# Houghton Mifflin Harcourt
## *Waggle,* Grade 2

## Product to Product Correlation to

## *Math Expressions, Grade 2* © 2018
## *Common Core Edition*

| Math Expressions, Grade 2 Lessons | Waggle, Grade 2 Goals and Skills |
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| **Unit 1: Addition and Subtraction Within 20** | |
| 1.1 Represent Addition and Subtraction | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20<br>Add and Subtract Within 1,000<br>• Addition and Subtraction Strategies |
| 1.2 Relate Addition and Subtraction | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20 |
| 1.3 Make-a-Ten Strategies | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20<br>Add and Subtract Within 1,000<br>• Addition and Subtraction Strategies |
| 1.4 Relate Unknown Addends and Subtraction | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20 |

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| 1.5 More Practice with Unknown Addends and Teen Totals | Add to 100<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20 |
| 1.6 Odd and Even Numbers | Even and Odd Numbers<br>   • Even and Odd Numbers<br>Mental Math<br>   • Skip-Counting |
| 1.7 Strategies Using Doubles | Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20<br>Even and Odd Numbers<br>   • Even Numbers as Sums |
| 1.8 Equations, Equation Chains, and Vertical Form | Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20 |

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| 1.9 Add Three or Four Addends | Add and Subtract Within 20<br>  • Addition to 20<br>  • Subtraction Within 20<br>Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>Work with Addition<br>  • Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>  • Addition and Subtraction Strategies |
| 1.10 *Add To* and *Take From* Word Problems | Word Problems<br>  • Represent Word Problems<br>Add to 100<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>  • Addition to 20<br>  • Subtraction Within 20 |
| 1.11 *Add To* and *Take From* Problems-Unknown in All Positions | Word Problems<br>  • Represent Word Problems<br>Add to 100<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>  • Addition to 20<br>  • Subtraction Within 20 |

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| 1.12 *Put Together/Take Apart* Problems | Word Problems<br>   • Represent Word Problems<br>Add to 100<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20 |
| 1.13 Special *Put Together/Take* Apart Problems | Word Problems<br>   • Represent Word Problems<br>Add to 100<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20 |
| 1.14 *Compare* Word Problems | Word Problems<br>   • Represent Word Problems<br>Add to 100<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20 |

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| 1.15 More *Compare* Word Problems | Word Problems<br>　• Represent Word Problems<br>Add to 100<br>　• Solve Addition Word Problems<br>Subtract Within 100<br>　• Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>　• Addition to 20<br>　• Subtraction Within 20 |
| 1.16 Mixed Word Problems | Word Problems<br>　• Represent Word Problems<br>Add to 100<br>　• Solve Addition Word Problems<br>Subtract Within 100<br>　• Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>　• Addition to 20<br>　• Subtraction Within 20 |
| 1.17 Problems with Not Enough, Extra, or Hidden Information | Word Problems<br>　• Represent Word Problems<br>Add to 100<br>　• Solve Addition Word Problems<br>Subtract Within 100<br>　• Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>　• Addition to 20<br>　• Subtraction Within 20 |

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| 1.18 More Complex *Compare* Problems | Word Problems<br> • Represent Word Problems<br>Add to 100<br> • Solve Addition Word Problems<br>Subtract Within 100<br> • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br> • Addition to 20<br> • Subtraction Within 20 |
| 1.19 Two-Step Word Problems | Word Problems<br> • Represent Word Problems<br> • Two-Step Word Problems<br>Add to 100<br> • Solve Addition Word Problems<br>Subtract Within 100<br> • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br> • Addition to 20<br> • Subtraction Within 20 |
| 1.20 Mixed Word Problems | Word Problems<br> • Represent Word Problems<br> • Two-Step Word Problems<br>Add to 100<br> • Solve Addition Word Problems<br>Subtract Within 100<br> • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br> • Addition to 20<br> • Subtraction Within 20 |

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| 1.21 Focus on Mathematical Practices | Word Problems<br>   • Represent Word Problems<br>   • Two-Step Word Problems<br>Add to 100<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Solve Subtraction Word Problems<br>Add and Subtract Within 20<br>   • Addition to 20<br>   • Subtraction Within 20<br>Even and Odd Numbers<br>   • Even and Odd Numbers<br>   • Even Numbers as Sums |
| **Unit 2: Addition Within 200** | |
| 2.1 Ones, Tens, and Hundred | Hundreds, Tens, and Ones<br>   • Make 100<br>Mental Math<br>   • Count to 1,000<br>Work with Three-Digit Numbers<br>   • Read and Write Numbers to 1,000 |
| 2.2 Draw Quick Tens and Quick Hundreds | Hundreds, Tens, and Ones<br>   • Make 100<br>Mental Math<br>   • Count to 1,000<br>Work with Three-Digit Numbers<br>   • Read and Write Numbers to 1,000 |
| 2.3 Represent Numbers in Different Ways | Hundreds, Tens, and Ones<br>   • Make 100<br>Mental Math<br>   • Count to 1,000<br>Work with Three-Digit Numbers<br>   • Read and Write Numbers to 1,000 |

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| 2.4 Combine Ones, Tens, and Hundreds | Hundreds, Tens, and Ones<br>   • Make 100<br>Work with Three-Digit Numbers<br>   • Read and Write Numbers to 1,000<br>Add to 100<br>   • Addition to 100<br>   • Addition Within 100 (Game) |
| 2.5 Compare Numbers Within 200 | Hundreds, Tens, and Ones<br>   • Three-Digit Numbers<br>   • Work With Hundreds<br>Work with Three-Digit Numbers<br>   • Read and Write Numbers to 1,000<br>   • Compare Three-Digit Numbers |
| 2.6 Explore 2-Digit Addition | Add and Subtract Within 20<br>   • Addition to 20<br>Work with Addition<br>   • Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>   • Addition to 1,000<br>   • Subtraction Within 1,000<br>   • Addition and Subtraction Strategies |

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| 2.7 Addition-Show All Totals Method | Word Problems<br>  • Represent Word Problems<br>  • Two-Step Word Problems<br>Add to 100<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Solve Subtraction Word Problems<br>Hundreds, Tens, and Ones<br>  • Make 100<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |
| 2.8 Addition-New Groups Below Method | Hundreds, Tens, and Ones<br>  • Make 100<br>Work with Addition<br>  • Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>Mental Math<br>  • Mental Subtraction<br>  • Mental Addition |
| 2.9 Practice Addition with Sums over 100 | Hundreds, Tens, and Ones<br>  • Make 100<br>Work with Addition<br>  • Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>Mental Math<br>  • Mental Subtraction<br>  • Mental Addition |

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| 2.10 Choose an Addition Method | Hundreds, Tens, and Ones<br>　• Make 100<br>Work with Addition<br>　• Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>　• Addition to 1,000<br>　• Subtraction Within 1,000<br>Mental Math<br>　• Mental Subtraction<br>　• Mental Addition |
| 2.11 Buy with Pennies and Dimes | Hundreds, Tens, and Ones<br>　• Make 100<br>Add and Subtract Within 1,000<br>　• Addition to 1,000<br>　• Subtraction Within 1,000<br>Mental Math<br>　• Mental Subtraction<br>　• Mental Addition |
| 2.12 Pennies, Nickels, and Dimes | Mental Math<br>　• Skip-Counting<br>Time and Money<br>　• Money |
| 2.13 Fluency: Addition Within 100 | Add to 100<br>　• Addition to 100<br>　• Addition Within 100 (Game)<br>Subtract Within 100<br>　• Subtraction Within 100<br>　• Subtraction Within 100 (Game) |

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| 2.14 Add Three or Four 2-Digit Addends | Add to 100<br>   • Addition to 100<br>   • Addition Within 100 (Game)<br>Subtract Within 100<br>   • Subtraction Within 100<br>   • Subtraction Within 100 (Game)<br>Work with Addition<br>   • Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>   • Addition to 1,000<br>   • Subtraction Within 1,000 |
| 2.15 Focus on Mathematical Practices | Word Problems<br>   • Represent Word Problems<br>   • Two-Step Word Problems<br>Mental Math<br>   • Skip-Counting<br>Add to 100<br>   • Addition to 100<br>   • Addition Within 100 (Game)<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Subtraction Within 100<br>   • Subtraction Within 100 (Game)<br>   • Solve Subtraction Word Problems<br>Add and Subtract Within 1,000<br>   • Addition to 1,000<br>   • Subtraction Within 1,000<br>Time and Money<br>   • Money |

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| **Unit 3: Length and Shapes** | |
| 3.1 Measure Length | Measure Length<br>   • Use Tools to Measure Length<br>Solve Problems with Length<br>   • Find the Difference Between Lengths |
| 3.2 Recognize and Draw Shapes | Flat and Solid Shapes<br>   • Features of Shapes |
| 3.3 Estimate and Measure | Measure Length<br>   • Use Tools to Measure Length<br>Solve Problems with Length<br>   • Estimate Length |
| 3.4 Draw, Estimate, and Measure | Measure Length<br>   • Use Tools to Measure Length<br>Solve Problems with Length<br>   • Estimate Length |
| 3.5 Draw Using Faces | Flat and Solid Shapes<br>   • Features of Shapes |
| 3.6 Estimate and Measure with Centimeters | Measure Length<br>   • Use Tools to Measure Length<br>   • Line Plots<br>Solve Problems with Length<br>   • Estimate Length<br>   • Find the Difference Between Lengths |
| 3.7 Estimate and Measure with Inches | Measure Length<br>   • Use Tools to Measure Length<br>   • Measure Length with Difference Units<br>Solve Problems with Length<br>   • Estimate Length |

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| 3.8 Measure for and Make Line Plots | Measure Length<br>   • Use Tools to Measure Length<br>   • Measure Length with Difference Units<br>Measure Length<br>   • Line Plots |
| 3.9 Focus on Mathematical Practices | Add to 100<br>   • Addition to 100<br>   • Addition Within 100 (Game)<br>Subtract Within 100<br>   • Subtraction Within 100<br>   • Subtraction Within 100 (Game)<br>Measure Length<br>   • Use Tools to Measure Length<br>   • Measure Length with Difference Units<br>Flat and Solid Shapes<br>   • Features of Shapes |
| **Unit 4: Subtract 2-Digit Numbers** | |
| 4.1 Explore Quarters | Time and Money<br>   • Money |
| 4.2 Explore Dollars | Time and Money<br>   • Money |

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| 4.3 Addends and Subtraction | Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>Hundreds, Tens, and Ones<br>  • Make 100<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |
| 4.4 Subtraction Word Problems | Subtract Within 100<br>  • Solve Subtraction Word Problems |
| 4.5 Two Methods of Subtraction | Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |
| 4.6 Practice and Explain a Method | Add and Subtract Within 20<br>  • Subtraction Within 20<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>Add and Subtract Within 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |

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| 4.7 Subtract from 200 | Hundreds, Tens, and Ones<br>   • Make 100<br>   • Work with Hundreds<br>Add and Subtract Within 1,000<br>   • Subtraction Within 1,000<br>   • Addition and Subtraction Strategies |
| 4.8 Ungroup from the Left or from the Right | Add and Subtract Within 1,000<br>   • Subtraction Within 1,000<br>   • Addition and Subtraction Strategies |
| 4.9 Zero in the Ones or Tens Place | Add and Subtract Within 1,000<br>   • Subtraction Within 1,000<br>   • Addition and Subtraction Strategies |
| 4.10 Model Subtraction with Money | Add and Subtract Within 1,000<br>   • Subtraction Within 1,000<br>   • Addition and Subtraction Strategies<br>Time and Money<br>   • Money |
| 4.11 Fluency: Subtraction Within 100 | Subtract Within 100<br>   • Subtraction Within 100<br>   • Subtraction Within 100 (Game) |
| 4.12 Word Problems with Addition and Subtraction | Add to 100<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Solve Subtraction Word Problems |

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| 4.13 Equations with Greater Numbers | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20<br>Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game)<br>Add and Subtract Within 1,000<br>• Addition to 1,000<br>• Subtraction Within 1,000 |
| 4.14 Practice Addition and Subtraction | Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game) |
| 4.15 Buy and Sell with One Dollar | Mental Math<br>• Count to 1,000<br>Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game)<br>Work with Addition<br>• Add More Than Two Numbers<br>Add and Subtract Within 1,000<br>• Addition to 1,000<br>• Subtraction Within 1,000<br>Time and Money<br>• Money |

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| 4.16 Word Problems with Unknown Addends | Add to 100<br>• Solve Addition Word Problems<br>Subtract Within 100<br>• Solve Subtraction Word Problems<br>Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game) |
| 4.17 More Word Problems with Unknown Addends | Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>• Solve Addition Word Problems<br>Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game)<br>• Solve Subtraction Word Problems<br>Add and Subtract Within 1,000<br>• Addition to 1,000<br>• Subtraction Within 1,000<br>• Addition and Subtraction Strategies |

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| 4.18 *Start Unknown* Problems | Word Problems<br>  • Represent Word Problems<br>Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>  • Solve Subtraction Word Problems<br>Add and Subtract Within 1,000<br>  • Addition and Subtraction Strategies |
| 4.19 *Compare* Word Problems | Word Problems<br>  • Represent Word Problems<br>Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>  • Solve Subtraction Word Problems |
| 4.20 Mixed Word Problems | Word Problems<br>  • Represent Word Problems<br>Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>  • Solve Subtraction Word Problems |

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| 4.21 Two-Step Word Problems | Word Problems<br>   • Represent Word Problems<br>   • Two-Step Word Problems<br>Add to 100<br>   • Addition to 100<br>   • Addition Within 100 (Game)<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Subtraction Within 100<br>   • Subtraction Within 100 (Game) |
| 4.22 More Two-Step Problems | Word Problems<br>   • Represent Word Problems<br>   • Two-Step Word Problems<br>Add to 100<br>   • Addition to 100<br>   • Addition Within 100 (Game)<br>   • Solve Addition Word Problems<br>Subtract Within 100<br>   • Subtraction Within 100<br>   • Subtraction Within 100 (Game)<br>   • Solve Subtraction Word Problems |

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| 4.23 Focus on Mathematical Practices | Word Problems<br>  • Represent Word Problems<br>  • Two-Step Word Problems<br>Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>  • Solve Subtraction Word Problems<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>Measure Length<br>  • Use Tools to Measure Length<br>Solve Problems With Length<br>  • Estimate Length<br>  • Find the Difference Between Lengths<br>  • Add and Subtract Lengths |
| **Unit 5: Time, Graphs, and Word Problems** ||
| 5.1 Hours and A.M. or P.M. | Time and Money<br>  • Tell and Write Time |
| 5.2 Hours and Minutes | Mental Math<br>  • Skip-Counting<br>Time and Money<br>  • Tell and Write Time |
| 5.3 Discuss Picture Graphs | Add and Subtract Within 20<br>  • Addition to 20<br>  • Subtraction Within 20<br>Graphs<br>  • Draw Picture Graphs |

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| 5.4 Read Picture Graphs | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20<br>Graphs<br>• Draw Picture Graphs |
| 5.5 Introduce Bar Graphs | Add and Subtract Within 20<br>• Addition to 20<br>• Subtraction Within 20<br>Graphs<br>• Solve Problems Using Bar Graphs<br>• Draw Bar Graphs |
| 5.6 Read Bar Graphs | Graphs<br>• Solve Problems Using Bar Graphs<br>• Draw Bar Graphs |
| 5.7 Solve Problems Using a Bar Graph | Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game)<br>Graphs<br>• Solve Problems Using Bar Graphs<br>• Draw Bar Graphs |

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| 5.8 Collect and Graph Data | Add to 100<br>  • Addition to 100<br>  • Addition Within 100 (Game)<br>Subtract Within 100<br>  • Subtraction Within 100<br>  • Subtraction Within 100 (Game)<br>Graphs<br>  • Solve Problems Using Bar Graphs<br>  • Draw Picture Graphs<br>  • Draw Bar Graphs |
| 5.9 Make Graphs and Interpret Data | Add and Subtract Within 20<br>  • Addition to 20<br>  • Subtraction Within 20<br>Graphs<br>  • Solve Problems Using Bar Graphs<br>  • Draw Picture Graphs<br>  • Draw Bar Graphs |
| 5.10 Focus on Mathematical Practices | Add and Subtract Within 20<br>  • Addition to 20<br>  • Subtraction Within 20<br>Work With Three-Digit Numbers<br>  • Compare Three-Digit Numbers<br>Graphs<br>  • Solve Problems Using Bar Graphs<br>  • Draw Picture Graphs<br>  • Draw Bar Graphs |

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| **Unit 6: 3-digit Addition and Subtraction** | |
| 6.1 Count Numbers to 1,000 | Hundreds, Tens, and Ones<br>   • Three-Digit Numbers<br>   • Make 100<br>   • Work With Hundreds<br>Mental Math<br>   • Count to 1,000<br>Work With Three-Digit Numbers<br>   • Read and Write Numbers to 1,000 |
| 6.2 Place Value | Hundreds, Tens, and Ones<br>   • Three-Digit Numbers<br>   • Make 100<br>   • Work With Hundreds<br>Work With Three-Digit Numbers<br>   • Read and Write Numbers to 1,000 |
| 6.3 Compare Numbers Within 999 | Work With Three-Digit Numbers<br>   • Compare Three-Digit Numbers |
| 6.4 Count by Ones and by Tens | Hundreds, Tens, and Ones<br>   • Three-Digit Numbers<br>   • Make 100<br>   • Work With Hundreds<br>Mental Math<br>   • Skip-Counting<br>Work With Three-Digit Numbers<br>   • Read and Write Numbers to 1,000 |
| 6.5 Add Ones, Tens, and Hundreds | Add and Subtract Within 1,000<br>   • Addition to 1,000<br>   • Subtraction Within 1,000<br>   • Addition and Subtraction Strategies |

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| 6.6 3-Digit Addition | Add and Subtract Within 1,000<br>• Addition to 1,000<br>• Subtraction Within 1,000<br>• Addition and Subtraction Strategies |
| 6.7 Discuss 3-Digit Addition | Add and Subtract Within 1,000<br>• Addition to 1,000<br>• Subtraction Within 1,000<br>• Addition and Subtraction Strategies |
| 6.8 Word Problems: Unknown Addends | Add to 100<br>• Addition to 100<br>• Addition Within 100 (Game)<br>• Solve Addition Word Problems<br>Add and Subtract Within 1,000<br>• Addition to 1,000<br>• Addition and Subtraction Strategies |
| 6.9 Subtract from Hundreds Numbers | Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game)<br>Add and Subtract Within 1,000<br>• Subtraction Within 1,000<br>• Addition and Subtraction Strategies |
| 6.10 Subtract from Numbers with Zeros | Subtract Within 100<br>• Subtraction Within 100<br>• Subtraction Within 100 (Game)<br>Add and Subtract Within 1,000<br>• Subtraction Within 1,000<br>• Addition and Subtraction Strategies |

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| 6.11 Subtract from Any 3-Digit Number | Add and Subtract Within 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |
| 6.12 Practice Ungrouping | Hundreds, Tens, and Ones<br>  • Three-Digit Numbers<br>  • Make 100<br>  • Work With Hundreds<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |
| 6.13 Relationships Between Addition and Subtraction Methods | Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000<br>  • Addition and Subtraction Strategies |
| 6.14 Mixed Addition and Subtraction Word Problems | Word Problems<br>  • Represent Word Problems<br>Add to 100<br>  • Solve Addition Word Problems<br>Subtract Within 100<br>  • Solve Subtraction Word Problems<br>Add and Subtract Within 1,000<br>  • Addition to 1,000<br>  • Subtraction Within 1,000 |

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| 6.15 Focus on Mathematical Practices | Word Problems<br>　• Represent Word Problems<br>Add to 100<br>　• Solve Addition Word Problems<br>Subtract Within 100<br>　• Solve Subtraction Word Problems<br>Work with Three-Digit Numbers<br>　• Compare Three-Digit Numbers<br>Add and Subtract Within 1,000<br>　• Addition to 1,000<br>　• Subtraction Within 1,000<br>　• Addition and Subtraction Strategies |
| **Unit 7: Arrays, Equal Shares, and Adding or Subtracting Lengths** | |
| 7.1 Arrays, Partitioned Rectangles, and Equal Shares | Work with Addition<br>　• Arrays<br>　• Add Equal Groups<br>Flat and Solid Shapes<br>　• Features of Shapes<br>　• Make Squares in Rectangles<br>　• Make Equal Shares |
| 7.2 Find Equal Shares | Flat and Solid Shapes<br>　• Features of Shapes<br>　• Make Equal Shares |
| 7.3 Length Word Problems and Number Line Diagrams | Word Problems<br>　• Represent Word Problems<br>Add to 100<br>　• Solve Addition Word Problems<br>Subtract Within 100<br>　• Solve Subtraction Word Problems<br>Solve Problems with Length<br>　• Add and Subtract Lengths |

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| 7.4 Add Three and Four Lengths | Work with Addition<br>    • Add More Than Two Numbers<br>Solve Problems with Length<br>    • Add and Subtract Lengths |
| 7.5 More Length Word Problems | Word Problems<br>    • Represent Word Problems<br>Add to 100<br>    • Solve Addition Word Problems<br>Subtract Within 100<br>    • Solve Subtraction Word Problems<br>Work with Addition<br>    • Add More Than Two Numbers<br>Solve Problems with Length<br>    • Add and Subtract Lengths |
| 7.6 Focus on Mathematical Practices | Work with Addition<br>    • Arrays<br>    • Equal Groups<br>Flat and Solid Shapes<br>    • Make Squares in Rectangles<br>    • Make Equal Shares |

# Houghton Mifflin Harcourt
## *Waggle,* Grade 3

## Product to Product Correlation to

## *Math Expressions, Grade 3* © 2018
### *Common Core Edition*

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| **Unit 1: Multiplication and Division With 0-5, 9, and 10** | |
| 1.1 Multiply with 5 | Represent Multiplication<br>　• Understand Multiplication<br>Multiply Whole Numbers<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game)<br>Patterns<br>　• Identify Number Patterns |
| 1.2 Multiplication as Equal Groups | Represent Multiplication<br>　• Understand Multiplication<br>Multiply Whole Numbers<br>　• Solve Problems With Multiplication<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game) |
| 1.3 Multiplication and Arrays | Represent Multiplication<br>　• Understand Multiplication<br>Multiply Whole Numbers<br>　• Solve Problems With Multiplication<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game) |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.4 The Meaning of Division | Represent Multiplication<br>   • Understand Multiplication<br>Represent Division<br>   • Understand Division<br>   • Missing Numbers in Division Equations<br>   • Relate Multiplication and Division<br>Divide Whole Numbers<br>   • Solve Problems With Division<br>   • Divide Within 100<br>   • Dividing Within 100 (Game) |
| 1.5 Multiply and Divide with 2 | Represent Multiplication<br>   • Understand Multiplication<br>   • Missing Numbers in Multiplication Equations<br>Represent Division<br>   • Understand Division<br>   • Relate Multiplication and Division<br>Multiply Whole Numbers<br>   • Solve Problems With Multiplication<br>   • Multiply Within 100<br>   • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>   • Solve Problems With Division<br>   • Divide Within 100<br>   • Dividing Within 100 (Game)<br>Patterns<br>   • Identify Number Patterns |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.6 Build Fluency with 2s and 5s | Represent Multiplication<br> • Understand Multiplication<br> • Missing Numbers in Multiplication Equations<br> • Apply Properties of Operations<br>Represent Division<br> • Understand Division<br> • Missing Numbers in Division Equations<br> • Relate Multiplication and Division<br>Multiply Whole Numbers<br> • Multiply Within 100<br> • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br> • Divide Within 100<br> • Dividing Within 100 (Game)<br>Patterns<br> • Identify Number Patterns |
| 1.7 Multiply and Divide with 10 | Represent Multiplication<br> • Understand Multiplication<br> • Missing Numbers in Multiplication Equations<br>Represent Division<br> • Understand Division<br> • Missing Numbers in Division Equations<br> • Relate Multiplication and Division<br>Multiply Whole Numbers<br> • Solve Problems With Multiplication<br> • Multiply Within 100<br> • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br> • Solve Problems With Division<br> • Divide Within 100<br> • Dividing Within 100 (Game)<br>Patterns<br> • Identify Number Patterns |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.8 Multiply and Divide with 9 | Represent Multiplication<br>  • Understand Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Represent Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game)<br>Patterns<br>  • Identify Number Patterns |
| 1.9 Build Fluency with 2s, 5s, 9s, and 10s | Represent Division<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game) |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.10 Multiply and Divide with 3 | Represent Multiplication<br>  • Understand Multiplication<br>  • Missing Numbers in Multiplication Equations<br>  • Apply Properties of Operations<br>Represent Division<br>  • Understand Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Solve Problems With Multiplication<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Solve Problems With Division<br>  • Divide Within 100<br>  • Dividing Within 100 (Game)<br>Patterns<br>  • Identify Number Patterns |
| 1.11 Multiplication and Area | Represent Multiplication<br>  • Apply Properties of Operations<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Understand Area<br>  • Understand Square Units<br>  • Understand Area<br>  • Measure Area by Counting Unit Squares<br>Area of Rectangles<br>  • Area of Rectangles by Tiling<br>  • Area of Rectangles by Multiplying<br>  • Use the Distributive Property to Find Area<br>  • Area of Figures Made of Rectangles |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.12 Multiply and Divide with 4 | Represent Multiplication<br>  • Understand Multiplication<br>  • Apply Properties of Operations<br>Represent Division<br>  • Understand Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game)<br>Patterns<br>  • Identify Number Patterns<br>Area of Rectangles<br>  • Use the Distributive Property to Find Area<br>  • Area of Figures Made of Rectangles |
| 1.13 Use the Strategy Cards | Represent Multiplication<br>  • Understand Multiplication<br>Represent Division<br>  • Understand Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game)<br>  • Solve Problems With Division<br>Area of Rectangles<br>  • Use the Distributive Property to Find Area |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.14 Build Fluency with 2s, 3s, 4s, 5s, 9s, and 10s | Represent Division<br>    • Relate Multiplication and Division<br>Multiply Whole Numbers<br>    • Multiply Within 100<br>    • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>    • Divide Within 100<br>    • Dividing Within 100 (Game) |
| 1.15 Multiply and Divide with 1 and 0 | Represent Multiplication<br>    • Apply Properties of Operations<br>Represent Division<br>    • Relate Multiplication and Division<br>Multiply Whole Numbers<br>    • Multiply Within 100<br>    • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>    • Divide Within 100<br>    • Dividing Within 100 (Game)<br>Patterns<br>    • Identify Number Patterns |
| 1.16 Solve and Create Word Problems | Represent Multiplication<br>    • Understand Multiplication<br>    • Missing Numbers in Multiplication Equations<br>Represent Division<br>    • Understand Division<br>    • Missing Numbers in Division Equations<br>    • Relate Multiplication and Division<br>Multiply Whole Numbers<br>    • Solve Problems With Multiplication<br>Divide Whole Numbers<br>    • Solve Problems With Division |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.17 Practice Multiplication and Division | Represent Multiplication<br>  • Understand Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Represent Division<br>  • Understand Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Solve Problems With Multiplication<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Solve Problems With Division<br>  • Divide Within 100<br>  • Dividing Within 100 (Game) |
| 1.18 Build Fluency with 0s, 1s, 2s, 3s, 4s, 5s, 9s, and 10s | Represent Division<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game) |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 1.19 Focus on Mathematical Practices | Represent Multiplication<br>　• Understand Multiplication<br>　• Missing Numbers in Multiplication Equations<br>　• Apply Properties of Operations<br>Represent Division<br>　• Understand Division<br>　• Missing Numbers in Division Equations<br>Multiply Whole Numbers<br>　• Solve Problems With Multiplication<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>　• Solve Problems With Division<br>　• Divide Within 100<br>　• Dividing Within 100 (Game)<br>Patterns<br>　• Identify Number Patterns |
| **Unit 2: Multiplication and Division with 65, 75, 85 and Multiply with Multiples of 10** | |
| 2.1 Multiply and Divide with 6 | Represent Multiplication<br>　• Apply Properties of Operations<br>Represent Division<br>　• Relate Multiplication and Division<br>Multiply Whole Numbers<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>　• Divide Within 100<br>　• Dividing Within 100 (Game)<br>Patterns<br>　• Identify Number Patterns |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 2.2 Solve Area Word Problems | Represent Multiplication<br>  • Understand Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Multiply Whole Numbers<br>  • Solve Problems with Multiplication<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Understand Area<br>  • Understand Square Units<br>  • Understand Area<br>  • Measure Area by Counting Unit Squares<br>Area of Rectangles<br>  • Area of Rectangles by Tiling<br>  • Area of Rectangles by Multiplying |
| 2.3 Multiply and Divide with 8 | Represent Multiplication<br>  • Missing Numbers in Multiplication Equations<br>  • Apply Properties of Operations<br>Represent Division<br>  • Missing Numbers in Division Equations<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game)<br>Patterns<br>  • Identify Number Patterns |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 2.4 Write Word Problems and Equations | Represent Multiplication<br>   • Understand Multiplication<br>   • Missing Numbers in Multiplication Equations<br>Represent Division<br>   • Understand Division<br>   • Missing Numbers in Division Equations<br>   • Relate Multiplication and Division<br>Multiply Whole Numbers<br>   • Solve Problems With Multiplication<br>Divide Whole Numbers<br>   • Solve Problems With Division |
| 2.5 Multiply and Divide with 7 | Represent Multiplication<br>   • Missing Numbers in Multiplication Equations<br>Represent Division<br>   • Missing Numbers in Division Equations<br>Multiply Whole Numbers<br>   • Multiply Within 100<br>   • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>   • Divide Within 100<br>   • Dividing Within 100 (Game)<br>Patterns<br>   • Identify Number Patterns |
| 2.6 Square Numbers | Multiply Whole Numbers<br>   • Multiply Within 100<br>   • Multiplying Within 100 (Game)<br>Patterns<br>   • Identify Number Patterns<br>Area of Rectangles<br>   • Area of Rectangles by Multiplying |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 2.7 Practice with 6s, 7s, and 8s | Represent Multiplication<br>  • Understand Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Represent Division<br>  • Understand Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Solve Problems With Multiplication<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Solve Problems With Division<br>  • Divide Within 100<br>  • Dividing Within 100 (Game) |
| 2.8 Build Fluency with 0s-10s | Represent Division<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Multiply Within 100<br>  • Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>  • Divide Within 100<br>  • Dividing Within 100 (Game) |
| 2.9 Equations and Word Problems | Represent Multiplication<br>  • Understand Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Represent Division<br>  • Understand Division<br>  • Missing Numbers in Division Equations<br>  • Relate Multiplication and Division<br>Multiply Whole Numbers<br>  • Solve Problems With Multiplication<br>Divide Whole Numbers<br>  • Solve Problems With Division |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 2.10 Write First-Step Questions for Two-Step Problems | Represent Multiplication<br> • Understand Multiplication<br> • Missing Numbers in Multiplication Equations<br>Represent Division<br> • Understand Division<br> • Missing Numbers in Division Equations<br> • Relate Multiplication and Division<br>Multiply Whole Numbers<br> • Solve Problems With Multiplication<br>Divide Whole Numbers<br> • Solve Problems With Division<br>Two-Step Word Problems<br> • Solve Two-Step Word Problems<br> • Represent Two-Step Word Problems |
| 2.11 Make Sense of Two-Step Word Problems | Represent Multiplication<br> • Understand Multiplication<br> • Missing Numbers in Multiplication Equations<br>Represent Division<br> • Understand Division<br> • Missing Numbers in Division Equations<br> • Relate Multiplication and Division<br>Multiply Whole Numbers<br> • Solve Problems With Multiplication<br>Divide Whole Numbers<br> • Solve Problems With Division<br>Two-Step Word Problems<br> • Solve Two-Step Word Problems<br> • Represent Two-Step Word Problems<br> • Is the Answer Reasonable? |

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|---|---|
| 2.12 Multiply with Multiples of 10 | Represent Multiplication<br>　• Apply Properties of Operations<br>Multiply Whole Numbers<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game)<br>　• Multiply by Multiplies of 10 |
| 2.13 Play Multiplication and Division Games | Represent Division<br>　• Relate Multiplication and Division<br>Multiply Whole Numbers<br>　• Solve Problems With Multiplication<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>　• Solve Problems With Division<br>　• Divide Within 100<br>　• Dividing Within 100 (Game) |
| 2.14 Build Fluency with 0s-10s | Represent Multiplication<br>　• Missing Numbers in Multiplication Equations<br>Represent Division<br>　• Relate Multiplication and Division<br>　• Missing Numbers in Division Equations<br>Multiply Whole Numbers<br>　• Multiply Within 100<br>　• Multiplying Within 100 (Game)<br>Divide Whole Numbers<br>　• Divide Within 100<br>　 Dividing Within 100 (Game) |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 2.15 Focus on Mathematical Practices | Represent Multiplication<br>   • Understand Multiplication<br>   • Missing Numbers in Multiplication Equations<br>   • Apply Properties of Operations<br>Represent Division<br>   • Understand Division<br>   • Missing Numbers in Division Equations<br>Multiply Whole Numbers<br>   • Multiply Within 100<br>   • Multiplying Within 100 (Game)<br>   • Solve Problems with Multiplication<br>Divide Whole Numbers<br>   • Divide Within 100<br>   • Dividing Within 100 (Game)<br>   • Solve Problems with Division<br>Patterns<br>   • Identify Number Patterns |
| **Unit 3: Multi-Digit Addition Subtraction and Multiplication** | |
| 3.1 Make Place Value Drawings | This skill is taught in *Waggle* Grade 2. |
| 3.2 Build Numbers | This skill is taught in *Waggle* Grade 2. |
| 3.3 Place Value in Word Problems | This skill is taught in *Waggle* Grade 2. |
| 3.4 Practice with Place Value | This skill is taught in *Waggle* Grade 2. |
| 3.5 Round to the Nearest Hundred | Round Whole Numbers<br>   • Round to the Nearest 100 |
| 3.6 Round to the Nearest Ten | Round Whole Numbers<br>   • Round to the Nearest 10 |

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|---|---|
| 3.7 Explore Multidigit Addition | Add and Subtract Whole Numbers<br>　• Adding to 1,000<br>　• Adding Within 1,000 (Game) |
| 3.8 Discuss Addition Methods | Add and Subtract Whole Numbers<br>　• Adding to 1,000<br>　• Adding Within 1,000 (Game) |
| 3.9 The Grouping Concept in Addition | Add and Subtract Whole Numbers<br>　• Adding to 1,000<br>　• Adding Within 1,000 (Game) |
| 3.10 Practice Addition | Add and Subtract Whole Numbers<br>　• Adding to 1,000<br>　• Adding Within 1,000 (Game) |
| 3.11 Ungroup to Subtract | Add and Subtract Whole Numbers<br>　• Subtract Within 1,000<br>　• Subtracting Within 1,000 (Game) |
| 3.12 Subtract Across Zeros | Add and Subtract Whole Numbers<br>　• Subtract Within 1,000<br>　• Subtracting Within 1,000 (Game) |
| 3.13 Discuss Methods of Subtracting | Add and Subtract Whole Numbers<br>　• Subtract Within 1,000<br>　• Subtracting Within 1,000 (Game) |
| 3.14 Relate Addition and Subtraction | Add and Subtract Whole Numbers<br>　• Adding to 1,000<br>　• Adding Within 1,000 (Game)<br>　• Subtract Within 1,000<br>　• Subtracting Within 1,000 (Game) |

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|---|---|
| 3.15 Subtraction Practice | Add and Subtract Whole Numbers<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game) |
| 3.16 Addition and Subtraction Practice | Add and Subtract Whole Numbers<br>  • Adding to 1,000<br>  • Adding Within 1,000 (Game)<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game) |
| 3.17 Solve Word Problems | Two-Step Word Problems<br>  • Solve Two-Step Word Problems<br>  • Represent Two-Step Word Problems<br>  • Is the Answer Reasonable?<br>Add and Subtract Whole Numbers<br>  • Adding to 1,000<br>  • Adding Within 1,000 (Game)<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game) |
| 3.18 Focus on Mathematical Practices | Add and Subtract Whole Numbers<br>  • Adding to 1,000<br>  • Adding Within 1,000 (Game)<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game) |
| **Unit 4: Fractions, Time, And Data** | |
| 4.1 Understand Fractions | Represent Fractions<br>  • Understand Fractions<br>  • Relate Fractions to Area |

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| 4.2 Model Fractions | Represent Fractions<br>• Understand Unit Fractions<br>• Understand Fractions<br>• Unit Fractions on a Number Line<br>• Fractions on a Number Line |
| 4.3 Locate Fractions on the Number Line | Represent Fractions<br>• Unit Fractions on a Number Line<br>• Fractions on a Number Line |
| 4.4 Compare Unit Fractions | Represent Fractions<br>• Unit Fractions on a Number Line<br>• Fractions on a Number Line<br>Compare Fractions<br>• Compare Fractions with Like Numerators |
| 4.5 Compare Fractions | Compare Fractions<br>• Compare Fractions with Like Denominators<br>• Compare Fractions with Like Numerators |
| 4.6 Customary Units of Length | Line Plots<br>• Line Plots with Lengths<br>• Measure Length to the Nearest Quarter Inch |
| 4.7 Tell Time | Time<br>• Time |
| 4.8 Before and After the Hour | Time<br>• Time |
| 4.9 Elapsed Time | Time<br>• Solve Problems Involving Time<br>• Time |

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|---|---|
| 4.10 Add and Subtract Time | Time<br>• Solve Problems Involving Time<br>• Time |
| 4.11 Solve Word Problems Involving Time | Time<br>• Solve Problems Involving Time<br>• Time |
| 4.12 Read and Create Pictographs and Bar Graphs | Picture Graphs and Bar Graphs<br>• Bar Graphs<br>• Solve Problems with Bar Graphs<br>• Picture Graphs |
| 4.13 Read and Create Bar Graphs with Multidigit Numbers | Picture Graphs and Bar Graphs<br>• Bar Graphs<br>• Solve Problems with Bar Graphs |
| 4.14 Represent and Organize Data | Picture Graphs and Bar Graphs<br>• Bar Graphs<br>• Solve Problems with Bar Graphs<br>• Picture Graphs<br>Line Plots<br>• Line Plots with Lengths |
| 4.15 Use Graphs to Solve Time and Measurement Word Problems | Picture Graphs and Bar Graphs<br>• Bar Graphs<br>• Solve Problems with Bar Graphs<br>Line Plots<br>• Line Plots with Lengths |

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|---|---|
| 4.16 Focus on Mathematical Practices | Time<br>   • Solve Problems Involving Time<br>   • Time<br>Line Plots<br>   • Line Plots with Lengths |
| **Unit 5: Measurement and Fractions** | |
| 5.1 Perimeter and Area | Understand Area<br>   • Understand Square Units<br>   • Understand Area<br>   • Measure Area by Counting Unit Squares<br>Area of Rectangles<br>   • Area of Rectangles by Tiling<br>   • Area of Rectangles by Multiplying<br>Perimeter and Area<br>   • Perimeter of Polygons<br>   • Perimeter and Area |
| 5.2 Side Lengths with Area and Perimeter | Understand Area<br>   • Measure Area by Counting Unit Squares<br>Area of Rectangles<br>   • Area of Rectangles by Tiling<br>   • Area of Rectangles by Multiplying<br>   • Area of Rectangles Made of Rectangles<br>Perimeter and Area<br>   • Perimeter of Polygons<br>   • Perimeter and Area |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 5.3 Compare Areas and Perimeters | Understand Area<br>• Understand Square Units<br>• Understand Area<br>Area of Rectangles<br>• Area of Rectangles by Multiplying<br>Perimeter and Area<br>• Perimeter of Polygons<br>• Perimeter and Area |
| 5.4 Area of Rectilinear Figures | Area of Rectangles<br>• Area of Rectangles by Multiplying<br>• Area of Figures Made of Rectangles |
| 5.5 Solve Perimeter and Area Problems | Understand Area<br>• Measure Area by Counting Unit Squares<br>Area of Rectangles<br>• Area of Rectangles by Multiplying<br>• Area of Figures Made of Rectangles<br>Perimeter and Area<br>• Perimeter of Polygons<br>• Perimeter and Area |
| 5.6 Tangram Shapes and Area | Understand Area<br>• Understand Area<br>• Measure Area by Counting Unit Squares |
| 5.7 Introduce Equivalence | Equivalent Fractions<br>• Understand Equivalent Fractions |
| 5.8 Equivalent Fractions | Equivalent Fractions<br>• Unit Fractions on a Number Line<br>• Fractions on a Number Line<br>• Understand Equivalent Fractions<br>• Find Equivalent Fractions |

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|---|---|
| 5.9 Problem Solving with Fractions | Equivalent Fractions<br> • Understand Equivalent Fractions<br> • Find Equivalent Fractions<br>Compare Fractions<br> • Compare Fractions with Like Denominators<br> • Compare Fractions with Like Numerators |
| 5.10 Focus on Mathematical Practices | Represent Fractions<br> • Understand Unit Fractions<br> • Understand Fractions<br> • Relate Fractions to Area<br>Equivalent Fractions<br> • Understand Equivalent Fractions<br> • Find Equivalent Fractions<br>Compare Fractions<br> • Compare Fractions with Like Denominators<br> • Compare Fractions with Like Numerators |
| **Unit 6: Write Equations To Solve Word Problems** | |
| 6.1 Addition and Subtraction Situations | Add and Subtract Whole Numbers<br> • Adding to 1,000<br> • Adding Within 1,000 (Game)<br> • Subtract Within 1,000<br> • Subtracting Within 1,000 (Game) |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 6.2 Word Problems with Unknown Factors | Add and Subtract Whole Numbers<br>  • Adding to 1,000<br>  • Adding Within 1,000 (Game)<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game)<br>Multiply Whole Numbers<br>  • Solve Problems with Multiplication<br>Divide Whole Numbers<br>  • Solve Problems with Division<br>Represent Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Represent Division<br>  • Missing Numbers in Division Equations |
| 6.3 Word Problems with Unknown Starts | Add and Subtract Whole Numbers<br>  • Adding to 1,000<br>  • Adding Within 1,000 (Game)<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game)<br>Multiply Whole Numbers<br>  • Solve Problems with Multiplication<br>Divide Whole Numbers<br>  • Solve Problems with Division<br>Represent Multiplication<br>  • Missing Numbers in Multiplication Equations<br>Represent Division<br>  • Missing Numbers in Division Equations |
| 6.4 Comparison Problems | Add and Subtract Whole Numbers<br>  • Adding to 1,000<br>  • Adding Within 1,000 (Game)<br>  • Subtract Within 1,000<br>  • Subtracting Within 1,000 (Game) |

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|---|---|
| 6.5 Comparison Problems with Misleading Language | Add and Subtract Whole Numbers<br>• Adding to 1,000<br>• Adding Within 1,000 (Game)<br>• Subtract Within 1,000<br>• Subtracting Within 1,000 (Game) |
| 6.6 Word Problems with Extra, Hidden, or Not Enough Information | Add and Subtract Whole Numbers<br>• Adding to 1,000<br>• Adding Within 1,000 (Game)<br>• Subtract Within 1,000<br>• Subtracting Within 1,000 (Game) |
| 6.7 Write First-Step Questions for Two-Step Problems | Two-Step Word Problems<br>• Solve Two-Step Word Problems<br>• Represent Two-Step Word Problems |
| 6.8 Solve Two-Step Word Problems | Two-Step Word Problems<br>• Solve Two-Step Word Problems<br>• Represent Two-Step Word Problems<br>• Is the Answer Reasonable? |
| 6.9 Equations and Two-Step Word Problems | Two-Step Word Problems<br>• Solve Two-Step Word Problems<br>• Represent Two-Step Word Problems<br>• Is the Answer Reasonable? |
| 6.10 Practice with Two-Step Word Problems | Two-Step Word Problems<br>• Solve Two-Step Word Problems<br>• Represent Two-Step Word Problems<br>• Is the Answer Reasonable? |

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|---|---|
| 6.11 Focus on Mathematical Practices | Multiply Whole Numbers<br>   • Solve Problems with Multiplication<br>Divide Whole Numbers<br>   • Solve Problems with Division<br>Two-Step Word Problems<br>   • Solve Two-Step Word Problems<br>   • Represent Two-Step Word Problems<br>   • Is the Answer Reasonable? |
| **Unit 7: Measurement and Polygons** | |
| 7.1 Customary Units of Liquid Volume | Multiply Whole Numbers<br>   • Solve Problems with Multiplication<br>Divide Whole Numbers<br>   • Solve Problems with Division<br>Mass and Capacity<br>   • Measure Capacity<br>   • Solve Capacity Problems |
| 7.2 Metric Units of Liquid Volume | Multiply Whole Numbers<br>   • Solve Problems with Multiplication<br>Divide Whole Numbers<br>   • Solve Problems with Division<br>Mass and Capacity<br>   • Measure Capacity<br>   • Solve Capacity Problems |
| 7.3 Customary Units of Weight and Metric Units of Mass | Multiply Whole Numbers<br>   • Solve Problems with Multiplication<br>Divide Whole Numbers<br>   • Solve Problems with Division<br>Mass and Capacity<br>   • Measure Mass<br>   • Solve Mass Problems |

| Math Expressions, Grade 3 Lessons | Waggle, Grade 3 Goals and Skills |
|---|---|
| 7.4 Solve Word Problems Involving Liquid Volume and Mass | Multiply Whole Numbers<br>    • Solve Problems with Multiplication<br>Divide Whole Numbers<br>    • Solve Problems with Division<br>Mass and Capacity<br>    • Measure Mass<br>    • Solve Mass Problems |
| 7.5 Triangles | Shapes<br>    • Understand Categories of Shapes |
| 7.6 Parallelograms, Rectangles, Squares, and Rhombuses | Shapes<br>    • Understand Categories of Shapes |
| 7.7 Draw Quadrilaterals | Shapes<br>    • Identify Quadrilaterals |
| 7.8 Classify Quadrilaterals | Shapes<br>    • Identify Quadrilaterals |
| 7.9 Focus on Mathematical Practices | Area of Rectangles<br>    • Area of Figures Made of Rectangles<br>Perimeter and Area<br>    • Perimeter of Shapes<br>    • Perimeter and Area<br>Shapes<br>    • Understand Categories of Shapes<br>    • Identify Quadrilaterals |

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## *Waggle,* Grade 4

## Product to Product Correlation to

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## *Common Core Edition*

| Math Expressions, Grade 4 Lessons | Waggle, Grade 4 Goals and Skills |
|---|---|
| **Unit 1: Place Value and Multidigit Addition and Subtraction** | |
| 1.1 Place Value to Thousands | Place Value<br>• Place Value in Whole Numbers |
| 1.2 Place Value Patterns | Place Value<br>• Place Value in Whole Numbers<br>• Read and Write Whole Numbers |
| 1.3 Round Numbers | Place Value<br>• Read and Write Whole Numbers<br>• Round Whole Numbers |
| 1.4 Numbers to One Million | Place Value<br>• Place Value in Whole Numbers<br>• Read and Write Whole Numbers |
| 1.5 Compare and Round Greater Numbers | Place Value<br>• Compare Whole Numbers<br>• Read and Write Whole Numbers<br>• Round Whole Numbers |
| 1.6 Make New Groups for Addition | Addition and Subtraction<br>• Add Whole Numbers<br>• Adding Within 1,000,000 (Game) |

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|---|---|
| 1.7 Add Greater Numbers | Addition and Subtraction<br>  • Add Whole Numbers<br>  • Adding Within 1,000,000 (Game) |
| 1.8 Estimation and Mental Math | Place Value<br>  • Round Whole Numbers<br>Addition and Subtraction<br>  • Add Whole Numbers<br>  • Adding Within 1,000,000 (Game) |
| 1.9 Subtract from Thousands | Addition and Subtraction<br>  • Subtract Whole Numbers<br>  • Subtracting Within 1,000,000 (Game) |
| 1.10 Subtraction Undoes Addition | Addition and Subtraction<br>  • Subtract Whole Numbers<br>  • Subtracting Within 1,000,000 (Game) |
| 1.11 Subtract Greater Numbers | Addition and Subtraction<br>  • Subtract Whole Numbers<br>  • Subtracting Within 1,000,000 (Game) |
| 1.12 Practice Addition and Subtraction | Addition and Subtraction<br>  • Add Whole Numbers<br>  • Adding Within 1,000,000 (Game)<br>  • Subtract Whole Numbers<br>  • Subtracting Within 1,000,000 (Game) |
| 1.13 Problem Solving with Greater Numbers | Addition and Subtraction<br>  • Add Whole Numbers<br>  • Adding Within 1,000,000 (Game)<br>  • Subtract Whole Numbers<br>  • Subtracting Within 1,000,000 (Game) |

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|---|---|
| 1.14 Focus on Mathematical Practices | Place Value<br>  • Round Whole Numbers<br>Addition and Subtraction<br>  • Add Whole Numbers<br>  • Adding Within 1,000,000 (Game)<br>  • Subtract Whole Numbers<br>  • Subtracting Within 1,000,000 (Game) |
| **Unit 2: Multiplication with Whole Numbers** | |
| 2.1 Arrays and Area Models | Multiplication<br>  • Multiply by 1-Digit Numbers |
| 2.2 Connect Place Value and Multiplication | Place Value Division<br>  • Place Value in Whole Numbers<br>Multiplication<br>  • Multiply by 1-Digit Numbers |
| 2.3 Mental Math and Multiplication | Place Value Division<br>  • Place Value in Whole Numbers<br>Multiplication<br>  • Multiply by 1-Digit Numbers |
| 2.4 Model One-Digit by Two-Digit Multiplication | Multiplication<br>  • Multiply by 1-Digit Numbers |
| 2.5 Estimate Products | Place Value<br>  • Round Whole Numbers<br>Multiplication<br>  • Multiply by 1-Digit Numbers |
| 2.6 Use Place Value to Multiply | Multiplication<br>  • Multiply by 1-Digit Numbers |

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|---|---|
| 2.7 Algebraic Notation Method | Multiplication<br>• Multiply by 1-Digit Numbers |
| 2.8 Compare Methods of One-Digit by Two-Digit Multiplication | Multiplication<br>• Multiply by 1-Digit Numbers |
| 2.9 Discuss Different Methods | Multiplication<br>• Multiply by 1-Digit Numbers |
| 2.10 One-Digit by Three-Digit Multiplication | Multiplication<br>• Multiply by 1-Digit Numbers |
| 2.11 Multistep Word Problems | Multiplication<br>• Multiply by 1-Digit Numbers<br>Multistep Word Problems<br>• Solve Multistep Word Problems<br>• Represent Multistep Word Problems |
| 2.12 Two-Digit by Two-Digit Multiplication | Multiplication<br>• Multiply by 2-Digit Numbers<br>• Solve Multiplication Word Problems |
| 2.13 Different Methods for Two-Digit Multiplication | Multiplication<br>• Multiply by 2-Digit Numbers |
| 2.14 Check Products of Two-Digit Numbers | Multiplication<br>• Multiply by 2-Digit Numbers |
| 2.15 Practice Multiplication | Multiplication<br>• Multiply by 2-Digit Numbers<br>• Solve Multiplication Word Problems |
| 2.16 Multiply One-Digit and Four-Digit Numbers | Multiplication<br>• Multiply by 1-Digit Numbers |

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| 2.17 Use the Shortcut Method | Multiplication<br>  • Multiply by 1-Digit Numbers |
| 2.18 Practice Multiplying | Multiplication<br>  • Multiply by 1-Digit Numbers<br>  • Multiply by 2-Digit Numbers<br>  • Solve Multiplication Word Problems |
| 2.19 Focus on Mathematical Practices | Multiplication<br>  • Multiply by 1-Digit Numbers<br>  • Multiply by 2-Digit Numbers<br>  • Solve Multiplication Word Problems<br>Multistep Word Problems<br>  • Solve Multistep Word Problems<br>  • Represent Multistep Word Problems |
| **Unit 3: Division with Whole Numbers** | |
| 3.1 Divide With Remainders | Division<br>  • Divide by 1-Digit Numbers |
| 3.2 Relate Three-Digit Multiplication to Division | Division<br>  • Divide by 1-Digit Numbers |
| 3.3 Discuss Two-Digit and Four-Digit Quotients | Division<br>  • Divide by 1-Digit Numbers |
| 3.4 Digit-by-Digit Method | Division<br>  • Divide by 1-Digit Numbers |
| 3.5 Relate Three Methods | Division<br>  • Divide by 1-Digit Numbers |
| 3.6 Divide by Any Method | Division<br>  • Divide by 1-Digit Numbers |

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| 3.7 Just-Under Quotient Digits | Division<br>　• Divide by 1-Digit Numbers |
| 3.8 Estimate to Check Quotients | Place Value<br>　• Round Whole Numbers<br>Division<br>　• Divide by 1-Digit Numbers |
| 3.9 Make Sense of Remainders | Division<br>　• Divide by 1-Digit Numbers |
| 3.10 Mixed Problem Solving | Division<br>　• Divide by 1-Digit Numbers<br>Multistep Word Problems<br>　• Solve Multistep Word Problems |
| 3.11 Focus on Mathematical Practices | Division<br>　• Divide by 1-Digit Numbers<br>　• Solve Division Word Problems |
| **Unit 4: Equations and Word Problems** | |
| 4.1 Properties and Algebraic Notation | Multiplication<br>　• Interpret Multiplication Equations |
| 4.2 Situation and Solution Equations for Addition and Subtraction | Addition and Subtraction<br>　• Add Whole Numbers<br>　• Adding Within 1,000,000 (Game)<br>　• Subtract Whole Numbers<br>　• Subtracting Within 1,000,000 (Game) |
| 4.3 Situation and Solution Equations for Multiplication and Division | Multiplication<br>　• Interpret Multiplication Equations |

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|---|---|
| 4.4 Multiplication Comparisons | Multiplication<br>• Interpret Multiplication Equations |
| 4.5 Discuss Comparison Problems | Multiplication<br>• Interpret Multiplication Equations |
| 4.6 Graphs and Comparison Problems | Multiplication<br>• Interpret Multiplication Equations |
| 4.7 Solve Two-Step Problems | Multistep Word Problems<br>• Solve Multistep Word Problems<br>• Represent Multistep Word Problems |
| 4.8 Solve Multistep Problems | Multistep Word Problems<br>• Solve Multistep Word Problems<br>• Represent Multistep Word Problems |
| 4.9 Practice with Multistep Problems | Multistep Word Problems<br>• Solve Multistep Word Problems<br>• Represent Multistep Word Problems |
| 4.10 Factors and Prime Numbers | Factors and Multiples<br>• Factors<br>• Prime and Composite |
| 4.11 Analyze Patterns | Patterns<br>• Shape Patterns<br>• Number Patterns |
| 4.12 Focus on Mathematical Practices | Multiplication<br>• Interpret Multiplication Equations<br>Patterns<br>• Number Patterns<br>Factors and Multiples<br>• Prime and Composite |

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| **Unit 5: Measurement** | |
| 5.1 Measure Length | Measurement Problems<br>• Units of Measure<br>• Convert From Larger Units to Smaller Units<br>• Solve Measurement Problems by Converting<br>• Solve Measurement Problems (Whole Numbers) |
| 5.2 Metric Measures of Liquid Volume and Mass | Measurement Problems<br>• Units of Measure<br>• Solve Measurement Problems (Whole Numbers) |
| 5.3 Units of Time | Measurement Problems<br>• Solve Measurement Problems (Whole Numbers)<br>Line Plots<br>• Line Plots to Eighths of a Unit<br>• Add and Subtract to Solve Problems with Line Plots |
| 5.4 Customary Measures of Length | Measurement Problems<br>• Units of Measure<br>• Convert From Larger Units to Smaller Units<br>• Solve Measurement Problems by Converting<br>• Solve Measurement Problems (Whole Numbers)<br>• Solve Measurement Problems (Fractions) |
| 5.5 Customary Measures of Weight and Liquid Volume | Measurement Problems<br>• Units of Measure<br>• Convert From Larger Units to Smaller Units<br>• Solve Measurement Problems by Converting<br>• Solve Measurement Problems (Whole Numbers) |
| 5.6 Perimeter and Area of Rectangles | Perimeter and Area<br>• Perimeter of Rectangles<br>• Area of Rectangles |

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| 5.7 Solve Measurement Problems | Measurement Problems<br>  • Solve Measurement Problems (Whole Numbers)<br>Perimeter and Area<br>  • Perimeter of Rectangles<br>  • Area of Rectangles |
| 5.8 Focus on Mathematical Practices | Measurement Problems<br>  • Units of Measure<br>  • Convert From Larger Units to Smaller Units<br>  • Solve Measurement Problems by Converting<br>  • Solve Measurement Problems (Whole Numbers)<br>Perimeter and Area<br>  • Perimeter of Rectangles<br>  • Area of Rectangles |
| **Unit 6: Fraction Concepts and Operations** | |
| 6.1 Understand Fractions | Add Fractions and Mixed Numbers<br>  • Fractions as Sums of Fractions<br>Fraction Multiplication<br>  • Fractions as Multiples of Unit Fractions |
| 6.2 Fractions That Add to One | Add Fractions and Mixed Numbers<br>  • Understand Addition of Fractions<br>  • Fractions as Sums of Fractions |
| 6.3 Add and Subtract Fractions with Like Denominators | Add Fractions and Mixed Numbers<br>  • Understand Addition of Fractions<br>  • Solve Problems by Adding Fractions<br>Subtract Fractions and Mixed Numbers<br>  • Understand Subtraction of Fractions<br>  • Solve Problems by Subtracting Fractions<br>Measurement Problems<br>  • Solve Measurement Problems (Fractions |

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| 6.4 Mixed Numbers and Fractions Greater Than 1 | Add Fractions and Mixed Numbers<br>  • Understand Addition of Fractions<br>  • Fractions as Sums of Fractions<br>  • Solve Problems by Adding Fractions<br>Subtract Fractions and Mixed Numbers<br>  • Understand Subtraction of Fractions<br>  • Solve Problems by Subtracting Fractions |
| 6.5 Add and Subtract Mixed Numbers with Like Denominators | Add Fractions and Mixed Numbers<br>  • Add Mixed Numbers with Like Denominators<br>Subtract Fractions and Mixed Numbers<br>  • Subtract Fractions with Mixed Numbers with Like Denominators |
| 6.6 Practice with Fractions and Mixed Numbers | Add Fractions and Mixed Numbers<br>  • Understand Addition of Fractions<br>  • Fractions as Sums of Fractions<br>  • Add Mixed Numbers with Like Denominators<br>Subtract Fractions and Mixed Numbers<br>  • Understand Subtraction of Fractions<br>  • Subtract Fractions with Mixed Numbers with Like Denominators |
| 6.7 Multiply a Fraction by a Whole Number | Fraction Multiplication<br>  • Multiply Fractions by Whole Numbers |
| 6.8 Practice Multiplying a Fraction by a Whole Number | Fraction Multiplication<br>  • Multiply Fractions by Whole Numbers |

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| 6.9 Mixed Practice | Add Fractions and Mixed Numbers<br>• Fractions as Sums of Fractions<br>• Add Mixed Numbers with Like Denominators<br>• Add Fractions with Like Denominators<br>• Solve Problems by Adding Fractions<br>Subtract Fractions and Mixed Numbers<br>• Subtract Fractions with Like Denominators<br>• Subtract Mixed Numbers with Like Denominators<br>• Solve Problems by Subtracting Fractions<br>Fraction Multiplication<br>• Fractions as Multiples of Unit Fractions<br>• Multiply Fractions by Whole Numbers<br>• Solve Problems by Multiplying a Fraction by a Whole Number |
| 6.10 Focus on Mathematical Practices | Add Fractions and Mixed Numbers<br>• Understand Addition of Fractions<br>• Fractions as Sums of Fractions<br>• Add Mixed Numbers with Like Denominators<br>• Add Fractions with Like Denominators<br>• Solve Problems by Adding Fractions<br>Subtract Fractions and Mixed Numbers<br>• Understand Subtraction of Fractions<br>• Subtract Fractions with Like Denominators<br>• Subtract Mixed Numbers with Like Denominators<br>• Solve Problems by Subtracting Fractions<br>Fraction Multiplication<br>• Fractions as Multiples of Unit Fractions<br>• Multiply Fractions by Whole Numbers<br>• Solve Problems by Multiplying a Fraction by a Whole Number |
| **Unit 7: Fractions and Decimals** | |
| 7.1 Compare Fractions | Equivalent Fractions and Ordering<br>• Compare Fractions |

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| 7.2 Fractions on the Number Line | Equivalent Fractions and Ordering<br>  • Compare Fractions |
| 7.3 Fractions of Different-Size Wholes | Equivalent Fractions and Ordering<br>  • Compare Fractions |
| 7.4 Equivalent Fractions Using Multiplication | Equivalent Fractions and Ordering<br>  • Equivalent Fractions<br>  • Extend Understanding of Equivalent Fractions |
| 7.5 Equivalent Fractions Using Division | Equivalent Fractions and Ordering<br>  • Equivalent Fractions<br>  • Extend Understanding of Equivalent Fractions |
| 7.6 Compare Fractions with Unlike Denominators | Equivalent Fractions and Ordering<br>  • Compare Fractions |
| 7.7 Fractions and Line Plots | Line Plots<br>  • Line Plots to Eighths of a Unit<br>  • Add and Subtract to Solve Problems with Line Plots |
| 7.8 Relate Fractions and Decimals | Fractions and Decimals<br>  • Rename Fractions as Decimals |
| 7.9 Explore Decimal Numbers | Fractions and Decimals<br>  • Rename Fractions as Decimals |
| 7.10 Compare Decimals to Hundredths | Fractions and Decimals<br>  • Rename Fractions as Decimals<br>Compare Decimals<br>  • Compare Decimals to Hundredths<br>  • Compare Decimals to Tenths |

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| 7.11 Decimals Greater Than 1 | Fractions and Decimals<br>    • Rename Fractions as Decimals |
| 7.12 Compare Decimals Greater Than 1 | Compare Decimals<br>    • Compare Decimals to Hundredths<br>    • Compare Decimals to Tenths |
| 7.13 Focus on Mathematical Practices | Equivalent Fractions and Ordering<br>    • Equivalent Fractions<br>    • Extend Understanding of Equivalent Fractions<br>    • Compare Fractions<br>Compare Decimals<br>    • Compare Decimals to Hundredths<br>    • Compare Decimals to Tenths |
| **Unit 8: Geometry** | |
| 8.1 Points, Rays, and Angles | Lines and Angles<br>    • Points, Lines, Line Segments, and Rays<br>    • Types of Angles |
| 8.2 Measuring Angles | Angle Measure<br>    • Define Angles<br>    • Angles and Degrees<br>Lines and Angles<br>    • Types of Angles |
| 8.3 Circles and Angles | Angle Measure<br>    • Define Angles<br>    • Draw and Measure Angles<br>    • Decompose Angles |

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| 8.4 Name Triangles | Two-Dimensional Figures<br>    • Classify Figures Based on Lines<br>    • Classify Figures Based on Angles<br>    • Right Triangles |
| 8.5 Compose and Decompose Angles | Lines and Angles<br>    • Types of Angles<br>Angle Measure<br>    • Draw and Measure Angles<br>    • Decompose Angles |
| 8.6 Real World Problems | Angle Measure<br>    • Decompose Angles<br>    • Find Unknown Angles |
| 8.7 Parallel and Perpendicular Lines and Line Segments | Lines and Angles<br>    • Parallel and Perpendicular Lines |
| 8.8 Classify Quadrilaterals | Lines and Angles<br>    • Identify Parts of Two-Dimensional Figures<br>Two-Dimensional Figures<br>    • Classify Figures Based on Lines<br>    • Classify Figures Based on Angles |
| 8.9 Decompose Quadrilaterals and Triangles | Lines and Angles<br>    • Points, Lines, Line Segments, and Rays<br>    • Identify Parts of Two-Dimensional Figures<br>    • Types of Angles<br>Two-Dimensional Figures<br>    • Classify Figures Based on Lines<br>    • Classify Figures Based on Angles |

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| 8.10 Classify Polygons | Lines and Angles<br>   • Points, Lines, Line Segments, and Rays<br>   • Identify Parts of Two-Dimensional Figures<br>   • Types of Angles<br>Two-Dimensional Figures<br>   • Classify Figures Based on Lines<br>   • Classify Figures Based on Angles |
| 8.11 Line Symmetry | Two-Dimensional Figures<br>   • Lines of Symmetry |
| 8.12 Focus on Mathematical Practices | Patterns<br>   • Shape Patterns<br>Lines and Angles<br>   • Points, Lines, Line Segments, and Rays<br>   • Identify Parts of Two-Dimensional Figures<br>   • Types of Angles<br>Two-Dimensional Figures<br>   • Classify Figures Based on Lines<br>   • Classify Figures Based on Angles |

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## *Waggle,* Grade 5

## Product to Product Correlation to

### *Math Expressions, Grade 5* © 2018
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| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| **Unit 1: Addition and Subtraction with Fractions** | |
| 1.1 Introduce the MathBoard | Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers |
| 1.2 Explain Equivalent Fractions | This skill is taught in *Waggle* Grade 4. |
| 1.3 Equivalent Fractions and Multipliers | This skill is taught in *Waggle* Grade 4. |
| 1.4 Strategies for Comparing Fractions | This skill is taught in *Waggle* Grade 4. |
| 1.5 Fractions Greater Than One | This skill is taught in *Waggle* Grade 4. |
| 1.6 Add and Subtract Like Mixed Numbers | Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers |
| 1.7 Add Unlike Fractions | Add and Subtract Fractions<br>• Add Fractions with Unlike Denominators<br>• Add and Subtract Fractions with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers |

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| 1.8 Subtract Unlike Fractions | Add and Subtract Fractions<br>• Subtract Fractions with Unlike Denominators<br>• Add and Subtract Fractions with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Subtracting Fractions and Mixed Numbers |
| 1.9 Solve with Unlike Mixed Numbers | Add and Subtract Fractions<br>• Add Mixed Numbers with Unlike Denominators<br>• Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers |
| 1.10 Practice with Unlike Mixed Numbers | Add and Subtract Fractions<br>• Add Mixed Numbers with Unlike Denominators<br>• Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers |
| 1.11 Reasonable Answers | Add and Subtract Fractions<br>• Add Fractions with Unlike Denominators<br>• Subtract Fractions with Unlike Denominators<br>• Add and Subtract Fractions with Unlike Denominators<br>• Add Mixed Numbers with Unlike Denominators<br>• Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers<br>• Reasonable Answers with Fractions |

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| 1.12 Real World Problems | Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers |
| 1.13 Focus on Mathematical Practices | Add and Subtract Fractions<br>• Add Fractions with Unlike Denominators<br>• Add and Subtract Fractions with Unlike Denominators<br>• Add Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers |
| **Unit 2: Addition and Subtraction With Decimals** | |
| 2.1 Decimals as Equal Divisions | Decimals to Thousandths<br>• Read and Write Decimals to Thousandths |
| 2.2 Thousands to Thousandths | Place Value<br>• Place Value Concepts<br>Decimals to Thousandths<br>• Read and Write Decimals to Thousandths |
| 2.3 Equate and Compare Thousandths | Place Value<br>• Place Value Concepts<br>Decimals to Thousandths<br>• Read and Write Decimals to Thousandths<br>• Compare Decimals |
| 2.4 Adding and Subtracting Decimals | Decimal Operations<br>• Add Decimals to Hundredths<br>• Subtract Decimals to Hundredths |
| 2.5 Add Whole Numbers and Decimals | Decimal Operations<br>• Add Decimals to Hundredths |

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| 2.6 Subtract Whole and Decimal Numbers | Decimal Operations<br>   • Subtract Decimals to Hundredths |
| 2.7 Properties and Strategies | Decimal Operations<br>   • Add Decimals to Hundredths |
| 2.8 Round and Estimate with Decimals | Decimals to Thousandths<br>   • Round Decimals |
| 2.9 Graph with Decimal Numbers | Decimals to Thousandths<br>   • Compare Decimals<br>   • Round Decimals |
| 2.10 Focus on Mathematical Practices | Decimal Operations<br>   • Add Decimals to Hundredths<br>   • Subtract Decimals to Hundredths |
| **Unit 3: Multiplication and Division with Fractions** | |
| 3.1 Basic Multiplication Concepts | Multiply with Fractions<br>   • Multiply a Fraction by a Whole Number<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Multiplication as Scaling<br>   • Explain Multiplication by a Fraction |
| 3.2 Multiplication with Non-Unit Fractions | Multiply with Fractions<br>   • Multiply a Fraction by a Fraction<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers |
| 3.3 Multiplication with Fractional Solutions | Multiply with Fractions<br>   • Multiply a Fraction by a Fraction<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers |

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|---|---|
| 3.4 Multiply a Fraction by a Fraction | Multiply with Fractions<br>• Multiply a Fraction by a Fraction<br>• Solve Problems by Multiplying Fractions and Mixed Numbers |
| 3.5 Multiplication Strategies | Multiply with Fractions<br>• Multiply a Fraction by a Fraction<br>• Solve Problems by Multiplying Fractions and Mixed Numbers |
| 3.6 Multiply Mixed Numbers | Multiply with Fractions<br>• Area of Rectangles with Fractional Side Lengths<br>• Solve Problems by Multiplying Fractions and Mixed Numbers<br>Multiplication as Scaling<br>• Compare Products to the Sizes of Factors<br>• Explain Multiplication by a Fraction |
| 3.7 Relate Fraction Operations | Add and Subtract Fractions<br>• Add Fractions with Unlike Denominators<br>• Subtract Fractions with Unlike Denominators<br>• Add and Subtract Fractions with Unlike Denominators<br>• Add Mixed Numbers with Unlike Denominators<br>• Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>• Solve Problems by Adding Fractions and Mixed Numbers<br>• Solve Problems by Subtracting Fractions and Mixed Numbers<br>Multiply with Fractions<br>• Multiply a Fraction by a Fraction<br>• Solve Problems by Multiplying Fractions and Mixed Numbers<br>Multiplication as Scaling<br>• Compare Products to the Sizes of Factors<br>• Explain Multiplication by a Fraction |

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|---|---|
| 3.8 Solve Real-World Problems | Add and Subtract Fractions<br>   • Add Fractions with Unlike Denominators<br>   • Subtract Fractions with Unlike Denominators<br>   • Add and Subtract Fractions with Unlike Denominators<br>   • Add Mixed Numbers with Unlike Denominators<br>   • Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>   • Solve Problems by Adding Fractions and Mixed Numbers<br>   • Solve Problems by Subtracting Fractions and Mixed Numbers<br>Multiply with Fractions<br>   • Multiply a Fraction by a Fraction<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Multiplication as Scaling<br>   • Compare Products to the Sizes of Factors |
| 3.9 Make Generalizations | Multiply with Fractions<br>   • Multiply a Fraction by a Fraction<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Multiplication as Scaling<br>   • Compare Products to the Sizes of Factors<br>   • Explain Multiplication by a Fraction |
| 3.10 When Dividing Is Also Multiplying | Fractions and Division<br>   • Interpret Fractions as Division<br>   • Fractions as Answers to Division Problems<br>Multiply with Fractions<br>   • Multiply a Fraction by a Fraction<br>Divide with Unit Fractions<br>   • Divide a Unit Fraction by a Whole Number<br>   • Divide a Whole Number by a Unit Fraction<br>   • Solve Problems by Dividing Unit Fractions and Whole Numbers |

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|---|---|
| 3.11 Solve Division Problems | Fractions and Division<br>• Interpret Fractions as Division<br>• Fractions as Answers to Division Problems<br>Divide with Unit Fractions<br>• Divide a Unit Fraction by a Whole Number<br>• Divide a Whole Number by a Unit Fraction<br>• Solve Problems by Dividing Unit Fractions and Whole Numbers |
| 3.12 Distinguish Multiplication from Division | Multiplication as Scaling<br>• Compare Products to the Sizes of Factors<br>• Explain Multiplication by a Fraction<br>Multiply with Fractions<br>• Multiply a Fraction by a Fraction<br>• Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>• Divide a Unit Fraction by a Whole Number<br>• Divide a Whole Number by a Unit Fraction<br>• Solve Problems by Dividing Unit Fractions and Whole Numbers |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| 3.13 Review Operations with Fractions | Add and Subtract Fractions<br>    • Add Fractions with Unlike Denominators<br>    • Subtract Fractions with Unlike Denominators<br>    • Add and Subtract Fractions with Unlike Denominators<br>    • Add Mixed Numbers with Unlike Denominators<br>    • Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>    • Solve Problems by Adding Fractions and Mixed Numbers<br>    • Solve Problems by Subtracting Fractions and Mixed Numbers<br>Fractions and Division<br>    • Interpret Fractions as Division<br>    • Fractions as Answers to Division Problems<br>Multiplication as Scaling<br>    • Compare Products to the Sizes of Factors<br>Multiply with Fractions<br>    • Multiply a Fraction by a Fraction<br>    • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>    • Divide a Unit Fraction by a Whole Number<br>    • Divide a Whole Number by a Unit Fraction<br>    • Solve Problems by Dividing Unit Fractions and Whole Numbers |
| 3.14 Focus on Mathematical Practices | Fractions and Division<br>    • Interpret Fractions as Division<br>    • Fractions as Answers to Division Problems<br>Multiplication as Scaling<br>    • Compare Products to the Sizes of Factors<br>Multiply with Fractions<br>    • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>    • Solve Problems by Dividing Unit Fractions and Whole Numbers |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| **Unit 4: Multiplication with Whole Numbers and Decimals** | |
| 4.1 Shift Patterns in Multiplication | Place Value<br> • Place Value Concepts<br> • Powers of 10<br> • Multiply Whole Numbers by Powers of 10<br>Decimal Operations<br> • Multiply Decimals to Hundredths |
| 4.2 Patterns with Fives and Zeros | Multiply and Divide Whole Numbers<br> • Multiply Whole Numbers |
| 4.3 Sharing Methods for Multiplication | Place Value<br> • Place Value Concepts<br>Multiply and Divide Whole Numbers<br> • Multiply Whole Numbers<br> • Multiplying Within 1,000,000 (Game) |
| 4.4 Multiply Two-Digit Numbers | Multiply and Divide Whole Numbers<br> • Multiply Whole Numbers<br> • Multiplying Within 1,000,000 (Game) |
| 4.5 Practice Multiplication | Multiply and Divide Whole Numbers<br> • Multiply Whole Numbers<br> • Multiplying Within 1,000,000 (Game) |
| 4.6 Multiply Decimals by Whole Numbers | Decimal Operations<br> • Multiply Decimals to Hundredths |
| 4.7 Multiply by Decimals | Place Value<br> • Place Value Concepts<br>Decimal Operations<br> • Multiply Decimals to Hundredths |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| 4.8 Multiply with Decimals Greater Than 1 | Decimal Operations<br>• Multiply Decimals to Hundredths |
| 4.9 Compare Shift Patterns | Place Value<br>• Place Value Concepts<br>Decimal Operations<br>• Multiply and Divide Decimals by Powers of 10<br>• Multiply Decimals to Hundredths |
| 4.10 Estimate Products | Decimals to Thousandths<br>• Round Decimals<br>Decimal Operations<br>• Multiply Decimals to Hundredths |
| 4.11 Multiplication Practice | Decimal Operations<br>• Multiply Decimals to Hundredths |
| 4.12 Focus on Mathematical Practices | Decimals to Thousandths<br>• Compare Decimals<br>Decimal Operations<br>• Multiply Decimals to Hundredths |
| **Unit 5: Division With Whole Numbers and Decimals** | |
| 5.1 Divide Whole Numbers by One Digit | Multiply and Divide Whole Numbers<br>• Divide by 2-Digit Numbers |
| 5.2 Explore Dividing by Two Digit Whole Numbers | Multiply and Divide Whole Numbers<br>• Divide by 2-Digit Numbers |
| 5.3 Too Large, Too Small, or Just Right? | Multiply and Divide Whole Numbers<br>• Divide by 2-Digit Numbers |
| 5.4 Interpret Remainders | Multiply and Divide Whole Numbers<br>• Divide by 2-Digit Numbers |

| **Math Expressions, Grade 5 Lessons** | **Waggle, Grade 5 Goals and Skills** |
|---|---|
| 5.5 Division Practice | Multiply and Divide Whole Numbers<br>   • Divide by 2-Digit Numbers |
| 5.6 Divide Decimal Numbers by Whole Numbers | Decimal Operations<br>   • Multiply and Divide Decimals by Powers of 10<br>   • Divide Decimals to Hundredths |
| 5.7 Divide Whole Numbers by Decimal Numbers | Decimal Operations<br>   • Multiply and Divide Decimals by Powers of 10<br>   • Divide Decimals to Hundredths |
| 5.8 Divide a Decimal Number by a Decimal Number | Decimal Operations<br>   • Divide Decimals to Hundredths |
| 5.9 Division Practice | Multiply and Divide Whole Numbers<br>   • Divide by 2-Digit Numbers<br>Decimal Operations<br>   • Divide Decimals to Hundredths |
| 5.10 Distinguish Between Multiplication and Division | Decimals to Thousandths<br>   • Compare Decimals<br>Decimal Operations<br>   • Multiply Decimals to Hundredths<br>   • Divide Decimals to Hundredths<br>Multiplication as Scaling<br>   • Compare Products to the Sized of Factors |
| 5.11 Focus on Mathematical Practices | Decimal Operations<br>   • Multiply Decimals to Hundredths<br>   • Divide Decimals to Hundredths |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
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| **Unit 6: Operations and Word Problems** | |
| 6.1 Situation and Solution Equations for Addition and Subtraction | Solve Problems by Adding and Subtracting Fractions<br>    • Solve Problems by Adding Fractions and Mixed Numbers<br>    • Solve Problems by Subtracting Fractions and Mixed Numbers<br>Decimal Operations<br>    • Add Decimals to Hundredths<br>    • Subtract Decimals to Hundredths |
| 6.2 Situation and Solution Equations for Multiplication and Division | Multiply and Divide Whole Numbers<br>    • Multiply Whole Numbers<br>    • Solve Multiplication Word Problems<br>    • Divide by 2-Digit Numbers<br>Decimal Operations<br>    • Add Decimals to Hundredths<br>    • Subtract Decimals to Hundredths<br>    • Multiply Decimals to Hundredths<br>    • Divide Decimals to Hundredths<br>Multiply with Fractions<br>    • Area of Rectangles with Fractional Side Lengths<br>    • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>    • Solve Problems by Dividing Unit Fractions and Whole Numbers |
| 6.3 Write Word Problems | Multiply with Fractions<br>    • Multiply a Fractions by a Whole Number<br>Divide with Unit Fractions<br>    • Divide a Unit Fraction by a Whole Number<br>    • Divide a Whole Number by a Unit Fraction |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
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| 6.4 Determine Reasonable Answers | Decimals to Thousandths<br>    • Round Decimals<br>Multiply and Divide Whole Numbers<br>    • Divide by 2-Digit Numbers<br>Decimal Operations<br>    • Add Decimals to Hundredths<br>    • Subtract Decimals to Hundredths<br>    • Multiply Decimals to Hundredths<br>    • Divide Decimals to Hundredths<br>Add and Subtract Fractions<br>    • Add Fractions with Unlike Denominators<br>    • Subtract Fractions with Unlike Denominators<br>    • Add and Subtract Fractions with Unlike Denominators<br>    • Add Mixed Numbers with Unlike Denominators<br>    • Subtract Mixed Numbers with Unlike Denominators<br>Solve Problems by Adding and Subtracting Fractions<br>    • Solve Problems by Adding Fractions and Mixed Numbers<br>    • Solve Problems by Subtracting Fractions and Mixed Numbers |
| 6.5 Language of Comparison Problems | Multiply and Divide Whole Numbers<br>    • Multiply Whole Numbers<br>    • Solve Multiplication Word Problems<br>    • Multiplying Within 1,000,000 (Game) |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| 6.6 Multiplicative Comparison Problems | Multiply and Divide Whole Numbers<br>  • Multiply Whole Numbers<br>  • Solve Multiplication Word Problems<br>  • Multiplying Within 1,000,000 (Game)<br>  • Divide by 2-Digit Numbers<br>Decimal Operations<br>  • Add Decimals to Hundredths<br>  • Subtract Decimals to Hundredths<br>  • Multiply Decimals to Hundredths<br>  • Divide Decimals to Hundredths<br>Multiplication as Scaling<br>  • Compare Products to the Sizes of Factors<br>  • Explain Multiplication by a Fraction<br>Multiply with Fractions<br>  • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>  • Solve Problems by Dividing Unit Fractions and Whole Numbers |
| 6.7 Types of Comparison Problems | Multiply and Divide Whole Numbers<br>  • Multiply Whole Numbers<br>  • Solve Multiplication Word Problems<br>  • Multiplying Within 1,000,000 (Game)<br>  • Divide by 2-Digit Numbers<br>Decimal Operations<br>  • Add Decimals to Hundredths<br>  • Subtract Decimals to Hundredths<br>  • Multiply Decimals to Hundredths<br>  • Divide Decimals to Hundredths<br>Solve Problems by Adding and Subtracting Fractions<br>  • Solve Problems by Adding Fractions and Mixed Numbers<br>  • Solve Problems by Subtracting Fractions and Mixed Numbers |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| 6.8 Equations and Parentheses | Numerical Expressions<br>   • Evaluate Numerical Expressions<br>Multiply and Divide Whole Numbers<br>   • Multiply Whole Numbers<br>   • Solve Multiplication Word Problems<br>Decimal Operations<br>   • Add Decimals to Hundredths<br>   • Subtract Decimals to Hundredths<br>   • Multiply Decimals to Hundredths<br>   • Divide Decimals to Hundredths<br>Solve Problems by Adding and Subtracting Fractions<br>   • Solve Problems by Adding Fractions and Mixed Numbers<br>   • Solve Problems by Subtracting Fractions and Mixed Numbers<br>Multiply with Fractions<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>   • Solve Problems by Dividing Unit Fractions and Whole Numbers |
| 6.9 Multi-step Word Problems | Multiply and Divide Whole Numbers<br>   • Multiply Whole Numbers<br>   • Solve Multiplication Word Problems<br>Decimal Operations<br>   • Add Decimals to Hundredths<br>   • Subtract Decimals to Hundredths<br>   • Multiply Decimals to Hundredths<br>   • Divide Decimals to Hundredths<br>Solve Problems by Adding and Subtracting Fractions<br>   • Solve Problems by Adding Fractions and Mixed Numbers<br>   • Solve Problems by Subtracting Fractions and Mixed Numbers<br>Multiply with Fractions<br>   • Solve Problems by Multiplying Fractions and Mixed Numbers |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
|---|---|
| 6.10 Practice Problem Solving | Multiply and Divide Whole Numbers<br>    • Divide by 2-Digit Numbers<br>Solve Problems by Adding and Subtracting Fractions<br>    • Solve Problems by Adding Fractions and Mixed Numbers<br>    • Solve Problems by Subtracting Fractions and Mixed Numbers<br>Multiply with Fractions<br>    • Solve Problems by Multiplying Fractions and Mixed Numbers<br>Divide with Unit Fractions<br>    • Solve Problems by Dividing Unit Fractions and Whole Numbers |
| 6.11 Focus on Mathematical Practices | Decimal Operations<br>    • Add Decimals to Hundredths<br>    • Subtract Decimals to Hundredths<br>    • Multiply Decimals to Hundredths<br>    • Divide Decimals to Hundredths<br>Fractions and Division<br>    • Interpret Fractions as Division<br>    • Fractions as Answers to Division Problems |
| **Unit 7: Algebra, Patterns, and Coordinate Graphs** | |
| 7.1 Read and Write Expressions | Numerical Expressions<br>    • Evaluate Numerical Expressions<br>    • Write and Interpret Numerical Expressions |
| 7.2 Simplify Expressions | Numerical Expressions<br>    • Evaluate Numerical Expressions |
| 7.3 Evaluate Expressions | Numerical Expressions<br>    • Evaluate Numerical Expressions<br>    • Write and Interpret Numerical Expressions |

| Math Expressions, Grade 5 Lessons | Waggle, Grade 5 Goals and Skills |
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| 7.4 Patterns and Relationships | Numerical Expressions<br>    • Evaluate Numerical Expressions<br>    • Write and Interpret Numerical Expressions<br>Patterns and Relationships<br>    • Relationships Between Corresponding Terms<br>    • Generate Numerical Patterns by Using Given Rules<br>    • Graph Patterns |
| 7.5 The Coordinate Plane | The Coordinate Plane<br>    • Understand the Coordinate Plane |
| 7.6 Graph Ordered Pairs | Patterns and Relationships<br>    • Graph Patterns<br>The Coordinate Plane<br>    • Understand the Coordinate Plane<br>    • Graph Points in the First Quadrant |
| 7.7 Focus on Mathematical Practices | Numerical Expressions<br>    • Evaluate Numerical Expressions<br>The Coordinate Plane<br>    • Understand the Coordinate Plane<br>    • Graph Points in the First Quadrant |
| **Unit 8: Measurement and Geometry** | |
| 8.1 Metric Units of Length | Measurement Problems<br>    • Convert Measurement Units Within a System |
| 8.2 Customary Units of Length | Measurement Problems<br>    • Convert Measurement Units Within a System |
| 8.3 Perimeter and Area of Rectangles | Multiply with Fractions<br>    • Area of Rectangles with Fractional Side Lengths |

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| 8.4 Cubic Units and Volume | Understand Volume<br>  • Understand Cubic Units<br> Volume of Rectangular Prisms<br>  • Volume of Rectangular Prisms with Formulas<br>  • Volume of Rectangular Prisms with Unit Cubes<br>Understand Volume<br>  • Measure Volume by Counting Unit Cubes |
| 8.5 Visualize Volume | Understand Volume<br>  • Understand Cubic Units<br>  • Understand Volume |
| 8.6 Introduce Volume Formulas | Understand Volume<br>  • Measure Volume by Counting Unit Cubes<br>Volume of Rectangular Prisms<br>  • Volume of Rectangular Prisms with Formulas<br>  • Volume of Rectangular Prisms with Unit Cubes |
| 8.7 Relate Length, Area, and Volume | Volume of Rectangular Prisms<br>  • Volume of Rectangular Prisms with Formulas |
| 8.8 Volume of Composite Solid Figures | Volume of Rectangular Prisms<br>  • Volume of Rectangular Prisms with Formulas<br>  • Volume of Figures Made of Rectangular Prisms |
| 8.9 Metric Units of Liquid Volume | Measurement Problems<br>  • Convert Measurement Units Within a System<br>  • Solve Multistep Measurement Problems |
| 8.10 Metric Units of Mass | Measurement Problems<br>  • Convert Measurement Units Within a System<br>  • Solve Multistep Measurement Problems |

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| 8.11 Customary Units of Liquid Volume | Measurement Problems<br>    • Convert Measurement Units Within a System<br>    • Solve Multistep Measurement Problems |
| 8.12 Customary Units of Weight | Measurement Problems<br>    • Convert Measurement Units Within a System<br>    • Solve Multistep Measurement Problems |
| 8.13 Read and Make Line Plots | Line Plots<br>    • Line Plots with Fractions of a Unit<br>    • Solve Problems with Line Plots |
| 8.14 Attributes of Quadrilaterals | Classify Shapes<br>    • Attributes of Shapes<br>    • Classify Shapes Based on Properties |
| 8.15 Attributes of Triangles | Classify Shapes<br>    • Attributes of Shapes<br>    • Classify Shapes Based on Properties |
| 8.16 Attributes of Two-Dimensional Shapes | Classify Shapes<br>    • Attributes of Shapes<br>    • Classify Shapes Based on Properties |
| 8.17 Focus on Mathematical Practices | Understand Volume<br>    • Understand Cubic Units<br>    • Understand Volume<br>Volume of Rectangular Prisms<br>    • Volume of Rectangular Prisms with Formulas |

# Houghton Mifflin Harcourt
## *Waggle,* Grade 6

## Product to Product Correlation to

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### *Common Core Edition*

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| **Unit 1: Rates, Ratios, and Proportions** | |
| 1.1 Factor Puzzles and the Multiplication Table | Tables of Equivalent Ratios<br>• Complete Ratio Tables |
| 1.2 Solving Factor Puzzles | Tables of Equivalent Ratios<br>• Complete Ratio Tables |
| 1.3 Rate Situations and Rate Tables | Ratios and Rates<br>• Understand Unit Rates<br>• Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>• Complete Ratio Tables |
| 1.4 Rate Situations and Unit Rate Language | Ratios and Rates<br>• Understand Unit Rates<br>• Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>• Complete Ratio Tables |
| 1.5 Unit Rates, Products, and Rate Tables | Ratios and Rates<br>• Understand Unit Rates<br>• Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>• Complete Ratio Tables |

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|---|---|
| 1.6 Unit Pricing | Ratios and Rates<br>• Understand Unit Rates<br>• Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>• Equivalent Ratios on the Coordinate Plane<br>• Complete Ratio Tables |
| 1.7 Constant Speed | Ratios and Rates<br>• Understand Unit Ratios<br>• Understand Unit Rates<br>• Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>• Equivalent Ratios on the Coordinate Plane<br>• Complete Ratio Tables |
| 1.8 Ratio as Linked Rates | Ratios and Rates<br>• Understand Unit Ratios<br>• Understand Unit Rates<br>Tables of Equivalent Ratios<br>• Equivalent Ratios on the Coordinate Plane<br>• Complete Ratio Tables |
| 1.9 Finding Linked Values in Ratio Tables | Ratios and Rates<br>• Understand Unit Ratios<br>Tables of Equivalent Ratios<br>• Equivalent Ratios on the Coordinate Plane<br>• Complete Ratio Tables |
| 1.10 Seeing Proportions in Ratio Tables | Ratios and Rates<br>• Understand Unit Ratios<br>Tables of Equivalent Ratios<br>• Equivalent Ratios on the Coordinate Plane<br>• Complete Ratio Tables |

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| 1.11 Identify and Solve Proportion Situations | Ratios and Rates<br>  • Understand Unit Ratios<br>Tables of Equivalent Ratios<br>  • Equivalent Ratios on the Coordinate Plane<br>  • Complete Ratio Tables |
| 1.12 Solve Numeric Proportion Problems | Ratios and Rates<br>  • Understand Unit Ratios<br>Tables of Equivalent Ratios<br>  • Equivalent Ratios on the Coordinate Plane<br>  • Complete Ratio Tables |
| 1.13 Basic Ratio Solution Strategies | Ratios and Rates<br>  • Understand Unit Ratios<br>  • Understand Unit Rates<br>Tables of Equivalent Ratios<br>  • Equivalent Ratios on the Coordinate Plane<br>  • Complete Ratio Tables |
| 1.14 Write and Solve Proportion Problems | Ratios and Rates<br>  • Understand Unit Ratios<br>Tables of Equivalent Ratios<br>  • Equivalent Ratios on the Coordinate Plane<br>  • Complete Ratio Tables |
| 1.15 Focus on Mathematical Practices | Ratios and Rates<br>  • Understand Unit Ratios<br>  • Understand Unit Rates<br>Tables of Equivalent Ratios<br>  • Equivalent Ratios on the Coordinate Plane<br>  • Complete Ratio Tables |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| **Unit 2: Area of Polygons** | |
| 2.1 Units of Area | Area<br>  • Area of Polygons |
| 2.2 Area of Any Right Triangle | Area<br>  • Area of Triangles |
| 2.3 Area of Any Parallelogram | Area<br>  • Area of Parallelograms and Trapezoids |
| 2.4 Area of Any Triangle | Area<br>  • Area of Triangles |
| 2.5 Select the Needed Measurements | Area<br>  • Area of Triangles<br>  • Area of Parallelograms and Trapezoids |
| 2.6 Area of Any Trapezoid | Area<br>  • Area of Parallelograms and Trapezoids |
| 2.7 Area of a Complex Figure | Area<br>  • Area of Polygons |
| 2.8 Area of Any Regular Polygon | Area<br>  • Area of Polygons |
| 2.9 Graph Polygons in the Coordinate Plane | Area<br>  • Area of Polygons |
| 2.10 Focus on Mathematical Practices | Area<br>  • Area of Polygons |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| **Unit 3: Operations with Whole Numbers, Fractions, and Decimals** | |
| 3.1 Place Value and Whole Number Division | Divide Whole Numbers and Fractions<br>• Divide Whole Numbers<br>• Dividing Within 100,000 (Game) |
| 3.2 Estimated Multipliers in Division | Divide Whole Numbers and Fractions<br>• Divide Whole Numbers<br>• Dividing Within 100,000 (Game) |
| 3.3 Multiplying by a Decimal | Decimal Operations<br>• Multiply Decimals<br>• Multiplying Decimals (Game) |
| 3.4 Decimal Divisors | Decimal Operations<br>• Divide Decimals<br>• Dividing Decimals (Game) |
| 3.5 Multiplication or Division | Decimal Operations<br>• Multiply Decimals<br>• Multiplying Decimals (Game)<br>• Divide Decimals<br>• Dividing Decimals (Game) |
| 3.6 Comparing, Adding, and Subtracting with the Same Unit | Decimal Operations<br>• Add Decimals<br>• Adding Decimals (Game)<br>• Subtract Decimals<br>• Subtracting Decimals (Game) |
| 3.7 Equivalent Fractions or Decimals | |
| 3.8 Finding a Common Unit Fraction | |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| 3.9 Mixed Problem Solving | Decimal Operations<br>• Add Decimals<br>• Adding Decimals (Game)<br>• Subtract Decimals<br>• Subtracting Decimals (Game)<br>GCF and LCM<br>• Greatest Common Factor<br>• Least Common Multiple |
| 3.10 Multiplying with Fractions | This skill is taught in *Waggle*, Grade 5. |
| 3.11 Dividing with Fractions and Whole Numbers | Divide Whole Numbers and Fractions<br>• Divide Whole Numbers by Fractions |
| 3.12 Is It Multiplying or Dividing? | Divide Whole Numbers and Fractions<br>• Divide Whole Numbers by Fractions |
| 3.13 Dividing Numerators and Denominators | Divide Whole Numbers and Fractions<br>• Divide Fractions |
| 3.14 Dividing by Unsimplifying | Divide Whole Numbers and Fractions<br>• Divide Fractions |
| 3.15 Dividing by Multiplying by the Reciprocal | Divide Whole Numbers and Fractions<br>• Divide Fractions |
| 3.16 Is It Multiplying or Dividing? | Divide Whole Numbers and Fractions<br>• Divide Fractions |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| 3.17 Mixed Practice with Decimals and Fractions | Divide Whole Numbers and Fractions<br>• Divide Fractions<br>Decimal Operations<br>• Multiply Decimals<br>• Multiplying Decimals (Game)<br>• Divide Decimals<br>• Dividing Decimals (Game) |
| 3.18 Focus on Mathematical Practices | Divide Whole Numbers and Fractions<br>• Divide Fractions<br>Decimal Operations<br>• Add Decimals<br>• Adding Decimals (Game)<br>• Subtract Decimals<br>• Subtracting Decimals (Game)<br>• Multiply Decimals<br>• Multiplying Decimals (Game)<br>• Divide Decimals<br>• Dividing Decimals (Game) |
| **Unit 4: Surface Area of Prisms and Pyramids** | |
| 4.1 Nets and Surface Area for Rectangular Prisms | Volume and Surface Area<br>• Nets of Solid Figures<br>• Use Nets to Find Surface Area |
| 4.2 Nets and Surface Area for Nonrectangular Prisms | Volume and Surface Area<br>• Nets of Solid Figures<br>• Use Nets to Find Surface Area |
| 4.3 Surface Area of Prisms | Volume and Surface Area<br>• Use Nets to Find Surface Area |
| 4.4 Nets for Pyramids | Volume and Surface Area<br>• Nets of Solid Figures |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| 4.5 Surface Area of Pyramids | Volume and Surface Area<br>    • Use Nets to Find Surface Area |
| 4.6 Focus on Mathematical Practices | Volume and Surface Area<br>    • Nets of Solid Figures<br>    • Use Nets to Find Surface Area |
| **Unit 5: Expressions and Equations** | |
| 5.1 Expressions and Order of Operations | Algebraic Expressions<br>    • Parts of Expressions<br>Evaluate Algebraic Expressions<br>    • Evaluate Formulas<br>    • Evaluate Algebraic Expressions |
| 5.2 Expressions with Exponents | Numerical Expressions<br>    • Evaluate Numerical Expressions with Exponents<br>    • Repeated Multiplication and Exponents<br>Algebraic Expressions<br>    • Translate Verbal Expressions into Algebraic Expressions<br>    • Parts of Expressions<br>Evaluate Algebraic Expressions<br>    • Evaluate Formulas<br>    • Evaluate Algebraic Expressions |
| 5.3 Interpreting and Analyzing Expressions | Numerical Expressions<br>    • Evaluate Numerical Expressions with Exponents<br>    • Repeated Multiplication and Exponents<br>Algebraic Expressions<br>    • Translate Verbal Expressions into Algebraic Expressions<br>    • Parts of Expressions |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| 5.4 Modeling and Simplifying Expressions | Numerical Expressions<br> • Evaluate Numerical Expressions with Exponents<br> • Repeated Multiplication and Exponents<br>Algebraic Expressions<br> • Translate Verbal Expressions into Algebraic Expressions<br> • Parts of Expressions<br>Evaluate Algebraic Expressions<br> • Evaluate Formulas<br> • Evaluate Algebraic Expressions<br>Equivalent Expressions<br> • Decide if Expressions are Equivalent |
| 5.5 Expressions for Area and Surface Area | Numerical Expressions<br> • Evaluate Numerical Expressions with Exponents<br> • Repeated Multiplication and Exponents<br>Algebraic Expressions<br> • Parts of Expressions<br>Equivalent Expressions<br> • Decide if Expressions are Equivalent<br>Volume and Surface Area<br> • Use Nets to Find Surface Area |
| 5.6 Equivalent Expressions | Equivalent Expressions<br> • Decide if Expressions are Equivalent |
| 5.7 The Commutative and Associative Properties | Numerical Expressions<br> • Evaluate Numerical Expressions with Exponents<br>Algebraic Expressions<br> • Parts of Expressions<br>Equivalent Expressions<br> • Generate Equivalent Expressions<br> • Decide if Expressions Are Equivalent |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| 5.8 The Distributive Property | Numerical Expressions<br>   • Evaluate Numerical Expressions with Exponents<br>Algebraic Expressions<br>   • Parts of Expressions<br>Equivalent Expressions<br>   • Generate Equivalent Expressions Using the Distributive Property |
| 5.9 Practice with Expressions | Algebraic Expressions<br>   • Translate Verbal Expressions Into Algebraic Expressions<br>   • Write Expressions Using Variables<br>Evaluate Algebraic Expressions<br>   • Evaluate Algebraic Expressions<br>Equivalent Expressions<br>   • Generate Equivalent Expressions<br>   • Generate Equivalent Expressions Using the Distributive Property<br>   • Decide if Expressions Are Equivalent |
| 5.10 Relating Two Quantities | Algebraic Expressions<br>   • Write Expressions Using Variables<br>Dependent and Independent Variables<br>   • Equations Relating Variables |
| 5.11 Motion at a Constant Speed | Algebraic Expressions<br>   • Write Expressions Using Variables<br>Dependent and Independent Variables<br>   • Equations Relating Variables<br>   • Identify Dependent and Independent Variables<br>   • Relationship Between Independent and Dependent Variables |
| 5.12 Relating Equations, Tables, and Graphs | Dependent and Independent Variables<br>   • Equations Relating Variables<br>   • Identify Dependent and Independent Variables<br>   • Relationship Between Independent and Dependent Variables |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
|---|---|
| 5.13 Writing Equations | Dependent and Independent Variables<br> • Equations Relating Variables<br> • Identify Dependent and Independent Variables<br> • Relationship Between Independent and Dependent Variables |
| 5.14 Inequalities | Algebraic Expressions<br> • Translate Verbal Expressions Into Algebraic Expressions<br> • Write Expressions Using Variables<br>Inequalities<br> • Represent Inequalities on a Number Line<br> • Write Simple Inequalities |
| 5.15 Solutions of Equations and Inequalities | Equations<br> • Decide if a Number Makes an Equation True<br>Inequalities<br> • Decide if a Number Makes an Inequality True<br> • Represent Inequalities on a Number Line<br> • Write Simple Inequalities |
| 5.16 Addition and Subtraction Equations | Equations<br> • Decide if a Number Makes an Equation True<br> • Solve One-Step Addition Equations<br>Inequalities<br> • Decide if a Number Makes an Inequality True<br> • Write Simple Inequalities<br>Algebraic Expressions<br> • Write Expressions Using Variables |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 5.17 Multiplication and Division Equations | Equations<br>    • Decide if a Number Makes an Equation True<br>    • Solve One-Step Multiplication Equations<br>Inequalities<br>    • Decide if a Number Makes an Inequality True<br>    • Write Simple Inequalities<br>Algebraic Expressions<br>    • Write Expressions Using Variables |
| 5.18 Focus on Mathematical Practices | Algebraic Expressions<br>    • Write Expressions Using Variables<br>Equations<br>    • Solve One-Step Addition Equations<br>    • Solve One-Step Multiplication Equations<br>Dependent and Independent Variables<br>    • Equations Relating Variables |
| **Unit 6: Geometry and Measurement** | |
| 6.1 What Is Volume? | Volume and Surface Area<br>    • Nets of Solid Figures<br>    • Use Nets to Find Surface Area<br>Evaluate Algebraic Expressions<br>    • Evaluate Formulas |
| 6.2 Fractional Unit Cubes | Volume and Surface Area<br>    • Volume of Rectangular Prisms with Fractional Edge Lengths<br>Evaluate Algebraic Expressions<br>    • Evaluate Formulas |
| 6.3 Compose Rectangular Prisms with Fractional Edge Lengths | Volume and Surface Area<br>    • Volume of Rectangular Prisms with Fractional Edge Lengths<br>Evaluate Algebraic Expressions<br>    • Evaluate Formulas |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 6.4 Volume of Prisms with Fractional Edge Lengths | Volume and Surface Area<br> • Volume of Rectangular Prisms with Fractional Edge Lengths<br>Evaluate Algebraic Expressions<br> • Evaluate Formulas |
| 6.5 Write and Solve Equations about Volume | Volume and Surface Area<br> • Volume of Rectangular Prisms with Fractional Edge Lengths<br> • Use Nets to Find Surface Area<br>Evaluate Algebraic Expressions<br> • Evaluate Formulas |
| 6.6 Focus on Mathematical Practices | Volume and Surface Area<br> • Volume of Rectangular Prisms with Fractional Edge Lengths<br> • Use Nets to Find Surface Area<br>Evaluate Algebraic Expressions<br> • Evaluate Formulas<br>Algebraic Expressions<br> • Write Expressions Using Variables |
| **Unit 7: Ratios and Rates with Fractions, Decimals, and Percents** | |
| 7.1 Comparing Ratios | Ratios and Rates<br> • Understand Ratios<br>Tables of Equivalent Ratios<br> • Compare Ratios Shown in Tables |
| 7.2 Unit Rates | Ratios and Rates<br> • Understand Unit Rates<br> • Solve Unit Rate Problems<br>Algebraic Expressions<br> • Write Expressions Using Variables |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 7.3 Ratios, Fractions, and Fraction Notation | Ratios and Rates<br>  • Understand Rates<br>  • Understand Ratios<br>Tables of Equivalent Ratios<br>  • Complete Ratio Tables |
| 7.4 Understanding Cross-Multiplication | Ratios and Rates<br>  • Solve Unit Rate Problems |
| 7.5 Describing Ratios with Tape Diagrams | Ratios and Rates<br>  • Understand Ratios<br>  • Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>  • Complete Ratio Tables |
| 7.6 Ratios and Multiplicative Comparisons | Ratios and Rates<br>  • Understand Ratios<br>  • Solve Unit Rate Problems |
| 7.7 Solve Ratio and Rate Problems | Ratios and Rates<br>  • Understand Ratios<br>  • Solve Unit Rate Problems<br>Tables of Equivalent Ratios<br>  • Complete Ratio Tables<br>Algebraic Expressions<br>  • Write Expressions Using Variables |
| 7.8 The Meaning of Percent | Percent<br>  • Find a Percent of a Number |
| 7.9 Percent of a Number | Percent<br>  • Find a Percent of a Number |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 7.10 Percent Calculations | Percent<br>  • Find a Percent of a Number |
| 7.11 Solve Percent Problems | Percent<br>  • Find a Percent of a Number |
| 7.12 Convert Units of Length | Ratios and Rates<br>  • Convert Measurement Units |
| 7.13 Convert Units of Liquid Volume, Mass, and Weight | Ratios and Rates<br>  • Convert Measurement Units |
| 7.14 Focus on Mathematical Practices | Ratios and Rates<br>  • Convert Measurement Units |
| **Unit 8: Statistics and Probability** | |
| 8.1 Making Sense of Data | Statistical Variability<br>  • Recognize Statistical Questions<br>Display Data<br>  • Dot Plots<br>Describe Data<br>  • Report the Number of Observations |
| 8.2 Dot Plots and Histograms | Statistical Variability<br>  • Recognize Statistical Questions<br>Display Data<br>  • Histograms<br>  • Dot Plots<br>Describe Data<br>  • Report the Number of Observations |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 8.3 Making Data Groups Equal | Statistical Variability<br>    • Center, Spread, and Shape<br>    • Measures of Center |
| 8.4 Use the Mean | Statistical Variability<br>    • Center, Spread, and Shape<br>    • Measures of Center<br>Summarize Numerical Data Sets<br>    • Mean and Median |
| 8.5 The Mean as a Balance Point | Statistical Variability<br>    • Center, Spread, and Shape<br>    • Measures of Center<br>Display Data<br>    • Dot Plots<br>Summarize Numerical Data Sets<br>    • Mean and Median |
| 8.6 Find and Use the Median | Statistical Variability<br>    • Center, Spread, and Shape<br>    • Measures of Center<br>Display Data<br>    • Dot Plots<br>Summarize Numerical Data Sets<br>    • Mean and Median<br>    • Determine Appropriate Measures of Center and Variability |
| 8.7 Variability in Data | Statistical Variability<br>    • Center, Spread, and Shape<br>    • Measures of Variation<br>Display Data<br>    • Dot Plots<br>Describe Data<br>    • Range and Interquartile Range |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 8.8 Box Plots | Statistical Variability<br>  • Center, Spread, and Shape<br>  • Measures of Variation<br>Display Data<br>  • Box Plots<br>Describe Data<br>  • Range and Interquartile Range<br>Summarize Numerical Data Sets<br>  • Mean and Median<br>  • Determine Appropriate Measures of Center and Variability |
| 8.9 Mean Absolute Deviation | Summarize Numerical Data Sets<br>  • Mean Absolute Deviation |
| 8.10 Clusters, Peaks, Gaps, and Outliers | Statistical Variability<br>  • Center, Spread, and Shape<br>Summarize Numerical Data Sets<br>  • Determine Appropriate Measures of Center and Variability |
| 8.11 Collect, Display, and Interpret Data | Statistical Variability<br>  • Recognize Statistical Questions<br>  • Measures of Center<br>  • Measures of Variation<br>Statistical Variability<br>  • Center, Spread, and Shape<br>Describe Data<br>  • Report the Number of Observations<br>  • Describe the Nature of Collected Data<br>Summarize Numerical Data Sets<br>  • Range and Interquartile Range<br>  • Mean and Median<br>  • Mean Absolute Deviation<br>  • Determine Appropriate Measures of Center and Variability |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 8.12 Focus on Mathematical Practices | Statistical Variability<br> • Recognize Statistical Questions<br> • Center, Spread, and Shape<br> • Measures of Center<br> • Measures of Variation<br>Display Data<br> • Dot Plots<br>Statistical Variability<br> • Center, Spread, and Shape<br>Describe Data<br> • Report the Number of Observations<br> • Describe the Nature of Collected Data<br>Summarize Numerical Data Sets<br> • Range and Interquartile Range<br> • Mean and Median<br> • Mean Absolute Deviation<br> • Determine Appropriate Measures of Center and Variability |
| **Unit 9: Rational Numbers and the Coordinate Plane** | |
| 9.1 Negative Numbers in the Real World | Positive and Negative Numbers<br> • Represent Quantities with Positive and Negative Numbers |
| 9.2 Integers on a Number Line | Positive and Negative Numbers<br> • The Opposite of a Number<br> • Rational Numbers on Number Lines |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 9.3 Compare and Order Integers | Positive and Negative Numbers<br>    • Represent Quantities with Positive and Negative Numbers<br>    • The Opposite of a Number<br>    • Rational Numbers on Number Lines<br>Compare Numbers<br>    • Interpret Statements of Inequality<br>    • Compare Rational Numbers<br>Absolute Value<br>    • Absolute Value and Magnitude<br>    • Understand Absolute Value<br>    • Absolute Value and Statements About Order |
| 9.4 Integers and the Coordinate Plane | The Coordinate Plane<br>    • Quadrants on the Coordinate Plane<br>    • Ordered Pair son the Coordinate Plane<br>Compare Numbers<br>    • Compare Rational Numbers<br>Using the Coordinate Plane<br>    • Solve Problems on the Coordinate Plane |
| 9.5 Rational Numbers on a Number Line | Positive and Negative Numbers<br>    • The Opposite of a Number<br>    • Rational Numbers on Number Lines |
| 9.6 Compare and Order Rational Numbers | Positive and Negative Numbers<br>    • The Opposite of a Number<br>    • Rational Numbers on Number Lines<br>Compare Numbers<br>    • Interpret Statements of Inequality<br>    • Compare Rational Numbers |

| Math Expressions, Grade 6 Lessons | Waggle, Grade 6 Goals and Skills |
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| 9.7 Rational Numbers and the Coordinate Plane | Positive and Negative Numbers<br>　• Represent Quantities with Positive and Negative Numbers<br>The Coordinate Plane<br>　• Quadrants on the Coordinate Plane<br>　• Reflections of Points on the Coordinate Plane<br>　• Ordered Pairs on the Coordinate Plane<br>Absolute Value<br>　• Absolute Value and Magnitude<br>　• Understand Absolute Value<br>Using the Coordinate Plane<br>　• Solve Problems on the Coordinate Plane |
| 9.8 Focus on Mathematical Practices | Positive and Negative Numbers<br>　• Represent Quantities with Positive and Negative Numbers<br>The Coordinate Plane<br>　• Quadrants on the Coordinate Plane<br>　• Reflections of Points on the Coordinate Plane<br>　• Ordered Pairs on the Coordinate Plane<br>Absolute Value<br>　• Absolute Value and Magnitude<br>　• Understand Absolute Value<br>Using the Coordinate Plane<br>　• Solve Problems on the Coordinate Plane |