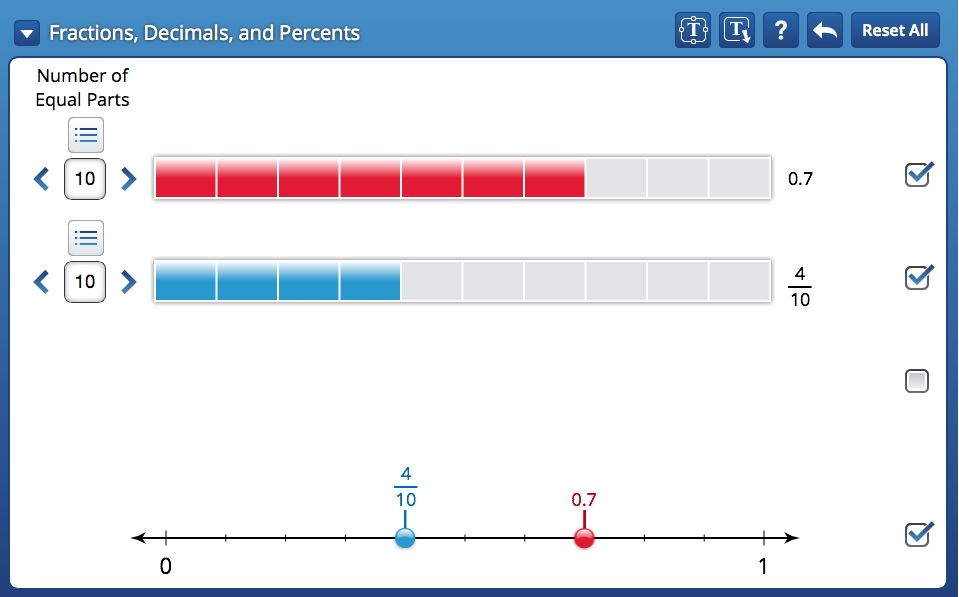
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| **Math 4** | | |
| **Subject: Math**  **Unit: Exploring Tenths** | | |
| **Learning Target:**  Students will describe and represent decimals (tenths) concretely, pictorially, and symbolically. They learn that tenths can be written as decimals and that a decimal point separates whole numbers from the fraction part. | | |
| **Curriculum Outcomes:**  **N9 01** Write a decimal for a given concrete or pictorial representation. **N902** Represent a given decimal using concrete materials or a pictorial representation.  **N903** Explain the meaning of each digit in a given decimal. | | |
| **Screencast Support:**  Exploring Tenths | | |
| **Resources/AT Tips:**  **-nsvs Pearson** [**interactive tools – fractions and decimals**](#interactivetools)  **-Screencast** – **Exploring Tenths**  -iPads  -**Fraction App** by **Brainingcamp**  **HD:Users:lorna:Desktop:Screen Shot 2015-07-08 at 6.58.16 PM.png**  **-** Flats and Rods and/or ten frames.  - 1 cm grid paper – for drawing fractions  -Place value chart  -Cooperative **game** –Matching Fractions  -HD:Users:lorna:Desktop:Screen Shot 2015-07-03 at 8.55.14 AM.png **Number Pieces App** | | |
| **Lesson Procedure** | | **21st Century Skills** |
| **I do:**  **Activate Prior Knowledge**   * Students need experience with **ten frames** or **base ten blocks**. If using ten frames, have one ten frame represent 1 whole and each block of the frame represent one-tenth, **or** let one 10 rod represent 1 whole and each individual unit represent 1 tenth. * Tell students base ten blocks can model whole numbers and model fractions. Demonstrate - Ask, ‘How many rods model 5/10? (5). How many rods represent 10/10? (a flat). Manipulate concrete materials. | | find, validate  remember, understand  communicate |
| **You do:**   * Present the information from Math Sense 4, page 198 explaining tenths in fraction and decimal form as well as how to use a place value mat to show a decimal. * Present the Screencast –[**Representing Tenths**](http://www.schooltube.com/video/825bf3584ebf473aa1ac/KJohnson%20Math%20Gr.%204%20Fr%20Unit%205%20Lesson%208%20Exploring%20Tenths) for a more in-depth look. * **Discuss** screencast. Review tenths concept by using **Pearson interactive tools on the Smartboar**d – see **sample below.** | | collaborate, communicate  analyze, synthesize |
| **We do:**   * Ask students to work on page 199, questions 2, 3, 4 and 5. They may **collaborate** and use any manipulatives available. * Working in pairs, using iPads, ask students to access and explore the **Fractions app** by Brainingcamp for further reinforcement of tenths. | | collaborate, communicate  analyze, synthesize  critical thinking  evaluate, leverage |
| **We share:**   * Using base ten blocks, have students take turns **demonstrating** a model of tenths as a fraction and as a decimal. Have them discuss where the **decimal point** would go on the place value mat. They can also **draw** the fraction / decimal on cm grid paper if more practice is required. | | collaborate, communicate  critical thinking  evaluate, leverage  create, publish  citizenship |
| **Differentiation** | | |
| **Adaptations:**   * Any student needing adaptations or support can **make a cue card** – draw a square to represent 1 whole, and a rod to represent 1 tenth. * Have students’ practice counting flats by ones and rods by tenths, until they grasp the concept. * **Review the screencast** and explore fractions using the **app-Fractions by Brainingcamp** as often as needed. | **Enrichment:**   * Students could model tenths using other materials such as Cuisenaire Rods – an orange rod could represent one whole and a white one, 1/10. | |
| **Assessment:**  Ask students to **write** a response to this question: **Why is the decimal point important**? Encourage them to use pictures, numbers and words.  Have them **play ‘**[**matching**](#matching) **fractions’**. Observe students.  **Record observations** as you rotate around the room, observing students share what they know. | | |
| **Teacher Reflection:**  **Discourage reading a decimal as a point**. Decimals should be read the same as fractions, ex: 0.4 is ‘zero and 7 tenths’. Letting the students work together allows you to roam, listen and support the students. This further informs the direction of your instructional strategies. | | |

**Pearson Interactive Tools –nsvs website**



Matching Fractions

Work with a partner.  
You will need 15 cards with fractions written on them, a geoboard,   
geobands, Pattern Blocks, square dot paper, and triangular dot paper.

* Place the cards face down.
* One student chooses a card and reads the fraction.
* Work together to model the fraction using a geoboard and  
  geobands, or Pattern Blocks.
* Draw a picture of your model on paper.  
  If you used a geoboard to model the fraction,   
   draw it on square dot paper.  
   If you used Pattern Blocks to model the fraction,   
   draw it on triangular dot paper.

**Take It Further:** Write fractions with tenths, such as  
, , and  on cards.  
Put these cards in your pile.  
Repeat the activity.

Master 1.20