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| **Lesson Title:**  **Percent of...** | **Date:**  BC |
| **Overall Expectations:**  Grade 7:  (O)demonstrate an understanding of proportional relationships using percent, ratio, and rate. (S) use estimation when solving problems involving operations with percents to help judge the reasonableness of a solution; determine, through investigation, the relationships among fractions, decimals, percents and ratios; solve problems that involve determining whole number percents using a variety of tools  Grade 8: (O) solve problems by using proportional reasoning in a variety of meaningful contexts. (S)  solve problems involving percents expressed to one decimal place and whole-number percents greater than 100; use estimation when solving problems involving operations with percents to help judge the reasonableness of a solution; solve problems involving percent that arise from real-life contexts   |  | | --- | |  |   **Learning Goals:**    **Success Criteria:** | **Assessment for/as Learning Opportunities:**  Strings; ticket-out-the-door; quiz  **Assessment of Learning:**  Independent problem solving (Culminating Activity); Unit Test  **Prior Knowledge/Readiness:**  Understanding of relationship between fractions, decimals and percent  Ability to multiply fractions by a whole number  **Learning Skills:**  Responsibility, Organization, Independent Work, Collaboration, Self-regulation |
| **Lesson Plan:**  **Minds  On**:  **Problems:** 32 is \_\_\_\_\_% of \_\_\_\_\_\_  I painted 50% of a picture red and 20% of another picture red . Which picture used more paint?  **Extensions**:  Exchange rates (Before Dean can go on a trip to Hong Kong, he must first exchange some of his Canadian money for Hong Kong dollars. At the beginning of the trip, he could buy 7 Hong Kong dollars for one Canadian dollar. When he returned, he would have to exchange 8 Hong Kong dollars for one Canadian dollar. If Dean ended up with 56 Canadian dollars and left with 1000 Canadian dollars, how many Hong Kong dollars did he spend?); interest | |
| **Resources:**  *Big Ideas from Dr. Small: Creating a Comfort Zone for Teaching Mathematics* | |
| **Homework Assignment:** | **Next Steps/Reminders:** |
| **Reflection:** | |

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| **Lesson Title:**  **Sales Tax** | **Date:**  BC |
| **Overall Expectations:**  Grade 7:  (O)demonstrate an understanding of proportional relationships using percent, ratio, and rate. (S) use estimation when solving problems involving operations with percents to help judge the reasonableness of a solution; determine, through investigation, the relationships among fractions, decimals, percents and ratios; solve problems that involve determining whole number percents using a variety of tools  Grade 8: (O) solve problems by using proportional reasoning in a variety of meaningful contexts. (S)  solve problems involving percents expressed to one decimal place and whole-number percents greater than 100; use estimation when solving problems involving operations with percents to help judge the reasonableness of a solution; solve problems involving percent that arise from real-life contexts   |  | | --- | |  |   **Learning Goals:**  - to calculate the final price of an item after tax is added  **Success Criteria:**  - accurately calculate sales tax  -add sales tax to calculate the final price  -estimate the final price of items including sales tax | **Assessment for/as Learning Opportunities:**  Strings; ticket-out-the-door; quiz  **Assessment of Learning:**  Independent problem solving (Culminating Activity); Unit Teast  **Prior Knowledge/Readiness:**  Understanding of relationship between fractions, decimals and percent  Ability to multiply fractions by a whole number  **Learning Skills:**  Responsibility, Organization, Independent Work, Collaboration, Self-regulation |
| **Lesson Plan:**  **Minds  On**: 10% of  100; 100 + 10%;  Brief discussion of sales tax--how much is it? How is it represented in the final price of an item? Does it increase or decrease the price?  **Problem/Action:** Provide  prices of a variety of items; the students will calculate the final price, including tax.  **Extensions**: Explore sales tax rates in other provinces. How would this impact the cost of items?  **Accommodations**: Use friendly numbers (10% for tax instead of 13%)  **Consolidation:**  Congress. Look at various ways in which students solved the problem. Look at ways students are able to show their thinking. | |
| **Reflection:**  Students should recognize the value of being able to estimate the final cost of an item, after tax, so that they will know what the final purchase price will be--Do they have enough money? | |

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| **Lesson Title:**  **iPad Problem** | **Date:**  **KD** |
| **Overall Expectations:**    **Learning Goals:**   * applying different tax percentages to given prices in order to pick the best price   **Success Criteria:**   * predict what price will be the best choice for buying an iPad * work through problems step by step * show all work | **Assessment for/as Learning Opportunities:**  **Assessment of Learning:**  **Prior Knowledge/Readiness:**  **Learning Skills:**  Responsibility, Organization, Independent Work, Collaboration, Self-regulation |
| **Lesson Plan:**  **Minds  On**:  **Action/Problem**:  You  want  to  buy  an  IPAD.  Your  parents  have  agreed  to  pay  half  the  price. You  have  done  your  research  and  narrowed  your  choices  down  to  these  three  options:   1. At  the  Apple  store,  it  costs  $500.00,  but  is  currently on  sale  for  35%  off.  Sales  tax  is  13%. 2. You  can  buy  it  online  from  a  store  in  Alberta  for  $450.00  plus  20%  off.   There  is  5%  sales tax  in  Alberta  and  a  shipping  charge  of  $7.50. 3. You  can  also  buy  it  online  from  B.C. for  $474.00.    It  is  discounted  by  ¼.   Sales  tax  in  B.C  is  12%  and  the  shipping  charge  is  $10.00.   Which  is  the  better  deal?  **Extensions**:   * Change numbers for the prices. * Add in a care package for the iPad, to change the price. * Change the kind and size of the iPad in order to add more to the price.   **Accommodations**:   * make the numbers more friendly * take away the tax * calculate the tax for them in order to save that step * compare two options rather than three.   **Consolidation:**   * Students can see whether their original prediction was correct, * realize how much prices can change within different provinces, * see that a bit of research can get you a better price on merchandise you desire. | |
| **Resources: https://bww.yrdsb.ca/services/cis/mathliteracy/Documents/AIM/Grade8-NumberSenseAndNumeration-ComparativeShopping.pdf** | |
| **Homework Assignment:** | **Next Steps/Reminders:** |
| **Reflection:**  Having students realize that they can make an educated decision about purchasing products such as electronics will allow them to realize that they can budget for such expenses. | |