**Essential Standard:** 5.NSBT.5 Fluently **multiply** multi-digit whole numbers **using** strategies to **include** a standard algorithm.

**3rd grade:**

3.ATO.1 Use concrete objects, drawings, and symbols to represent multiplication facts of two single-digit whole numbers and explain the relationship between the factors (i.e., 0-10) and the product.

3.ATO.3 Solve real-world problems involving equal groups, area/array, and the number line models using basic multiplication and related division facts. Represent the problem situation using the equation with a symbol for the unknown.

3.ATO.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is a missing factor, product, dividend, divisor, or quotient.

3.ATO.5 Apply properties of operations (Commutative Property of Multiplication, Associative Property of Multiplication, and Distributive Property) as strategies to multiply and divide and explain the reasoning.

3.ATO.7 Demonstrate fluency with basic multiplication and related division facts of products and dividends through 100.

3.ATO.8 Solve two-step real-world problems using addition, subtraction, multiplication and division of whole numbers and having whole number answers. Represent these problems using equations with a letter for the unknown quantity.

3.ATO.9 Identify a rule for an arithmetic pattern (including patterns in the addition table or multiplication table).

**4th grade:**

4.NSBT.5 Multiply up to a fourdigit number by a one-digit number and multiply a two-digit number by a two-digit number using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using rectangular arrays, area models and/or equations.

4.ATO.2 Solve real-world problems using multiplication (product unknown) and division (group size unknown, number of groups unknown.)

**Prerequisite Skills:**

→ Understanding of place value

→ Basic facts 0-9

→ Multiply numbers ending in zeros (ex. 9 x 400)

→ estimate products

→ multiply by a one digit number

→ multiply a 2 digit by 2 digit number

**Pretest with Prerequisite Skills and 5th grade standard**:

**Learning Targets:**

I can multiply a multi-digit number by a one digit number.

I can multiply 2,3, and 4 digit numbers by a two digit number

I can multiply multiply a 2, 3, and 4 digit number by a three digit number using the standard algorithm.

**Extensions:**

I can solve word problems that involve multiplying multi-digit whole numbers.

I can multiply multi-digit problems involving decimals.

CSA: [Multiplication Test 5.NSBT.5](https://docs.google.com/document/d/1zEzm1KTFGABsQqnwPXKPAMM5gLL67GgJsIa8dy3HYaM/edit?usp=drive_link)

CFAs:

→ 1 digit:

[5.NSBT.5 CFA #1A](https://docs.google.com/document/d/1xe9AUbCL-FYp4linnA_ybsPTI1clm8dpxAtA6JxGHqY/edit?usp=sharing)

[5.NSBT.5 CFA #1B](https://docs.google.com/document/d/1BtMqft-fdfni6wfFnbS2F5DEP7IryWbn22TxLJD2lXs/edit?usp=sharing)

→ 2 digit

[5.NSBT.5 CFA #2A](https://docs.google.com/document/d/1V0T2qUykKsHvuj66xXXEGjAxwq1xRE2L9HSg5uTXwlc/edit?usp=sharing)

[5.NSBT.5 CFA #2B](https://docs.google.com/document/d/1Vmwno2q1deccF3HakgCrZJOG_QjlVnOTS4I8PvJ07Nw/edit?usp=sharing)

→ 3 digit

[5.NSBT.5 CFA #3A](https://docs.google.com/document/d/1wT3DtaViHm7yMDV01mZeb6amXEoxPj_kRGqK_BuZqp4/edit?usp=sharing)

[5.NSBT.5 CFA #3B](https://docs.google.com/document/d/1yZVW912-ue0VvmIlf2_RNMJeJTQVsF9v5YbtiiGpI5c/edit?usp=sharing)

Extensions Activity:

Break Out Room: ADD LINK