Math
Multi-Digit Multiplication
5th Grade

State Standard(s): 5.NBT.5 Fluently, efficiently, accurately, and flexibly multiply multi-digit whole numbers using an efficient algorithm.

Student Learning Objective(s): TSWBAT learn and apply different types of methods to multiply multi-digit numbers.

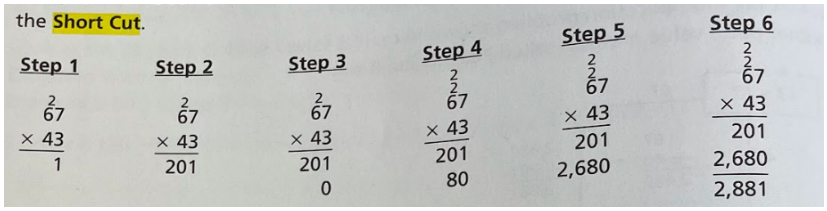
- **Materials:**
- Page 114
  - https://drive.google.com/file/d/1pNGLv73_wMjLHVdn7HBqrUQhtcYK0G2B/view?usp=sharing
- Page 115
  - https://drive.google.com/file/d/1zkaJel7-LWKZl4CXKtM9hMvZY41aikIy/view?usp=sharing
- Page 116
  - https://drive.google.com/file/d/1Zcsz08dzrEt1R25Z4fEtkXWUlO0vdk43/view?usp=sharing
- Standard Algorithm Video
  - https://learnzillion.com/lesson_plans/8041-use-the-standard-algorithm-for-multiplication/
- Multiplication Task Cards Game
  - https://drive.google.com/file/d/1ulRZZnnd_VGo4Gbw8f8OPc-89lG9AuR-/view?usp=sharing

ARK:

Have students get out their white boards and markers. Give them a 2 digit by 2 digit problem to solve. Tell them they can use any method they choose (place value sections, expanded notation, etc.). Once everyone has an answer written down, call on a student to come up to the board and solve the problem. Discuss their method. Repeat this with a few more practice problems. Encourage students to try solving it using different strategies. *(27 x 16) (43 x 32) (56 x 49)*

We do:

Show this video to help introduce/explain standard algorithm. (5:39)
Page 114 - Shortcut Method (standard algorithm). Carefully discuss each step in this method. Take special notice of the zero in step 3. This is the place holder. Relate it back to the video.



Students will do page 115 #9-11 with their table groups. They can choose whatever method they want to use. Come back together and check answers. Answer any final questions.

Two do:

Students will partner up and play the multiplication task cards game. They will choose their own partners. They can use any method that we have learned so far (place value sections, expanded notation, standard algorithm).

With a partner, shuffle the cards and spread them out face down.

Take turns flipping a card over and solving the problem. You must show your work somehow (white board, pencil paper, etc.).
Have your partner check your answer on the answer card.
If you get the answer correct, keep the card. If you answer incorrectly, put it back face down and it is your partner's turn.
The player with the most cards at the end of the game wins!

You do/ISS:

The students will complete page 116 problems #12, 14, 16, 18 on their own. When finished, they will turn it in to be checked for understanding.