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Addition and Subtraction Review with a Purpose

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Unit: Addition & Subtraction Review with a Purpose
Grade: 5/6

Understandings

Students will understand that…

You cannot spend more than what you have in a closed system.

Using math is an avenue leading to success in daily life.

There are relationships between numbers; in any equation, if two numbers are known, you can find the third.

Essential Questions	Knowledge & Skill
When given two numbers, how do you find the third related number? How can math be used in everyday life?	*(NEISD scope & sequence; TEKS; Core; etc.)* 6.b.1(A) apply mathematics to problems arising in everyday life, society, and the workplace; 6.b.3 (D) add, subtract, multiply, and divide integers fluently WSSA Curriculum 6.II.B Add Whole numbers and money amounts 6.II.C. Estimate Sums of Whole numbers and money amounts 6.II.D. Solve a number sentence using a related sentence 6.III.A. Subtract whole numbers and money amounts 6.III.B. Estimate differences of whole numbers and money amounts 6.III.C. Solve number sentences using related sentences

Stage 2: Assessment Evidence

Performance Task:

Students will be given a budget and a wish list from a local charity. Students will be expected to create care packages, purchasing items from the wish list, spending as much money as possible without exceeding their group budget.

Students will go on a shopping trip to purchase their selected items, and prepare the care packages. The following day, students will deliver the care packages to the local charity.

Other evidence:
(quizzes, tests, academic prompts, self-assessments, etc.
note – these are usually included where appropriate in Stage 3 as well)

Quizzes
Bell Ringers
Exit Slips

Stage 3: Learning Activities

(Steps taken to get students to answer Stage 1 questions and complete performance task)

Day 1 (Sept 4):

- Teacher will introduce class expectations for the year in math class including class procedures, and routines.
- The teacher will introduce the Ronald McDonald Care Package Assessment, providing students with the instruction sheet and rubric. The teacher will explain how the review of addition and subtraction applies to the Ronald McDonald Care Package project.
- The teacher will introduce the TGT Structure. Below is a link explaining the TGT structure:

https://www1.udel.edu/dssep/teaching_strategies/tgt_coop.htm

In Team-Game-Tournament reviews, students are first put into heterogeneous groups as teams. Students are provided with question cards, which they take turns quizzing each other with the goal of sharing knowledge. Each student will be assigned a number in the team. This portion of the activity is worth no points.

After students have had an opportunity to review the material, the Tournament portion of the activity will begin. All students with the same number will compete against each other (i.e. all 1s will compete against each other). Students groups can be differentiated so that all 1s are high performers, all 2s are struggling learners, etc. so that students compete against students with similar ability levels. Every table will require one student to keep score. For every question that a student answers correctly, the student will earn a point. The students will return at the end of the tournament and report their score to the group.

Team scores are reported, and the team with the highest score receives a prize.

Each student takes an assessment, and the assessments are averaged with all members of the team. Bonus points can be given to the group with the highest average or the most improved score.

- Students will begin the TGT tournament with questions regarding addition.
- Students will take an addition assessment at the end of the tournament.

Day 2 (Sept. 5):

- Students will complete a Bell Ringer regarding addition.
- Students will return to their Teams from the day before. Students will be assigned a new number, either based on teacher's opinion regarding how well student did the day before (moving up the students who did well and moving down the students who did not do as well) or by rotating the group similar to the example below to encourage students to compete against different students (in parentheses and color coded are the groupings for the second day) :

Team A (stays)	Team B (rotates 1)	Team C (rotates 2)	Team D (rotates 3)
Day 1 Day 2	Day 1 Day 2	Day 1 Day 2	Day 1 Day 2
Al -start 1 (stays in 1)	Eve-start1(move to 2)	Ivy-start 1(moves to 3)	May-start 1(moves to 4)
Bo-start 2 (stays in 2)	Fred-start 2(moves to 3)	Joy-start 2(moves to 4)	Ned-start 2(moves to 1)
Cha-start 3(stays in 3)	Ge-start3(moves to 4)	Kai-start 3(moves to 1)	Osa-start 3(moves to 2)
Dan-start4(stays in 4)	Hal-start 4(moves to 1)	Lou-start 4(moves to 2)	Pam-start 4(moves to 3)

Team A (stays)	Team B (rotates 1)	Team C (rotates 2)	Team D (rotates 3)
Day 3 Day 4	Day 3 Day 4	Day 3 Day 4	Day 3 Day 4
Al (group 1)(group 1)	Eve (G-3) (G-4)	Ivy (G-1) (G-3)	May (G-3) (G-2)
Bo (G-2) (G-2)	Fred (G-4) (G-1)	Joy (G-2) (G-4)	Ned (G-4) (G-3)
Cha (G-3) (G-3)	Ge (G-1) (G-2)	Kai (G-3) (G-1)	Osa (G-1) (G-4)
Dan (G-4) (G-4)	Hal (G-2) (G-3)	Lou (G-4) (G-2)	Pam (G-2) (G-1)

- At the end of the daily tournament, students will complete an individual assessment over subtraction.

Day 3 (Sept. 6):

- Students will begin class with a Bell Ringer over simple subtraction problems.
- If needed, teacher will review how to add with decimals.
- Students will continue the TGT tournament, staying in their same Teams, but competing against new groups either based on teacher discretion or through rotation.
- Students will complete an addition with decimals assessment individually.

Open House in the Evening:
- Parents will receive letter home concerning the field trip and assessments

Day 4 (Sept 7):
- Students will begin class with a Bell Ringer over addition with decimals problems.
- If needed, teacher will review how to subtract with decimals.
- Students will continue the TGT tournament, staying in their same Teams, but competing against new groups either based on teacher discretion or through rotation.
- Students will complete an subtraction with decimals assessment individually.
- Team scores for the week will be determined and a winner will be announced.
- Students will take a quiz covering addition and subtraction, with and without decimals.

Day 5 (Sept. 10):
- The students will complete a Bell Ringer covering addition and subtraction.
- The teacher will introduce the concept of the Missing Number using the fact family triangle as a model.
- The teacher will demonstrate how to make two addition and two subtraction problems using the same three numbers found in a fact family triangle.
- Students will practice making fact families using addition and subtraction along with creating two addition and two subtraction problems using the same fact family.
- The teacher will demonstrate how to remove one number from the fact family, and solve for that missing number by creating a number sentence.
- The students will complete a 3-2-1 Exit Slip reflecting their understanding of the concepts explained.

Day 6 (Sept. 11):
- The students will complete a Bell Ringer finding the Missing Numbers.
- The teacher will provide the Instructions for the HEB Cost Planning Sheet and explain to the students the requirements for the project. The teacher will provide students with an example of the shopping list and instructions regarding how to complete the shopping form.
- If students finish early, the teacher will demonstrate how to complete the feedback form on another group's shopping form. If students have finished their shopping list and are waiting on another group to complete a feedback form, the group may create cards to accompany the Care Packages.

Day 7 (Sept. 12):
- The students will complete a Bell Ringer finding the Missing Numbers with Money.
- If students did not finish their shopping list from the day before, they will complete that first.
- Once students finish their shopping list, they will complete a Feedback Form for another group. If Group A is done, they will give a printed copy of their shopping list (without

the prices) to Group B. Group B will have a Feedback Form, a blank HEB Cost Planning Sheet, and a copy of Group A's shopping list without prices listed. Group B will be expected to look up the prices of Group A's items, calculate the total cost of the items, complete a number sentence showing the amount expected in change, and complete a fact family using Group A's numbers.

- Once Group B returns their feedback form and calculations to Group A, Group A must determine if both groups came to the same total. Group A will complete the Post Feedback Form Checklist on the back of their original HEB Cost Planning Sheet. If the two groups did not come to the same answers, Group A is responsible for determining the reason why and where the difference occurred. Group A must then get another group to complete a second Feedback Form using their shopping list.
- Once the Feedback Form from a separate group matches Group A's calculations, Group A is done and ready to go shopping.
- If students finish early, they may make cards to go in the care packages.

Day 8 (Sept. 13):

- Students will go on a field trip to the local HEB (grocery store) and buy the items on their shopping list. Students will get bonus points for finding deals in store and being able to adjust their calculations in the store itself based on coupons and deals.

Day 9 (Sept. 14)

- Students will create care packages and deliver the care packages to the Ronald McDonald House.

Shopping Instructions and Rubric for Care Packages

Name: Group:

Instructions:

- Your group will be given **$20** and be expected to buy **at least 2 items** from your selected category for your Ronald McDonalds Care Packages.
- You will be expected to spend **at least $18 but may not exceed $20.**
- The goal is for the group to spend as much money as possible without exceeding $20.
- Your group does not need to include tax in your calculations.

	ADVANCED - 4	PROFICIENT - 3	APPROACHING PROFICIENT - 2	NOVICE - 1

Students understanding of budget constraints	Students have bought more than two items, spending at least $19.	Students buy at least two items and spend at least $18.	Students have bought at least one item within $5 of the budget.	Students have exceeded the budget.
Students show the relationship between numbers	When at the store, students are able to adjust their budget to take into account deals and coupons.	Students are able to accurately create an equation for addition and subtraction and check their answer.	Students create correct equations 85% of the time.	Students fail to create correct equations in more than 15% of problems.
Students complete arithmetic problems	Students complete complex arithmetic problems correctly	Students complete arithmetic problems correctly	Students correctly solve equations 85% of the time.	Students fail to correctly solve equations in more than 15% of problems.

Student Name: Group:

	ADVANCED - 4	PROFICIENT - 3	APPROACHING PROFICIENT - 2	NOVICE - 1
Students understanding of budget constraints	Students have bought more than two items, spending at least $19.	Students buy at least two items and spend at least $18.	Students have bought at least one item within $5 of the budget.	Students have exceeded the budget.
Students show the relationship between numbers	When at the store, students are able to adjust their budget to take into account deals and coupons.	Students are able to accurately create an equation for addition and subtraction and check their answer.	Students create correct equations 85% of the time.	Students fail to create correct equations in more than 15% of problems.
Students complete arithmetic problems	Students complete complex arithmetic problems correctly	Students complete arithmetic problems correctly	Students correctly solve equations 85% of the time.	Students fail to correctly solve equations in more than 15% of problems.

Grade: _____

Comments:

_____

_____

_____

_____

_____

_____

_____

Sample Letter Home:

Dear Math Families,

As part of our skills review unit covering addition and subtraction, the students' final assessment will be the budgeting and purchasing of items for care packages for the Ronald McDonald House. I am asking all students who are able to donate $7-10 for our shopping trip to purchase items for the families at the Ronald McDonald House.

In addition, we would like the students to be part of the choosing and purchasing of the items. In order to do this we have planned a field trip to the HEB around the corner. We have scheduled the field trip for **Thursday, September 13**, from 8:00 am to 9:30 am. We will need additional parent chaperones/drivers and are asking for volunteers.

On **Friday, September 14**, the class will walk to deliver the care packages to the Ronald McDonald House during math class.

Please fill out the bottom of this form and return it no later than September, September 11. In addition, if you would be able to chaperone and drive for our trip, please let me know at the bottom of the sheet.

Please contact me if you have any questions or concerns about this event.

Thank you,
Jackie Jaramillo

Jaramillo – Ronald McDonald Shopping – 9.13.18

Student name: _____

☐Yes, I have received this notification regarding the Ronald McDonald House Shopping Trip and Delivery Trip.

☐I will be able to drive and chaperone the HEB Shopping Trip.

Guardian Name (Print): _____

Guardian Signature: _____

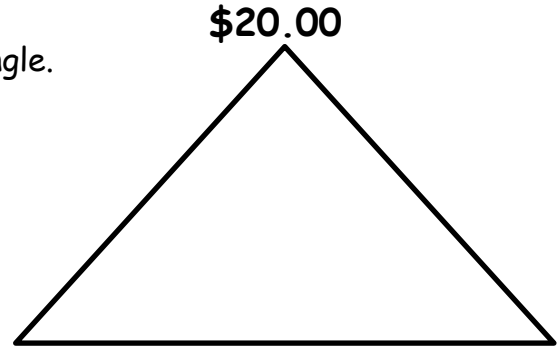
HEB Cost Planning Sheet

Name: _____ Group: _____

Aisle	ITEMS	COST	HEB Cost +/-
	TOTAL		

1. Write a number sentence showing the change you expect to receive back from your starting total.

2. Complete the fact family triangle.



Post Feedback Checklist

Did the cost of each item from the feedback form match your original costs?

☐ Yes ☐ No

Did totals from the feedback form match your original total?

☐ Yes ☐ No

Did the number sentence match your original number sentence?

☐ Yes ☐ No

Did the fact family triangle match your original fact family triangle?

☐ Yes ☐ No

If you answered No to any of the statements above, please explain why (what specific differences/mistakes were made either in the original calculations or the feedback form):

_____

_____

_____

If you answered No to any of the statements above, please find a second group and have them complete another feedback form.

If you answered Yes to all statements above, please check the following box:

☐ We are ready to go shopping!!!

Ronald McDonald Wish List

Kitchen

Pots and Pans

Silverware

Blenders

Zip Lock Bags (all sizes)

Sugar

Cooking Oil

Coffee Makers

Foil

Plastic Wrap

House Hold Supplies

Fabric Softener Sheets

Disinfectant Sprays

Clothes Baskets (Large Size)

Air Freshener

Trash Can Liners – 33 gallon

Dishwashing Liquid

Liquid Laundry Soap (front load efficiency machines) or Pods

detergent for High efficiency machines

Furniture Polish

Clorox

Disposable Gloves

Vinegar

Windex

Toilet bowl cleaner

Office Supplies

Copy Paper (standard)

White Out

Legal size Envelopes

Bath Items

Bath Towels

Hand Towels

Washcloths

Shopping List Example

Product location and availability may vary by store.

	Product	Qty	Aisle	Deal
☐	**Scott Choose-a-Sheet Big Roll Paper Towels, 6 ct**	1	Aisle 22	
☐	**S.O.S Reusable Soap Filled Steel Wool Pads, 10 pk**	1	Aisle 23	
☐	**Clorox Regular Concentrated Bleach, 121 oz**	2	Aisle 24	Yellow Coupon

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Type here to search

Feedback Form

Group Name Being Checked:

_____

☐ Determine the cost of each item on the Shopping List provided

☐ Check for any coupons or bonus deals

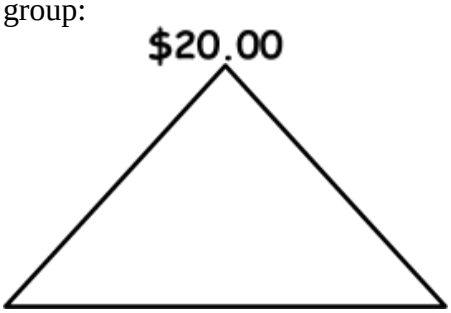
☐ Add together the cost of items:

_____

☐ Complete a number sentence for this group:

_____

☐ Complete a fact family triangle for this group:



Checked By Group:

_____

Feedback Form

Group Name Being Checked:

_____

☐ Determine the cost of each item on the Shopping List provided

☐ Check for any coupons or bonus deals

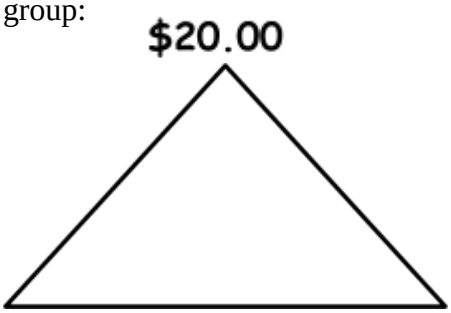
☐ Add together the cost of items:

_____

☐ Complete a number sentence for this group:

_____

☐ Complete a fact family triangle for this group:



Checked By Group:

_____