Purchasing one item:

Mary wants to purchase 4 displays of Astral Wonders Pencils. Each display of pencils has a purchase price of $8.64. Quickly determine an estimate of the total price Mary should expect to pay. Compare this to the actual total price.

- Round the price of $8.64 to $9.00.
- Now multiply $9.00 per eraser by the total quantity of 4.
- Mary's total purchase will be approximately $36.00.
- The actual price is $34.56 - only $1.44 less than the estimate.

Purchasing two items:

Michael wants to purchase 3 bags of Dessert Erasers at $2.64 each and 2 displays of Bracelet Pens at $6.96. What is a reasonable estimate for the total price of the items?

- Round the Dessert Eraser price of $2.64 to $3.00.
- Round the Bracelet Pen price of $6.96 to $7.00.
- Now multiply $3.00 by the eraser quantity of 3, and $7.00 by the pen quantity of 2.
- Michael's total purchase will be approximately $23.00.
- The actual price is $21.84 – only $1.16 less than the estimate.

Purchasing three items:

Jean would like to buy 2 tubs of Munchin Mike Sharpeners at $8.88, 4 Retro Pencils at $8.64 per display, and 2 Mini Fish Erasers at $4.44 per bag. What is an estimate for the total purchase price? How much higher or lower is the actual price than the estimate?

- Round the sharpener price of $8.88 to $9.00. Multiple $9.00 by the quantity of 2 for a total sharpener estimate of $18.00.
- Round the pencil price of $8.64 to $9.00. Multiply $9.00 by the quantity of 4 for a total pencil estimate of $36.00.
- Round the eraser price of $4.44 to $5.00. Multiply by the quantity of 2 for a total eraser estimate of $10.00.
- Add the three individual estimates for a total estimate of $64.00.
- Jean's total purchase will be approximately $64.00.
- The actual price is $61.20 – only $2.80 less than the estimate.

Help RG and Hannie estimate total purchases to stock merchandise at the Raymond Geddes School Store.

1. **Natalie has $50.00 to spend on merchandise for the school store. She would like to buy the following items: 4 Pet Silhouettes Pencils ($8.64/display) and 2 Piranha Sharpeners ($8.88/display).**

   - Round each item's purchase price to generate an estimate.

     Estimated price of 4 Pet Silhouettes Pencils $____
     Estimated price of 2 Piranha Sharpeners $____

                                    Total Estimate $____

   - Based on the total estimate, do you think Natalie will have enough money to buy all the items?

     Yes ____   No ____

   - Use a calculator to determine the actual prices.

     Actual price of 4 Pet Silhouettes Pencils $ ____
     Actual price of 2 Piranha Sharpeners $ ____

                                    Total Actual Price$ ____

   - Based on the total actual price, does Natalie have enough money to buy all the items?

     Yes ____   No ____

   - If she does not have enough money, what can she buy with her money? Explain and show your work.

Estimating School Store Purchases
Worksheet

2. Matt has $75.00 to spend on merchandise for the school store. He would like to buy the following items: 5 Erasing Grips ($9.00/bag), 4 Dessert Erasers ($2.64/bag), and 3 6-Color Pens ($6.48/display).

- Round each item's purchase price to generate an estimate.

  Estimated price of 5 Erasing Grips $_____
  Estimated price of 4 Dessert Erasers $_____
  Estimated price of 3 6-Color Pens $_____

                                    Total Estimate $_____

- Based on the total estimate, do you think Matt will have enough money to buy all the items?

  Yes _____   No _____

- Use a calculator to determine the actual prices.

  Actual price of 5 Erasing Grips $_____
  Actual price of 4 Dessert Erasers $_____
  Actual price of 3 6-Color Pens $_____

                                    Total Actual Price$_____

- Based on the total actual price, does Matt have enough money to buy all the items?

  Yes _____   No _____

- If he does not have enough money, what can he buy with his money? Explain and show your work.

Help RG and Hannie estimate total purchases to stock merchandise at the Raymond Geddes School Store.

1. **Natalie has $50.00 to spend on merchandise for the school store. She would like to buy the following items: 4 Pet Silhouettes Pencils ($8.64/display) and 2 Piranha Sharpeners ($8.88/display).**

- Round each item's purchase price to generate an estimate.

   Estimated price of 4 Pet Silhouettes Pencils $36.00
   Estimated price of 2 Piranha Sharpeners $20.00

                                    Total Estimate $56.00

- Based on the total estimate, do you think Natalie will have enough money to buy all the items?

   Yes _____   No __X__

- Use a calculator to determine the actual prices.

   Actual price of 4 Pet Silhouettes Pencils $34.56
   Actual price of 2 Piranha Sharpeners $17.76

                                Total Actual Price $52.32

- Based on the total actual price, does Natalie have enough money to buy all the items?

   Yes _____   No __X__

- If she does not have enough money, what can she buy with her money? Explain and show your work.

   Alternative 1 - She can purchase 4 Pet Silhouettes Pencils and 1 Piranha Sharpener for a total price of $43.44.

   (4 x $8.64) + (1 x $8.88) = $43.44

Alternative 2 – She can purchase 3 Pet Silhouettes Pencils and 2 Piranha Sharpeners for a total price of $43.68.

(3 x $8.64) + (2 x $8.88) = $43.68

2. **Matt has $75.00 to spend on merchandise for the school store. He would like to buy the following items: 5 Erasing Grips ($9.00/bag), 4 Dessert Erasers ($2.64/bag), and 3 6-Color Pens ($6.48/bag).**

- Round each item's purchase price to generate an estimate.

Estimated price of 5 Erasing Grips	$45.00
Estimated price of 4 Dessert Erasers	$12.00
Estimated price of 3 6-Color Pens	$21.00

Total Estimate	$78.00

- Based on the total estimate, do you think Matt will have enough money to buy all the items?

  Yes _____   No __X__

- Use a calculator to determine the actual prices.

Actual price of 5 Erasing Grips	$45.00
Actual price of 4 Dessert Erasers	$10.56
Actual price of 3 6-Color Pens	$19.44

Total Actual Price	$75.00

- Based on the total actual price, does Matt have enough money to buy all the items?

  Yes __X__   No _____

- If he does not have enough money, what can he buy with his money? Explain and show your work.

Geddes Kit List

	Item Name	RG Item #	Purchase Price
1	Retro Pencils	67176	8.64
2	Pet Silhouettes Pencils	67175	8.64
3	Astral Wonders Pencils	67124	8.64
4	Munchin Mike Sharpener	67183	8.88
5	Piranha Sharpener	67037	8.88
6	Mouse Sharpener	65627	8.88
7	Erasing Grip	67137	9.00
8	Criss Cross Critters	67036	10.00
9	Happy Cap Erasers	64259	3.00
10	Dessert Erasers	66993	2.64
11	Twister Erasers	67027	3.00
12	Mini Fish Erasers	67099	4.44
13	G Mechanical Pencils	67039	3.00
14	Traction Mechanical Pencils	67013	3.00
15	Cushion Click Mechanical Pencils	66315	6.00
16	.7mm Value Lead	61152	7.20
17	Study Buddy Inferno	66967	8.88
18	6-Color Pens	66685	6.48
19	Bracelet Pens	65581	6.96
20	Twister Pens	66921	6.25

Use the following summary to assess a student's abilities and performance throughout the lesson. Share this assessment with students at the start of the lesson so that students will understand how they will be assessed prior to beginning the Exploring and Learning section. The tool can be used as a basis for providing feedback to the student. Use the scale below to score each of the following items:

Making Connections:

____ Student participates in discussion by offering answers to one or more of the questions asked by the teacher.

Exploring and Learning

____ Student estimates the number of erasers or items in the jar.

____ Student participates in discussion by sharing approach for developing the estimate.

____ Student works with partner rounding purchase prices to estimate total purchases in a school store setting.

____ Student compares estimates against actual totals to determine if they can afford the items they would like to purchase.

____ Student practices estimating by using rounding and mental computations to arrive at estimates in step 11 of the Exploring and Learning component.

SCALE

4 – Excellent
Student completes the activity, task or assignment with no errors and demonstrates mastery of concepts and/or lesson objectives.
3 – Good
Student completes the activity, task, or assignment with few major errors and demonstrates an understanding of the concepts and/or lesson objectives.
2 – Fair
Student completes the activity, task, or assignment with some major errors and demonstrates difficulty with the concepts and lesson objectives.
1 – Poor
Student does not complete the activity, task, or assignment and demonstrates no understanding of the concepts and/or lesson objectives.