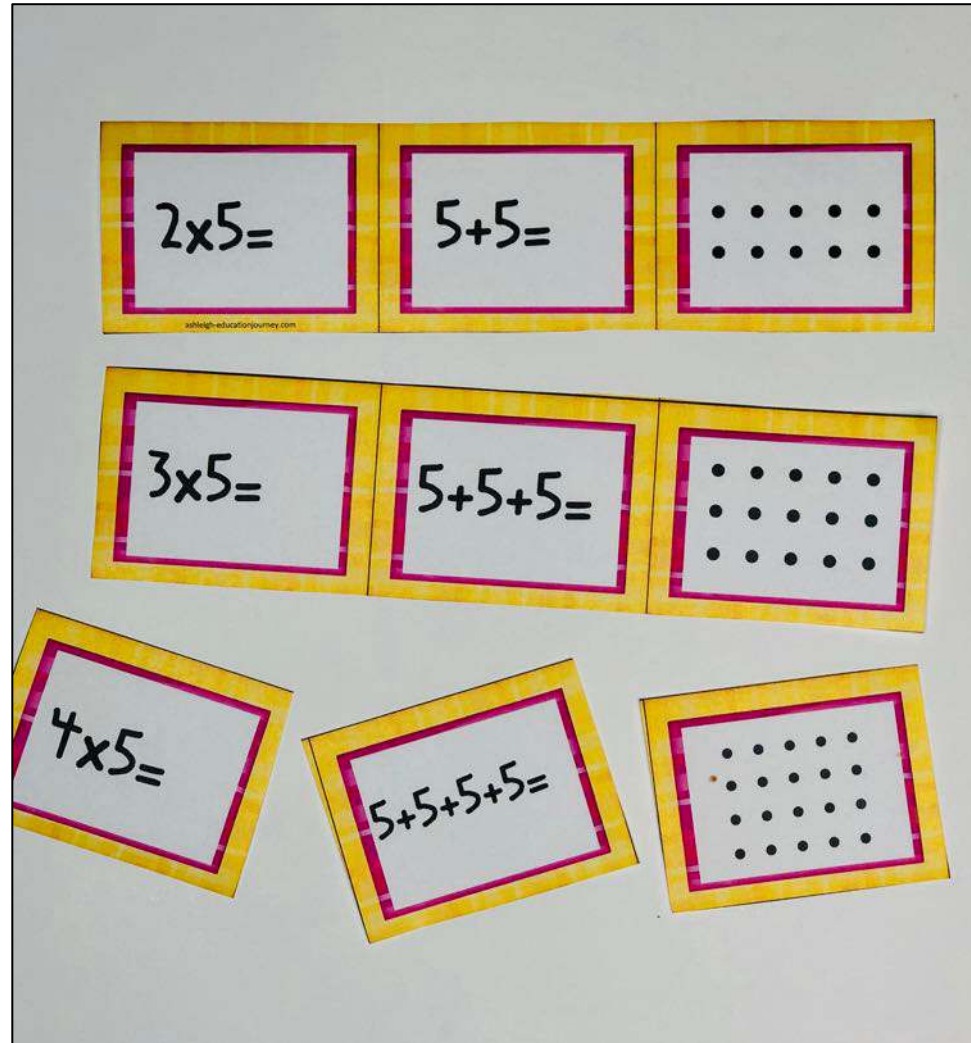
The following page shares a brief overview of what is included in the tool kit. I have also shared organization tips, strategies, and pictures to make this addition to your math instruction as seamless as possible!

What's included

- Multiple Representation Cards—Students should only use cards that apply to the strategy they are currently studying. For example, if a student is working on the five facts, they will only use the five cards. Print these task cards on card stock, and then laminate and cut out each card. Store each set in a separate labeled baggie.
- Multiplication Flashcards—There are three sets of flashcards for each level of multiplication facts. The first set focuses on concrete representation, where students use snap cubes or counters to model each multiplication fact. The second set of flash cards focuses on pictorial representations, where students have a pictorial representation of the fact on the flash card. The third set of flash cards focuses on abstract understanding. This is where students work on the flashcard in a traditional way. I recommend printing each level or set on a different color paper.
- Strategy Notebook—For each set of facts, students will complete a page in their Multiplication Fact Strategy Booklet. Since the one facts are not included in these activities, I recommend using the 1 fact page to model how to complete the strategy notebook. Students should model a different fact with a factor of the set of multiplication facts they are working on using different strategies. For example, in the 2 facts, each problem students model should include a 2. However, students should not repeat any problems. Students will model the problems with a grouping model, number line, and two arrays. Students also explain HOW to use a strategy to solve the set of problems.
- Word Problems—To help students conceptualize multiplication problems, they should also solve multiplication word problems. There is one page of multiplication problems for each set of facts. Students solve two multiplication problems that include that factor. Then, students write two multiplication problems, one where the number represents how many are in each group and one where the number represents how many groups there are.
- Individual Fact Practice—These are self-monitored quizzes, where students do not race a timer to finish a certain number of questions. Instead, students time themselves to see how long it takes them to complete all of the questions. This alleviates so much test anxiety associated with timed tests. Students will graph their progress to encourage meta-cognition.
- Study Plan Bookmarks—These help hold students accountable for practicing their math facts at school and at home.

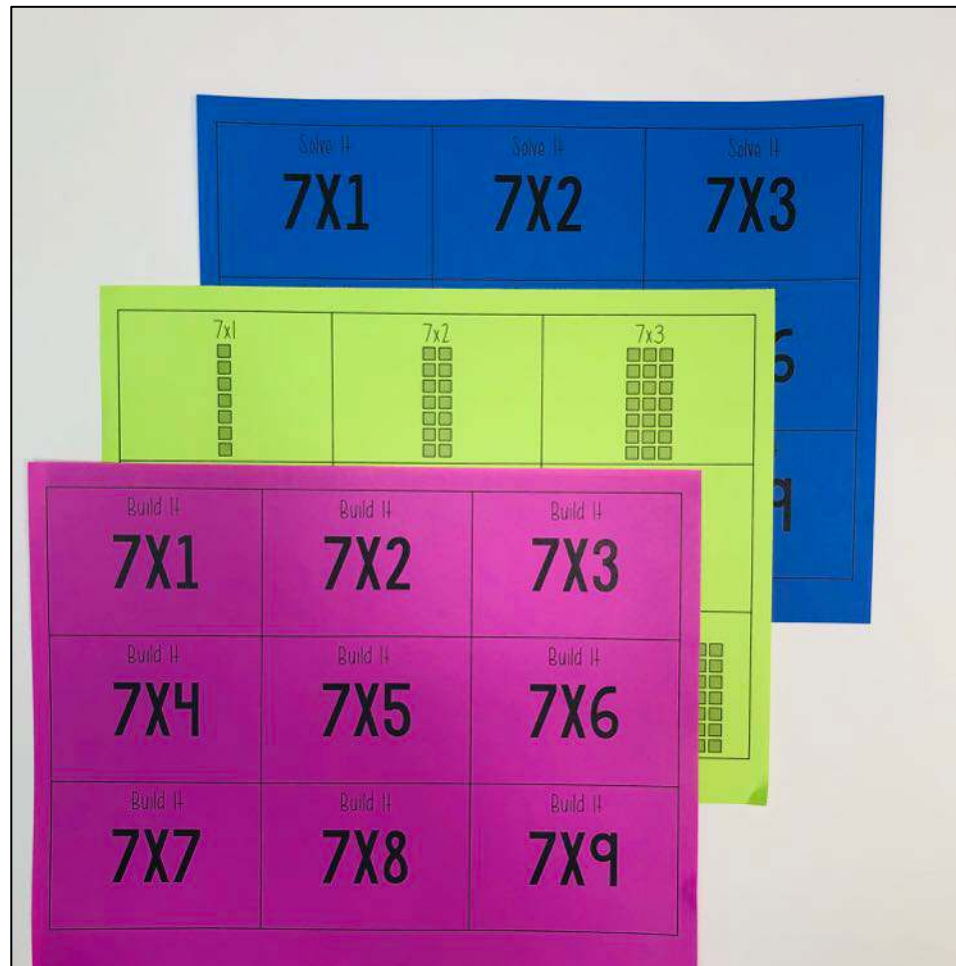
MULTIPLE REPRESENTATIONS TASK CARDS

The multiple representations task cards force students to think about multiplication as equal groups, arrays, and repeated addition. This allows students to picture that math fact. Students should match the various representations of each multiplication fact. Students should begin their practice with this activity.



MULTIPLICATION FLASH CARDS

Each set of flashcards gives students a different opportunity for multiplication practice. In the first set, students build the multiplication fact for each flashcard. These are the cards I printed on purple paper. In the second set of flashcards, students answer the multiplication problem using a visual model. This allows students to see the multiplication problem in a pictorial format. These are the flashcards I printed in green. The third set of flashcards is more abstract where students answer in a traditional format. This is the set I printed in blue.



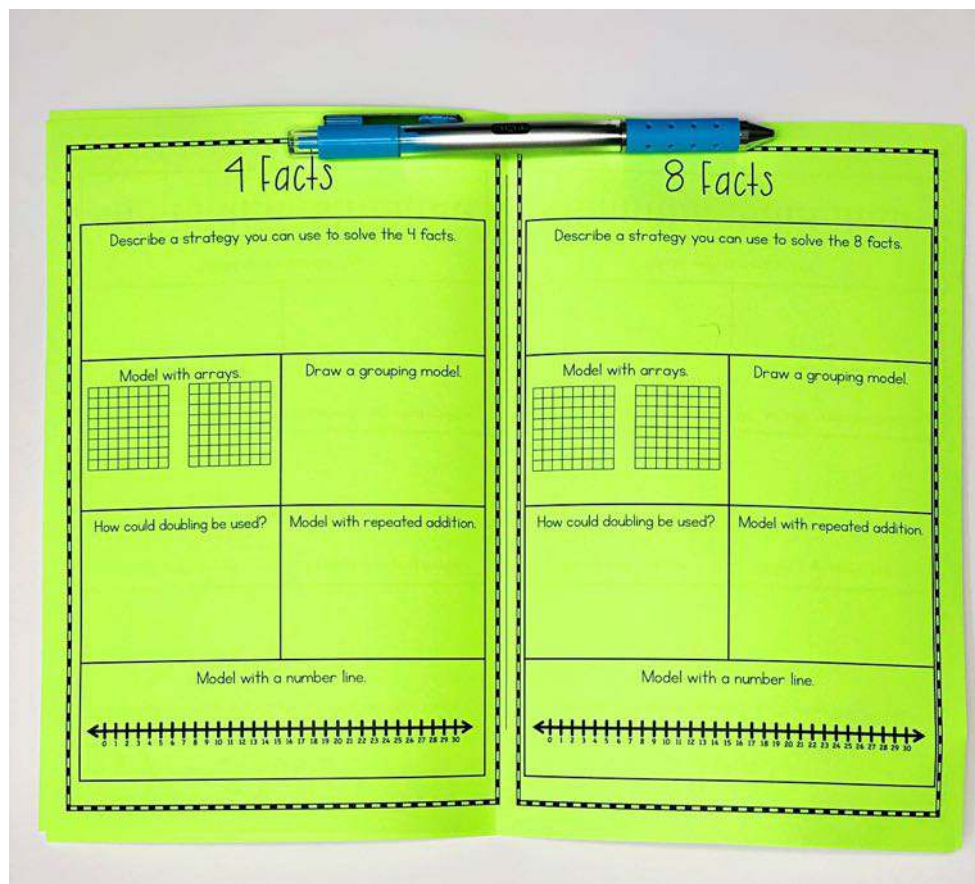
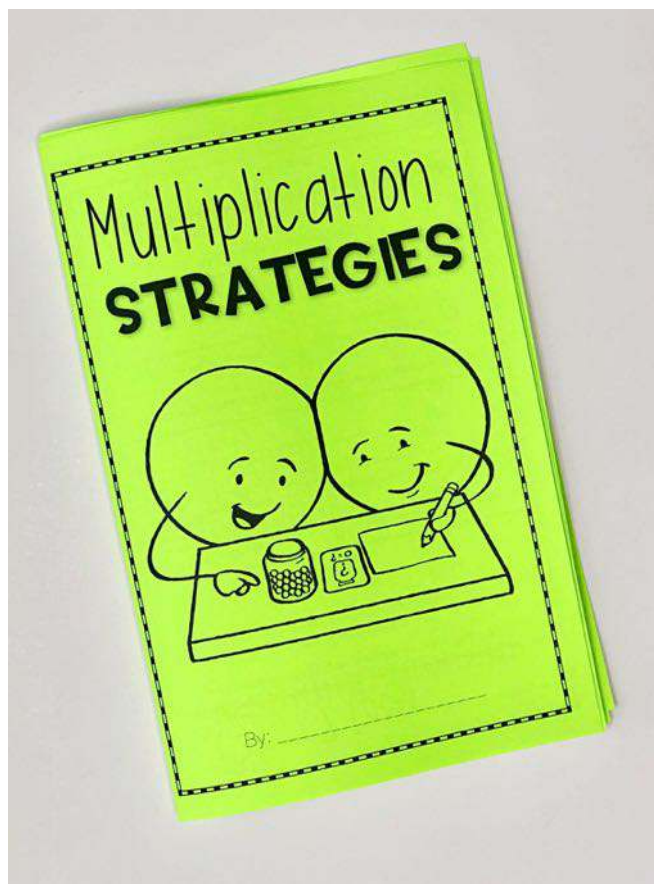
MULTIPLICATION WORD PROBLEMS

Multiplication should consistently be practiced in context. These multiplication word problems allow students to practice math facts in the context of a word problem. In this activity, students solve two word problems with a given factor. Then students write two word problems using the same factor. This allows students to put meaning into their math fact practice.

<p>Jesse saw four dogs. Each of the dogs had three charms on its collar. How many charms were there in all?</p> <p>$4 \times 3 = 12$</p> <p>There were 12 charms.</p>	<p>Zoe baked seven cupcakes. She placed four candles on each cupcake. How many candles did Zoe use?</p> <p>$7 \times 4 = 28$</p> <p>Zoe used 28 candles.</p>
<p>Write a multiplication word problem where there are four groups:</p> <p>There were four shelves in the bookcase. There were six books on each shelf. How many books were there?</p> <p>$4 \times 6 = 24$</p>	<p>Write a multiplication word problem where there are groups of four:</p> <p>My teacher had nine pencil boxes. There were four pencils in each box. How many pencils did my teacher have?</p> <p>$9 \times 4 = 36$</p>

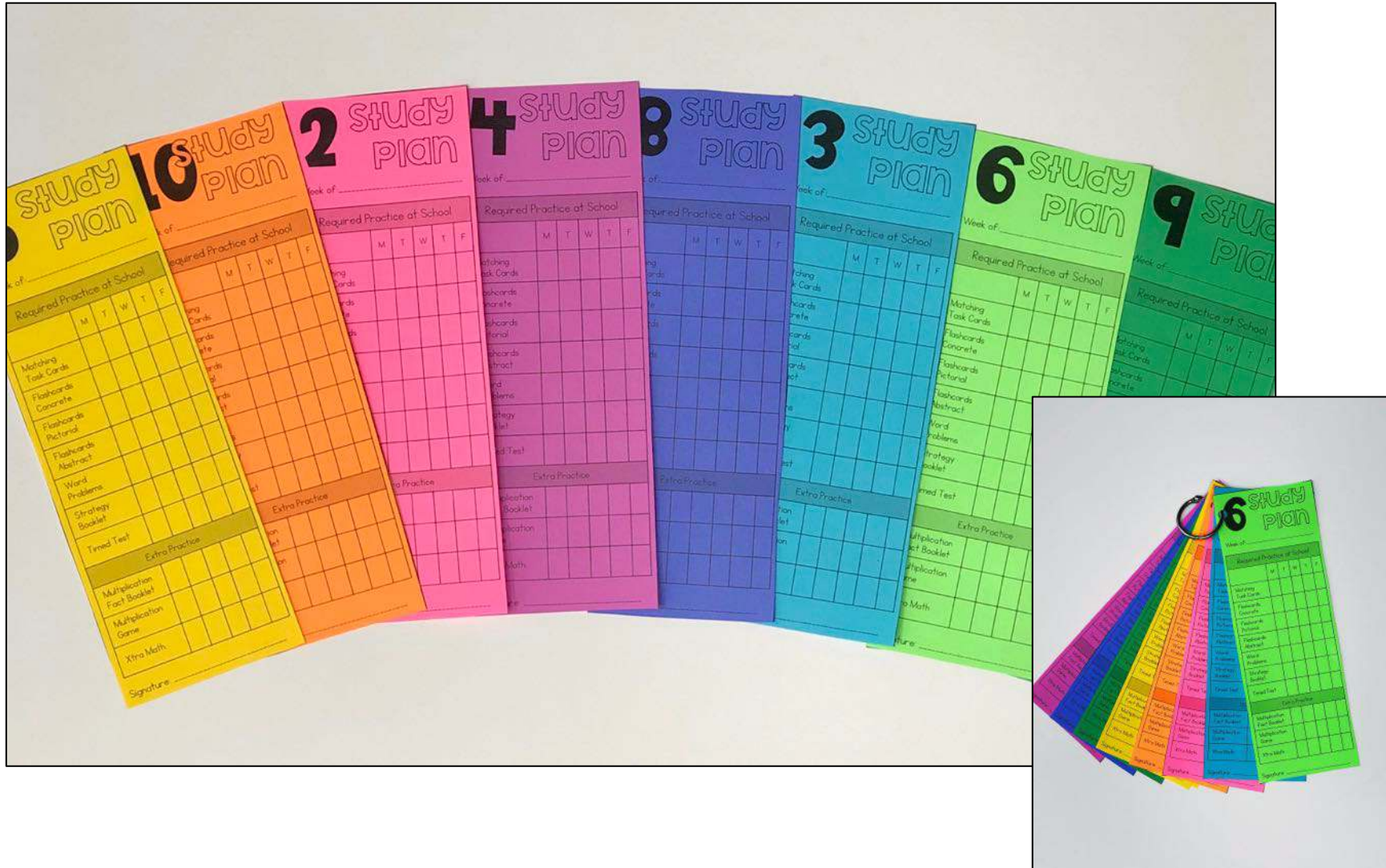
MULTIPLICATION STRATEGY BOOKLET

There is one page for each set of multiplication facts in the Multiplication Strategy Booklet. In the booklet, students will describe what strategy they can use to solve each set of facts. This gives students an opportunity to explain how they solve the multiplication fact. If the student has already reached automaticity with the week's practice, the student can explain how someone else could use a strategy to solve the fact. Students will also shade two arrays to model a multiplication fact, draw a grouping model, model with repeated addition, and model with a number line. At the completion of a page of the book, students will solve four math facts with the same factor.



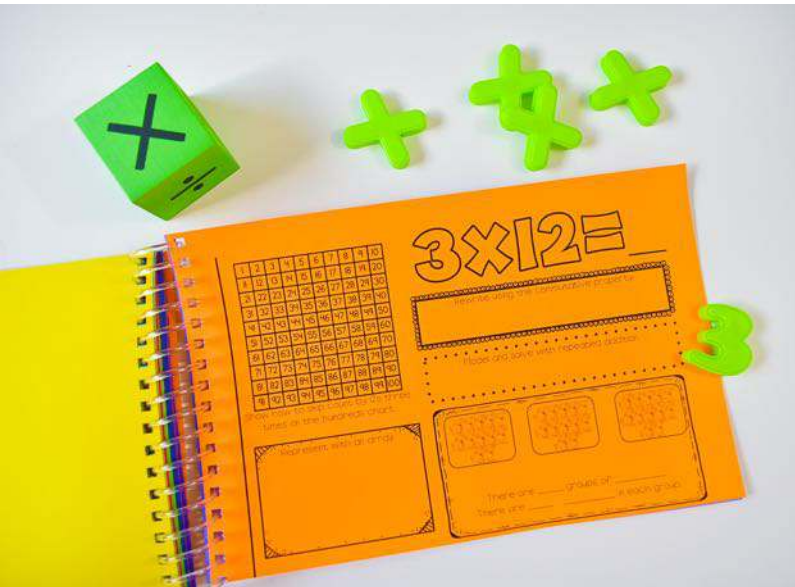
STUDY PLAN BOOKMARKS

Each week, students should receive a bookmark for the set of multiplication facts they are studying. You may keep these on a ring to keep all of students' completed bookmarks together for easy reference.



STUDY PLAN BOOKMARKS

The complete at school section of the bookmark includes all of the resources in this file. The extra things students can do for additional practice include some of my best selling multiplication resources.



<http://bit.ly/MultiplicationBooklet>

These multiplication fact booklets can be used to help students understand the concept of multiplication, as well as memorize multiplication facts. There are eleven total booklets that are each eight pages long. On each page students will: represent the multiplication fact on a hundreds chart; write another fact using the commutative property; create an array to represent the multiplication fact; model using repeated addition; identify the number of groups and the number in each group



<http://bit.ly/WeeklyMultiplicationGames>

Get 30 weeks worth of multiplication games that are PERFECT for homework and would make a great center or station activity. All of the games are no prep, and the only materials needed are common household items. This makes learning multiplication facts fun!