

# CAPACITY AND MASS



**Let's Learn: Finding Mass**

| Grams            | Kilograms          |
|------------------|--------------------|
| 1 g: paperclip   | 1 kg: dictionary   |
| 25 g: toothbrush | 5 kg: bowling ball |
| 50 g: frog       | 10 kg: desk        |
| 100 g: large key | 100 kg: fridge     |

**Word Problems**

My dog has a mass of 7,000 grams. What is his mass in kilograms?  
 $7,000 \div 1000 = 7 \text{ kg}$

I have 20 kg of watermelon and 1000 g of carrots. Do I have more watermelon or carrots?  
 $1000 \text{ g} = 1 \text{ kg}$  **More watermelon**

**Did You Know?**

Mass is how much matter is in an object. Mass and weight are similar but not the same. You could not weigh anything in space but would still have the same mass. Use g or kg to measure each object?

**My Bedroom**

To win, you must have 10 items in your bedroom.

**Liquid Volume**

Solve each problem. Name: **Lia**

Monica has 50 mL of water. She pours 27 mL into a cup. How much water is left?

$$\begin{array}{r} 50 \\ - 27 \\ \hline 23 \end{array}$$

63 mL

2. DJ uses 50 mL of water to fill a dog dish. If DJ uses 8 mL of water to fill a fish tank, how much water did she use?

$$\begin{array}{r} 50 \\ + 8 \\ \hline 58 \end{array}$$

200 mL

3. The water jug in the picture holds 1000 mL of water. A 1000 g bottle of water weighs 1 kg. How much water is in the jug?

$$\begin{array}{r} 1000 \\ - 1000 \\ \hline 0 \end{array}$$

0 mL

4. A spoon holds 1000 mL of water. How many spoons of water are in a 1000 kg water jug?

$$\begin{array}{r} 1000 \\ \times 1000 \\ \hline 1000000 \end{array}$$

1,000,000 mL

**Should We Use mL or L?**

Tell which unit of measurement is appropriate for each object. Name: **Lia**

|                 |                      |
|-----------------|----------------------|
| 1. A small bowl | 6. A mug             |
| 2. A spoon      | 7. A shoe            |
| 3. A water jug  | 8. A bottle of water |
| 4. A spoon      | 9. A water jug       |
| 5. A spoon      | 10. A water jug      |

- GAMES
- ACTIVITIES
- WORKSHEETS

# 2 MINI LESSONS

| Let's Learn: Finding Mass  |                       |  | Let's Learn: Capacity and Volume  |                         |   |
|--|-----------------------|--|---|-------------------------|---|
| Grams  | Kilograms             | Word Problems  | Liters  | Milliliters             | Word Problems   |
| 1 g:<br>paperclip  | 1 kg:<br>dictionary   | My dog has a mass of 7,000 grams. What is his mass in kilograms?<br>$7000 \div 1000 = 7 \text{ kg}$                                  | 1 L:<br>soda bottle   | 1 mL:<br>raindrop       | I have 8 liters of water. How many milliliters of water do I have?<br>$8 \text{ L} \times 1000 = 8000 \text{ mL}$                       |
| 25 g:<br>toothbrush  | 5 kg:<br>bowling ball | I have 20 kg of watermelon and 1,000 g of carrots. Do I have more watermelon or carrots?<br>$1000 = 1 \text{ kg}$<br>More watermelon | 5 L:<br>water in a sink   | 5 mL:<br>spoonful       | I have 2 liters of water and 2,000 mL of soda. Do I have more water or soda?<br>$2 \times 1000 = 2000 \text{ mL}$<br>they are the same. |
| 50 g:<br>frog  | 10 kg:<br>desk        |  | 50 L:<br>small fish tank  | 20 mL:<br>gulp of water |   |
| 100 g:<br>large key  | 100 kg:<br>fridge     |  | 100 L:<br>garbage can<br>you take to curb   | 500 mL:<br>bowl of soup |   |
| Did You Know?  |                       |  | Did You Know?   |                         |   |
| <ul style="list-style-type: none"> <li>Mass is how much matter is in an object.</li> <li>Mass and weight are similar but not the same.</li> <li>A paperclip would not weigh anything in space but would still have the same mass!</li> </ul> |                       |  | <ul style="list-style-type: none"> <li>Volume is the amount of space an object takes up.</li> <li>Capacity is how much a container can hold.</li> <li><math>1 \text{ L} = 1000 \text{ mL}</math></li> </ul> |                         |   |
| Would you use g or kg to measure each object?  |                       |  | Would you use L or mL to find the volume of each container?   |                         |   |
|  | g                     |  | kg  |                         | g   |
|  | ml                    |  | L   |                         | ml  |

## 1. Capacity and Volume 2. Finding Mass

# 10 WORKSHEETS

**Andy** **Which is More?** Circle which has a bigger volume in each question.

**Alex** **Find the Mass** Estimate the mass of each object below to your best ability.

**Debbie** **Should We Use mL or L?** Circle the unit of measurement is appropriate for each object.

**Stacy** **Mass Word Problems** Solve each word problem. Don't forget the label for each answer!

**Beaker Mathematics** Estimate the liquid volume of each container below to your best ability.

**Word Problems** 6. Amy is trying to fill up her 42 L. If she fills it up 6 liters at a time, how many times will she need to do this to fill the pool completely?

**Word Problems** 7. Coby the dog drinks 463 mL out of his 800 mL water bowl. How much water is still in the bowl?

**Word Problems** 8. Josephine puts 50 mL of water on each plant in her yard. If she has 5 plants, how much water did she use?

**Word Problems** 9. Mikey's water bottle can hold 600 mL of water. He noticed a leak in the bottle and now has 120 mL left. How much water leaked out?

**Word Problems** 10. Erika drinks 48 mL of water after her work-out and now has 88 mL left. How much water did she drink?

**WIDE RULED 10 SHEETS SUBJECT 1 SUBJECT 10.5" x 8.5" 20.3 cm x 20.3 cm**

# ERROR ANALYSIS

Students decide if each kid solved the problem correctly or incorrectly. They explain their thinking at the bottom.



4 PAGES

Directions: Read the problem below and look at the work the student did. Decide if the work is correct or not.

The stuffed animal weighs 100 grams. The man weighs 100 kilograms. Which weighs more?



The student says:  
They both weigh the same because 100 is equal to 100!



Explain if they are right or wrong. Put a check or X on their work.

The student thought that grams and kilograms were the same unit of measurement when kilograms weigh more than grams. The correct answer would have been that the man weighs more than the stuffed animal.

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# MATH SORT

Students solve each question. They put a smile or a frown on each based on if it's correct.

Card #48: Liquid in Thermos 45mL or 450mL?

Card #41: Ketchup Packet 2mL or 200mL?

Card #46: Cereal Bowl 300mL or 300L?

Card #45: Shampoo Bottle 2L or 200mL?

Card #23: Spoonful of applesauce 20g or 200kg?

Card #3: One forkful of lettuce 2g or 200g?

Card #42: Eyedropper 300mL or 3mL?

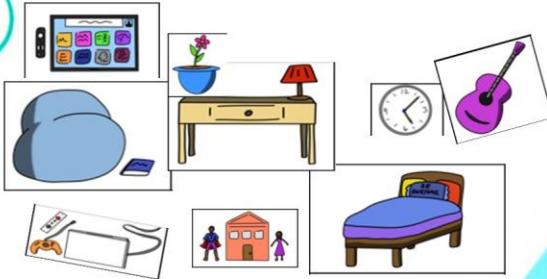
# REAL-LIFE MASS

Fill in your best estimates and then write the actual mass.

| Object         | Estimate (g) | Actual Mass (g) |
|----------------|--------------|-----------------|
| Eraser         | 4g           | 8g              |
| Band-aid       | 1g           | 5g              |
| Pencil         | 10g          | 20g             |
| Scissors       | 5g           | 6g              |
| Piece of paper |              |                 |
| Cotton ball    |              |                 |
| Object         |              |                 |
| Crayon         |              |                 |
| Glue stick     |              |                 |
| Pen            |              |                 |
| Stapler        |              |                 |

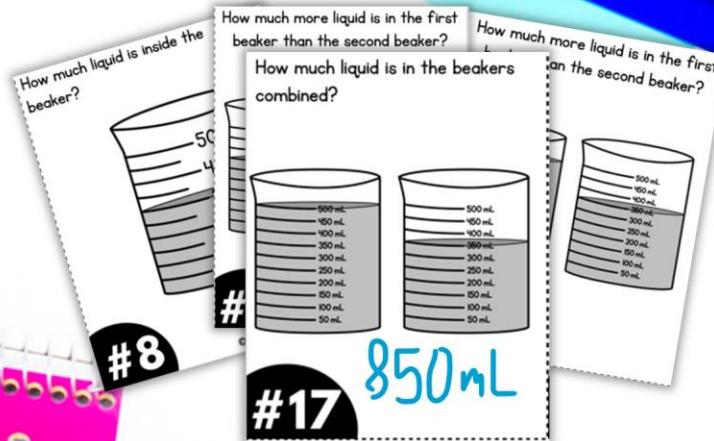
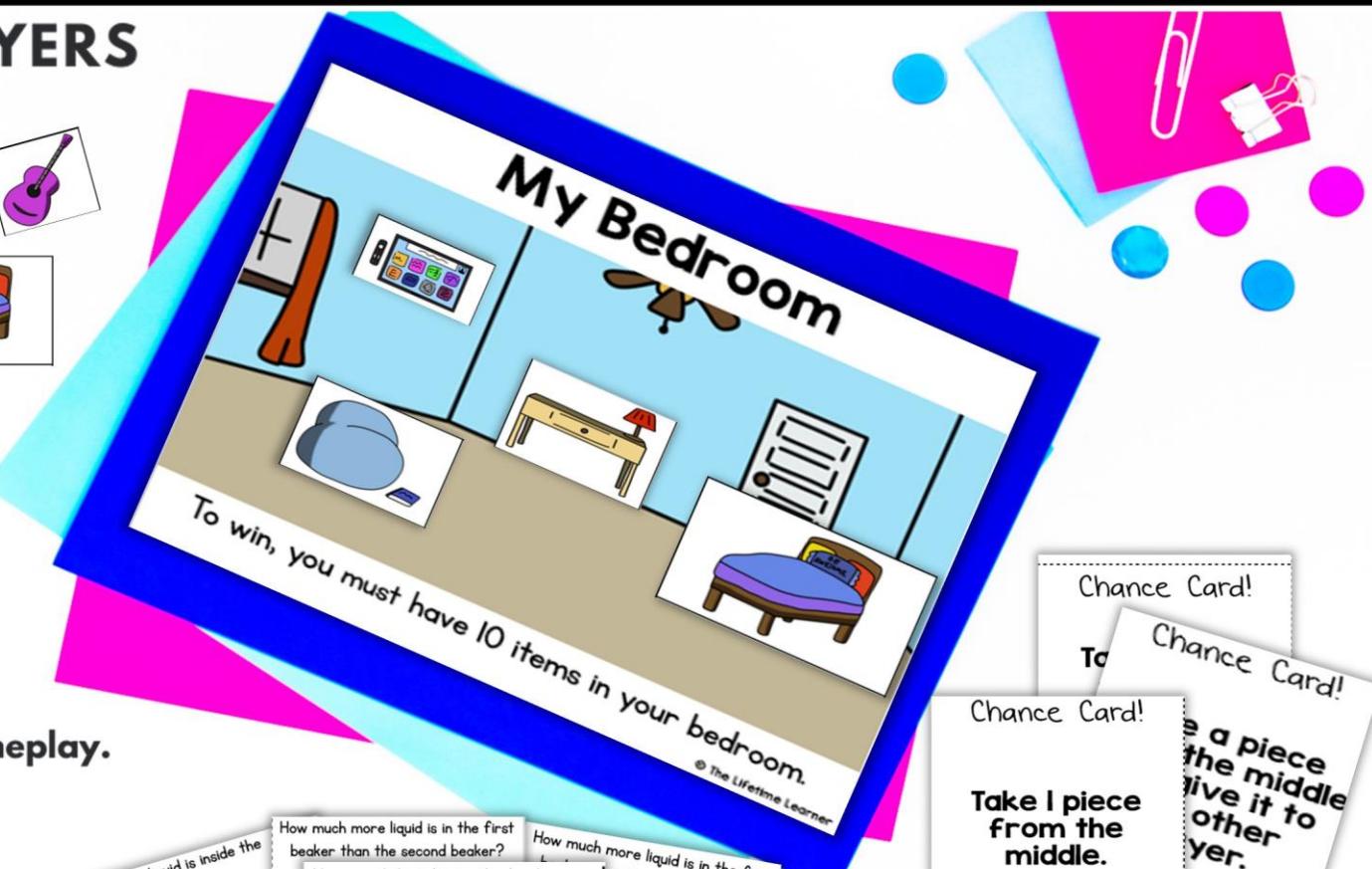
# GAME #1

FOR 2-4 PLAYERS



## HOW TO PLAY:

1. All players receive a game mat.
2. Students answer a question card.
3. If they are correct, they earn an item.
4. The first person to earn 10 items wins.
5. Chance cards included to spice up gameplay.



# GAME #2

the perfect game to play with the whole class



## HOW TO PLAY:

1. Students answer task cards.
2. If they get it right, they drop it in the bucket.
3. Students play for a set amount of time.
4. At the end of gameplay, the teacher draws task cards out of the bucket.
5. Any student whose task card gets pulled out gets a small prize.



# GAME #3

FOR 2-4 PLAYERS



## HOW TO PLAY:

1. All players receive a game mat.
2. Students answer a question card.
3. If they are correct, they earn an item.
4. The first person to earn 10 items wins.
5. Chance cards included to spice up gameplay.



# BUY THE BUNDLE AND SAVE BIG!

## 3RD GRADE MATH BUNDLE

**The Beach**  
Name: **Lindsay**

Write the number of the matching word problem on each bucket to show which sandcastle goes with each word problem.

5 A #5 3 B #5 C #2  
12 D #4 10 E #1 6 F #3

1. There are 2 sharks. Each one has 5 teeth. How many teeth do the teeth have combined?  $2 \times 5 = 10$   
2. There are 54 fish in the water. They are split between 6 small pools equally. How many fish are in each pool of water?  $54 \div 6 = 9$   
3. There are 36 umbrellas for sale on the beach. 6 umbrellas are sold each hour. How many hours did it take to sell all of the umbrellas?  $36 \div 6 = 6$   
4. There are 3 fences facing the beach. There are four seagulls sitting on each one. How many seagulls are there total?  $3 \times 4 = 12$   
5. There are 12 surfers out in the water. They are chatting in groups of 4. How many groups are chatting?  $12 \div 4 = 3$   
6. There are 50 seals out in the ocean. They are sitting in groups of 10. How many groups of seals are there?  $50 \div 10 = 5$

**My Castle**

To win, you must have 10 items in your castle.

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**EDITABLE ROOM TRANSFORMATION**



**ROYALTY day**

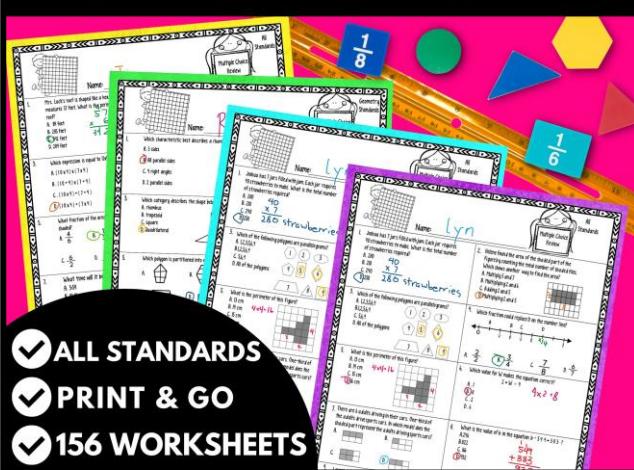
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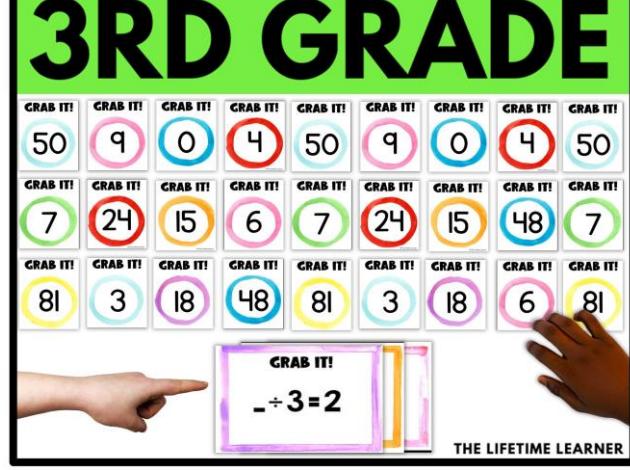
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