Alignment of PRIME 2 Fraction Activities with *Everyday Math* Lessons

**Grade 5 EM Lesson Order**

| PRIME2 Activity | Mathematics Concept | Use with Grade 4 EM lesson | Use with Grade 5 EM lesson | Notes | CCSS – M Standard |
|---|---|---|---|---|---|
| ***Fac Tac Toe*** | Multiplication and factors | 3.3 Multiplication Facts Practice | 2.8 Multiplication of Whole Numbers and Decimals | Excellent game for both grades and for ongoing practice. | 5.NF.4 |
| ***Cookie division problems vs Rose division problem*** | Understanding partitive and quotative division | 3.4 Multiplication and Division | 4.2 Partial Quotient Division Algorithm | **Grade 4:** Consider this activity in conjunction with Division Sort Problems as a precursor to 3.4 on division in EM.<br>**Grade 5:** Use this with Cookie and Rose model to investigate the two meanings of division before presenting the partial quotient algorithm. | 3.OA.6 |
| ***Division Sort Problems (partitive or quotitive)*** | Understanding partitive and quotative division | 3.4 Multiplication and Division | 4.2 Partial Quotient Division Algorithm | **Grade 4:** Consider this activity in conjunction with Cookie and Rose model as a precursor to 3.4 on division in EM.<br>**Grade 5:** Use this with Cookie and Rose model to investigate the two meanings of division before presenting the partial quotient algorithm. | 3.OA.6 |
| ***Two Green Triangles/*** **What Do You Call the___?/ Naming Fractional Parts** | Reunitizing | 7.10 The ONE for Fractions | 5.1 Fraction Review | **Grade 4:** Could be used as replacement for EM lesson.<br>**Grade 5:** May be used as reminder of the importance of defining the "whole" as part of the fraction review. | 4.NF.2<br>5.NF.3 |
| ***Use unit fractions to determine "1" on a number line*** | Build fractions from unit fractions | 7.1 Review of Basic Fraction Concepts<br>7.10 The ONE for Fractions | 5.1 Fraction Review | **Grade 4:** Activity is similar to MJ2 p.187 on TE p.573. May be used after this EM page.<br>**Grade 5:** May be used anywhere in 5.1 | 4.NF.3b |
| ***Using Tangrams to Reunitize the Whole*** | Reunitizing; Multiplication of fractions | 7.10 The ONE for Fractions | 5.1 Fraction Review | **Grade 4:** Similar to Two Green Triangles, but more complex. May be used as extension activity.<br>**Grade 5:** May be used as reminder of the importance of defining the "whole" as part of the fraction review. | 4.NF.2<br>5.NF.3 |
| ***Fractions of a Square*** | Dividing an area model; identifying fractions of a region | 7.4 Pattern-Block Fractions | 5.1 Fraction Review | **Grade 4:** Use after Pattern Block Fractions activities.<br>**Grade 5:** An open-ended question that may be used anywhere in this EM lesson. | 4.NF.1,<br>4.NF.3a,b |
| ***Fractiono. Three in a row!*** | Arithmetic Operations with fractions | Above Grade 4 standards | 5.1 Fraction Review | **Grade 5:** Could be used as precursor to lesson 8.2. Practice with fractions before moving onto the mixed numbers of the lesson. | 5.NF.3 |
| ***Determine fractions on a number line :*** **CMP Number Lines** | Situate fractions on a number line | 7.9 Comparing Fractions | 5.1 Fraction Review<br>5.2 Mixed Numbers | **Grade 4:** Some number line activities may be challenging for Grade 4.<br>**Grade 5:** Some number line activities may be challenging for Grade 5. | 4.NF.2<br>4.NF.3b |

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|---|---|---|---|---|---|
| ***Sum Target Problems*** | Addition of fractions | Above grade 4 standards | 5.3 Comparing & Ordering Fractions | **Grade 5:** Could be used after "Adding with Fraction Sticks" MJ page 131 to extend addition of fractions with unlike denominators. | 5.NF.1 |
| ***Making a Number Line*** | Comparing fractions, equivalent fractions | 7.1 Review of Basic Fraction Concepts<br>7.7 Equivalent fractions<br>7.9 Comparing Fractions | 5.3 Comparing and Ordering Fractions | **Grade 4:** Use within different EM lessons to model similar concepts. | 4.NF.1<br>5.NF.1 |
| ***Comparing Fraction Pairs*** | Use a variety of strategies to compare/order fractions | 7.9 Comparing Fractions | 5.3 Comparing and Ordering Fractions<br><br>8.1 Review: Comparing Fractions | **Grade 4:** May be used at end of 7.9 Part 1.<br>**Grade 5:** May be used in 5.3 after 'Ordering Fractions' in Part 1. May also be used in 8.1 in 'Comparing Fractions Using Common Denominators'. | 4.NF.2 |
| ***Measuring with Fraction Strips/Cuisenaire rods*** | Fraction addition | 7.5 Fraction Addition and Subtraction | 5.3 Comparing and Ordering Fractions<br><br>6.8 Using a Slide Rule to Add and Subtract Fractions | Consider using Cuisenaire rods if available instead of fraction strips.<br>**Grade 5**: May be used in 5.3 to support MJ1, page 131 in TE page 131. | 5.NF.2 |
| ***Compare Fractions to 0, ½, and 1*** | Using benchmarks to compare/order fractions | 7.9 Comparing Fractions | 5.3 Comparing and Ordering Fractions | **Grade 4**: Can be used after Comparing Fractions with ½ MJ2, page 205.<br>**Grade 5:** May be used in 5.3 after 'Ordering Fractions' in Part 1. | 4.NF.2 |
| ***Dinosaur Pie*** | Repartitioning and chunking to get equivalent fractions | 7.7 Equivalent fractions | 5.4 Two Rules for Finding Equivalent Fractions | **Grade 4:** May be used after teaching Part 1. | 4.NF.1<br>5.NF.3 |
| ***Fraction Kit*** | Equivalent fractions, operations with fractions | 7.4 Pattern Block Fractions<br>7.5 Fraction Addition and Subtraction<br>7.6 Many Names for Fractions<br>7*7 Equivalent fractions | 5.4 Two Rules for Finding Equivalent Fractions<br>8.2 Adding Mixed Numbers<br>8.3 Subtracting Mixed Numbers | **Grade 4**: Use kit within different EM lessons to model similar concepts.<br>**Grade 5**: May be used as an alternative model to drawing of rectangle in 5.4. For 8.2 and 8.3, may use fraction kit to model + and - with mixed numbers. | 3.NF.1,<br>3.NF.3a,b<br>4.NF.1,<br>4.NF.2<br>5.NF.1 |
| ***Getting to One*** | decimals as part of a whole | 9.3: Using calculator to rename fractions to decimals | 5.7 Fractions and Decimals Pt* 2 | **Grade 5:** Using calculator to convert fractions to decimals. Could use this activity as a formative assessment at end of lesson.<br>**Grade 4:** Could be used in conjunction with Study Link 9.3 and as subsequent formative assessment and practice. | 5.NF.3 |
| ***100 Beads*** | Converting fractions to decimals & percents | Above grade 4 standards | 5.10 The Percent Circle: Reading Circle Graphs<br>5.11 The Percent Circle: Making Circle Graphs | **Grade 5:** May be used as a substitute for EM lessons. | 5.MD.2 |

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| ***Fractured Fractions game*** | Addition and subtraction of fractions | 7.5 Fraction Addition & Subtraction | 6.8 Using a Slide Rule to Add & Subtract Fractions | **Grade 4:** Use with pattern blocks to help students with fraction addition.<br>**Grade 5:** Could be used before lesson to practice fraction addition with pattern blocks. Could be used after lesson with the sum totals changed to greater than 1. | 4.NF.3b<br>5.NF.1 |
| ***Adding and Subtracting Fractions on a Number Line*** | Addition and subtraction of fractions | 7.5 Fraction Addition & Subtraction | 6.8 Using a Slide Rule to Add & Subtract Fractions<br>8.2 Adding Mixed Numbers<br>8.3 Subtracting Mixed Numbers | **Grade 4:** Change fractions to those with like denominators only. Use to introduce another visualization of fractions.<br>**Grade 5:** May replace Lesson 6.8. Use to provide alternative model to fraction pies in Lessons 8.2 & 8.3 and to provide support for addition and subtraction practice. May change to or add mixed numbers as well. | 5.NF.1<br>4.NF.3a, c |
| ***Fraction Sentences*** | Addition and subtraction of fractions | 7.7: Equivalent Fractions | 8.2: Adding Mixed Numbers | **Grade 4:** Could be used to deepen practice with equivalent fractions and addition/subtraction as long as it is modeled with concrete as well.<br>**Grade 5:** Could be used to deepen practice with addition/subtraction of fractions. Could be a stand alone lesson with concrete models to support. | 4.NF.3c<br>5.NF.1 |
| ***Fraction Track game*** | Addition and subtraction of fractions | 7.5 Fraction Addition & Subtraction | 8.2 Adding Mixed Numbers<br>8.3 Subtracting Mixed Numbers | **Grade 4:** May be used with like denominators or for a challenge activity.<br>**Grade 5:** Excellent game to practice addition and subtraction on the number line.<br>*This game is also available in an electronic version at **http://illuminations.nctm.org/ActivityDetail.aspx?ID=18** | 4.NF.2<br>5.NF.1 |
| ***Fractions with Cuisenaire Rods*** | Multiplication of Fractions | 7.4 Pattern Block Fractions | 8.5 Fractions of Fractions | **Grade 4:** May be used as a substitute for pattern block lesson.<br>**Grade 5:** May be used as replacement for EM lesson. | 4.NF.2<br>5.NF.5b |
| ***Exploring Playgrounds*** | Multiplication of fractions | Above Grade 4 standard | 8.5 Fractions of Fractions | **Grade 5:** Excellent for introduction the concept of fraction multiplication. Use prior to the EM lesson. | 5.NF.6 |
| ***Fraction Multiplication and Cutting Paper*** | Multiplication of Fractions | Above Grade 4 standards | 8.6 An Area Model for Fraction Multiplication | **Grade 5:** May be used as a substitute for or additional practice with EM lesson. | 5.NF.4b |

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|---|---|---|---|---|---|
| ***Sara's Candy Problem*** | Multiplication of fractions | Above Grade 4 standards | 8.6 Area Model for Fraction Multiplication | **Grade 5:** Recommended to teach diagramming model as a strategy for students to multiply fractions. | 5.NF.4 |
| ***Field Trip Sandwich Problems*** | Equal shares<br>Fraction addition | 7.1 Review of Basic Fraction Concepts<br>7.5 Fraction Addition and Subtraction | 8.12 Fraction Division | **Grade 4**: Use to provide alternative model to pattern blocks. | 4.NF.3<br>5.NF.3,<br>5.NF.7b |
| ***Division of fractions pattern worksheets*** | Division of fractions | Above Grade 4 standards | 8.12 Fraction Division | **Grade 5:** Use in conjunction with Cookie/Rose division models to discuss the patterns of division of whole numbers by fractions. | 5.NF.7 |
| ***Naked Fractions*** | Modeling division of fractions | Above Grade 4 standards | 8.12 Fraction Division | **Grade 5:** Use with concrete models to practice the concept of division of whole numbers by fractions. | 5.NF.7c |
| ***Smallest and largest quotient*** | Division of fractions | Above Grade 4 standards | 8.12 Fraction Division | **Grade 5:** Could be used as extended practice or challenge problem. | 5.NF.3 |