

# Grade 4 Mathematics – Unit 3: Fractions and Decimals

## Phoenixville Area School District

| Stage 1 Desired Results   |   |  |
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|   | <i>Transfer</i>   |  |
| <p><b>PA Core Standards:</b><br/> <u>CC.2.1.4.C.1</u> Extend the understanding of fractions to show equivalence and ordering<br/> <u>CC.2.1.4.C.2</u> Build fractions from unit fractions by applying and extending previous understandings of operations and whole numbers</p> | <p><b>TRANSFER GOALS</b><br/> <i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> <li>• Number sense: Develop a sound foundation to demonstrate the value of numbers by describing their various representations, relationships, and patterns</li> <li>• Problem-Solving: Persistently apply various problem-solving strategies and organized approaches to accurately understand and solve problems</li> <li>• Mathematical Vocabulary: Interpret mathematical vocabulary and apply proper terminology to engage in meaningful oral and written expression that communicates mathematical thinking, problem-solving methods, and rationale.</li> </ul> |  |
|   | <i>Meaning</i>  |  |
| <p><u>CC.2.1.4.C.3</u> Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, eg 19/100)</p>  | <p><b>UNDERSTANDINGS</b><br/> <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <li>• There are many ways to represent a number.</li> <li>• Identifying relationships between numbers helps classify and compare them.</li> </ul>  | <p><b>ESSENTIAL QUESTIONS</b><br/> <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> <li>• What are different ways to represent a number?</li> <li>• How can I use models, words, and expanded forms to order and compare numbers?</li> <li>• What information and strategies do I use to solve this problem? What is the right tool (operation/strategy/technology) for the job?</li> </ul> |
|   | <i>Knowledge and Skills Acquisition</i>   |  |
| <p><b>PSSA Assessment Anchors:</b></p> <p><u>M04.A-F.1.1</u> Find equivalencies and compare fractions</p> <p><u>M04.A-F.2.1</u> Solve problems involving fractions and whole</p>  | <p><b>KNOWLEDGE</b><br/> <i>Students will know...</i></p> <ul style="list-style-type: none"> <li>• Fractions and decimals are a way to represent the part and whole of numbers.</li> <li>• Fractions can be represented as proper, improper and mixed numbers.</li> </ul>   | <p><b>SKILLS</b><br/> <i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> <li>• Recognize and generate equivalent fractions</li> <li>• Compare two fractions with different numerators and different denominators</li> </ul>  |

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| <p>numbers (straight computation or word problems)</p> <p><u>M04.A-F.3.1</u> Use operations to solve problems involving decimals, including converting between fractions and decimals (may include word problems)</p> | <ul style="list-style-type: none"> <li>Fractions and decimals can be compared and ordered.</li> <li>Multiplication and division can be used to simplify and make equivalent fractions.</li> </ul> <p>VOCABULARY</p> <ul style="list-style-type: none"> <li>Improper fraction</li> <li>Mixed number</li> <li>Decimal notation</li> <li>Decompose</li> <li>Justify</li> <li>Convert</li> <li>Simplify/reduce</li> </ul> | <p>using symbols <math>&gt;</math>, <math>&lt;</math> or <math>=</math> and justify the conclusions</p> <ul style="list-style-type: none"> <li>Add and subtract fractions/mixed numbers with a common denominator/ respective denominator of 10 and 100</li> <li>Use expanded form to decompose a fraction or mixed number and justify the conclusion</li> <li>Solve word problems involving addition and subtraction of fractions referring to the same whole number or set and having like denominators</li> <li>Multiply a whole number by a unit fraction/non unit fraction</li> <li>Solve word problems involving multiplication of a whole number by a fraction</li> <li>Use decimal notation for fractions with denominators 10 or 100</li> <li>Compare two decimals to hundredths using symbols <math>&gt;</math>, <math>&lt;</math> or <math>=</math> and justify the conclusions</li> </ul> |
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### Stage 2 – Evidence

| Code<br>A/M/T   | Evaluative<br>Criteria   | Assessment Evidence  |   |
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| <p>A/M/T</p> <p>Acquisition</p> <p>Meaning Making</p> <p>Transfer</p> | <p><i>What criteria will be used in each assessment to evaluate attainment of the desired results?</i></p> | <p><b>PERFORMANCE TASK(S)</b></p> <p><i>Students will demonstrate understanding (meaning-making and transfer) through complex performance by...</i></p> <p><i>Fractions Assessment</i></p> <p>You are to create a test for your fellow classmates. You should include <u>at least 4</u> questions for the following topics:</p> <ul style="list-style-type: none"> <li>Equivalent fractions</li> <li>Comparing fractions</li> <li>Multiplying whole numbers by fractions</li> <li>Add and Subtract fractions and mixed numbers (like/unlike denominators)</li> </ul> | <p>Differentiation Considerations:</p> <p>[Work on this section after completing Stages 1-2 of all units]</p> |

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|   |  | <ul style="list-style-type: none"> <li>• Word problem (at least 1)</li> </ul> <p>Your test should include the following types of questions:</p> <ul style="list-style-type: none"> <li>• Multiple choice</li> <li>• Short answer</li> <li>• Open ended problems (word problems)</li> </ul> <p>Your test should include:</p> <ul style="list-style-type: none"> <li>• Directions for each type of question</li> <li>• An answer key showing work that should be used by the student to complete the problem</li> </ul> <p>Finished product to be turned in:</p> <ul style="list-style-type: none"> <li>• 1 blank test</li> <li>• Answer key with work to show how the problem is to be solved</li> </ul> |   |
| <p>A/M/T</p> <p>Acquisition</p> <p>Meaning Making</p> <p>Transfer</p> | <p><i>What criteria will be used in each assessment to evaluate attainment of the desired results?</i></p> | <p>OTHER EVIDENCE</p> <p>Decimals Assessment</p> <p><b>Test Prep: Math in Focus Chapter 4 (modified) *see assessment folder</b></p> <ul style="list-style-type: none"> <li>• See <b><u>modified test</u></b> in Assessment folder</li> <li>• Multiple Choice</li> <li>• Fill in the blank</li> <li>• Open ended Response</li> </ul>   | <p>Differentiation Considerations:</p> <p>[Work on this section after completing Stages 1-2 of all units]</p> |