Chapter 15 – Developing Fraction concepts Aimee welton

|  |  |
| --- | --- |
| **Representative TN State Curriculum Standards**  Grade Three Mathematics  GLE’s  GLE 0306.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.  SPI’s  SPI 0306.1.4 Match the spoken, written, concrete, and pictorial representations of fractions with denominators up to ten.  Standard 2 - Number and Operations  GLE’s  GLE 0306.2.5 Understand the meaning and uses of fractions.  SPI 0306.2.11 Identify fractions as parts of whole units, as parts of sets, as locations on number lines, and as division of two whole numbers  Grade Six Mathematics  GLE’s  GLE 0606.2.4 Understand and convert between fraction, decimal, and percent forms of rational numbers.  SPI’s  SPI 0606.2.1 Efficiently compare and order fractions, decimals and percents; determine their approximate locations on a number line.  SPI 0606.2.5 Transform numbers from one form to another (fractions, decimals, percents, and mixed numbers). | |
| Piecepartportion.jpg | Time: 15 minutes  Need medium sized Halloween bucket small plastic pumpkin to throw, a calculator and a tally sheet for each table.  Two students will be the “players” and try to make 10 baskets each with the pumpkin. The other two will record the information and calculate decimals and %’s from the fractions for each player. Then the players will switch and do the calculating and recording.  http://mathforum.org/paths/fractions/shoot.percent.html |

**Virtual Manipulatives -**

|  |
| --- |
| Time: 10 minutes  **Fraction Pieces**  This site allows students to explore different shapes and sizes of part of a whole. It allows students to work with a circle or a square as the whole and various other shapes as the parts of the whole.  [**http://nlvm.usu.edu/en/nav/frames\_asid\_274\_g\_2\_t\_1.html?open=activities&from=topic\_t\_1.html**](http://nlvm.usu.edu/en/nav/frames_asid_274_g_2_t_1.html?open=activities&from=topic_t_1.html) |
| **Fraction Models**  This site allows students to choose a fraction and then view it as a mixed number, a decimal, a percent, on a ruler and as a picture.  <http://illuminations.nctm.org/ActivityDetail.aspx?ID=11> |

**Activities from Textbook** – 6 minutes per activity

|  |  |
| --- | --- |
| Developing Fraction Concepts – Part-whole | Activity 15.3 – Class Fractions – Pg. 290  Materials: Participants from the class |
| Developing Fraction Concepts – Iteration | Activity 15.6 – More Less or Equal to One Whole – Pg. 295  Materials: One bag of fractional parts that have been marked for each pair of students |
| Developing Fraction Concepts – Fractions greater than one | Activity 15.8 – Pitcher and cups  Materials: One pitcher with 16 cups, water |
| Developing Fraction Concepts – Estimating with fractions | Activity 15.9 – About How Much  Materials: 3 slides for the overhead with various shapes with shaded areas |
| Developing Fraction Concepts – Equivalent fractions | Activity 15.16 – Apples and Bananas  Materials: colored buttons |

Lesson Plan: Fraction Strips

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L540>

Students construct fractions strips by folding identical strips of paper into different equal sized portions. Two equal pieces halves 3 equal pieces thirds, 4 equal pieces fourths – up to 16 equal pieces. Then students can compare the strips to find equivalent fractions.