

## Lesson 10: The cost of gassing up – do the math!

### Student worksheet

Over a six-year period, the price of gas can change. Find the difference in the price of gasoline between 2002 and 2008.

Write your answer in the appropriate spot in the “Difference” column.

Price of gas and year	Approximate price per litre	Difference
Average price of gas in 2008.	<b>\$1.35</b>	0
Average price of gas in 2007.	\$1.08	<b>\$1.35 - \$1.08</b> =
Average price of gas in 2006.	.97	<b>\$1.35 - .97</b> =
Average price of gas in 2005.	\$1.08	<b>\$1.35 - \$1.08</b> =
Average price of gas in 2004.	.77	<b>\$1.35 - .77</b> =
Average price of gas in 2003.	.67	<b>\$1.35 - .67</b> =
Average price of gas in 2002.	.69	<b>\$1.35 - .69</b> =

(Source: [http://www.ontariogasprices.com/retail\\_price\\_chart.aspx](http://www.ontariogasprices.com/retail_price_chart.aspx))

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### Student worksheet (continued)

1. What pattern(s) you see? Create a bar graph to represent the difference for each year.

2. Once you have determined the price pattern between 2002 and 2008, make a prediction about the price of gas by the year 2015 and 2020?

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3. Can you think of any advantage to rising gas prices? (*Consider that higher prices may cause people to want to use less gas!*)

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**Teacher instructions** (*Note: Teachers should know the current cost of gas before introducing this exercise to students.*)

### Introducing the activity

- This exercise examines the fluctuation in gas prices over a 6-year period, from 2002 to 2008. To begin, determine if students understand how much one litre represents. You may wish to hold up a one-litre jug of milk or pop and ask them if they know how much it costs.
- Ask the class to tell you what they think people in their city pay for one litre of gas. Record all answers on the board and keep a tally for the prices that are repeated. Circle the lowest guess and the highest guess and explain these two numbers represent the “range” of prices. Explain that the price suggested most often is called the mode. Ask students where they could go to find out the actual price of gas per litre. (*The internet; television; local gas station; their parents.*) Tell them what the current price is.
- Ask students if they think that the price of gas has gone up or down over the past ten years. (*Up!*) Have them write on a piece of paper what they believe was the price of gas per litre in 2002. When everyone has made a guess, let them know what the actual price was. (*69 cents per litre.*) See who was closest.
- Have students calculate, with you, the difference between the 2002 and current gas prices. Ask them if they think it is possible to predict future prices by finding patterns in the past prices.

### Ideas for teaching the worksheet

- Have students scan the page and ask them how many columns they see and what type of information is listed in each column. What do they think the price trend is from 2002 to 2008? (*The price has increased.*) Have students proceed with the worksheet by calculating the differences and listing the answers in column 3. You may wish to look at how the prices in this 6-year period compare with current gas prices.
- Review questions 1, 2, and 3 on the student worksheet. These may be completed with the class or in small groups. Small groups may produce an interesting diversity of responses that could be presented to the class.
- At some point during this exercise, you may wish to introduce the concept of supply and demand or “Peak Oil”. Videos that can support teaching this concept include: “A Crude Awakening”, “Crude Impact”, or “The End of Suburbia”. They explore the idea that the oil supply has a definite end. (*Videos are available for on-line purchase at: [www.endofsuburbia.com](http://www.endofsuburbia.com)*)