**Solving Multi-Step Equations with the Distributive Property**

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| Standard(s): CCR Standard A.REI.3  Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters | Instructional Shift(s) and Explanation: Conceptual Understanding, Fluency, and Application. |
| Length of Lesson: 1 hour | **EFL’s Targeted:** |
| Materials and Resources Needed: PowerPoint, post-its, projector, smartboard/dry erase board, student handouts, fast food cutouts | |

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| Objective | DOK Level(s) | Activity(ies) | Assessment(s)/Check(s) for Understanding |
| Students will be able to solve two-step equations with one variable on their own. | 2 | PowerPoint, Group Practice, Independent Practice | Warm-up questions |
| Students will be able to use the distributive property | 2 | Combo meal practice | Group practice, homework |
| Students will be able to solve multi-step equations that contain the distributive property | 2 | PowerPoint, Group Practice, Independent Practice | Group practice, homework |

*\*Objectives should be tied directly to DOK Levels, an activity, and a form of assessment.*

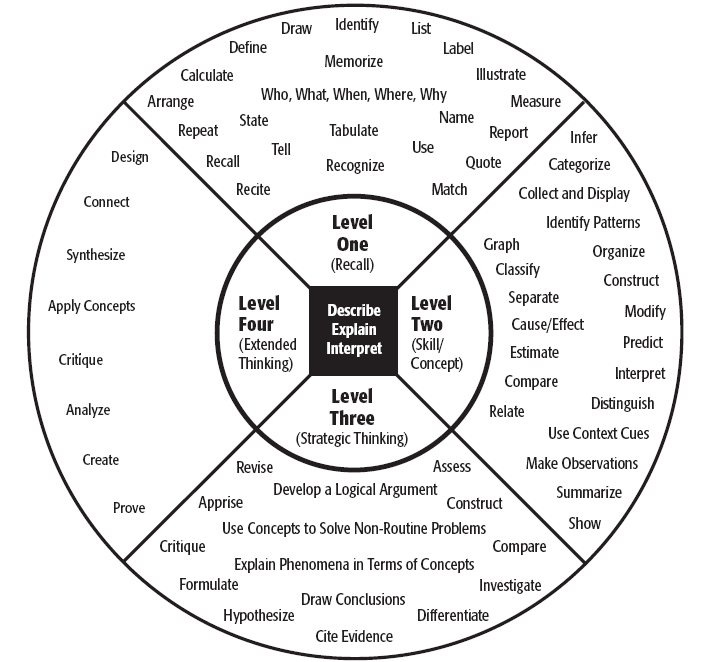
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| Lesson Flow |
| Warm Up/Introduction: Review of two-step equations. Have students think of synonyms for the word “distribute.” Students will put each synonym on a post-it and then post on the board. |
| Direct Instruction/Classroom Activities: First, students will review two-step equations during a warm-up activity. It is important that students are confident solving basic two-step equations before moving on. Students will participate in a PowerPoint demonstrating how to perform the distributive property. Then students will complete activity “Combo Meal Distributive Property” (instructions below). Then students will translate this knowledge into algebraic expressions and equations. Students will practice as a group throughout PowerPoint as teacher circulates to check for understanding. During the independent practice portion of the lesson, students will work on the practice page problems as pairs. They should agree together on how the problem should be worked and, also, agree on the correct answer. Then, after break, each pair will go to the board together, one will write the problem on the board, and the other will explain how/why they worked their problem the way they did. They would be instructed to leave their version of the problem on the board.  Instead of commenting on whether or not their answer is/was correct, have another pair come to the front of the room and repeat the process.  Then discuss as a group correct and incorrect processes.  Instructions for “Combo Meal Distributive Property”:   1. Print and cut out images of popular fast food items – put magnets on back 2. Design examples of combo meals on the board using magnets 3. Ask students to choose which combo meal they want, then count the number of combo meals needed 4. Write the number of items needed for each combo meal using the distributive property 5. Discuss how to write each combo meal as an algebraic expression |
| Recommended Strategies: Make sure students are confident solving basic two-step equations before beginning this lesson. |
| Differentiation options: |
| Assessments: Students will complete a practice page with multi-step equations independently (can be done for homework). |
| Independent/Distance/Homework Options: PowerPoint and homework posted to school’s website |

Attachments:

PowerPoint - [Lessons\Equations\Multi Step Equations with Distributive Property.pptx](file:///C:\Users\Office%20Manager\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.IE5\F78QWR1V\Lessons\Equations\Multi%20Step%20Equations%20with%20Distributive%20Property.pptx)

Independent/Group Practice - [Lessons\Equations\Distributive Property\Distributive Property Worksheet.docx](file:///C:\Users\Office%20Manager\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.IE5\F78QWR1V\Lessons\Equations\Distributive%20Property\Distributive%20Property%20Worksheet.docx)

Homework - [Lessons\Equations\Distributive Property\Solving-Equations-The-Distributive-Property-1.rtf](file:///C:\Users\Office%20Manager\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.IE5\F78QWR1V\Lessons\Equations\Distributive%20Property\Solving-Equations-The-Distributive-Property-1.rtf)

1. [](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&docid=p30Z6fLBnETREM&tbnid=3BiBjse4ExeIOM:&ved=0CAUQjRw&url=http://theteachablemoments.wordpress.com/2012/03/08/dok-is-not-a-verb-and-it-is-not-blooms-taxonomy-in-a-circle/&ei=2VOYU-r5CtLNsQSpn4LgCA&bvm=bv.68693194,d.cWc&psig=AFQjCNEhpUPWlItP8Z9C6ZJLXC_1E7v7uA&ust=1402578252955798)**Lesson Planning Resources**

**Webb’s DOK Levels:**

DOK Level 1: Recall and Reproduction

DOK Level 2: Skills/Concepts

DOK Level 3: Strategic Thinking

DOK Level 4: Extended Thinking

*Every lesson delivered should hit more than one DOK level. For a more detailed explanation of DOK and a comparison to Bloom’s Taxonomy click* [*here*](http://blogs.mtlakes.org/curriculum/files/2012/10/Screen-Shot-2012-10-21-at-4.57.09-PM.png)*.*

**Standards & Instructional Shifts:**

Indiana Adult Education is using the College and Career Readiness Standards for Adults developed by OCTAE. You can access a copy of the standards [here](http://lincs.ed.gov/publications/pdf/CCRStandardsAdultEd.pdf) to assist you in identifying the standards aligned to and the instructional shifts targeted in your lesson plan

**A note about this lesson plan template:**

This lesson plan template was created in 2012 and revised in 2014 to better reflect standards based education and assessment changes. The original was designed by Indiana Adult Education Teachers during a statewide teacher meeting. In addition to identifying the required “components” of a lesson plan, teachers also contributed a list of “characteristics” of good lesson plans: *engaging, fun, visual examples, accommodates for learning styles, clear and concise, flexible within structure, allows for student ownership, includes modifications and adaptations, evokes passion, builds on previous knowledge, and appropriately reflects its audience.*