# 2nd Grade Math: Real-World Problems — Measurement and Money

## Introduction

Understanding how to solve real-world problems using measurement and money is an important skill. Whether it's figuring out how much something costs or measuring items in the real world, students need to learn how to apply math to everyday situations.

## Key Concepts: Solving Real-World Problems with Measurement and Money

- **Measurement**: Measuring things like length, weight, and capacity using units such as centimeters, meters, kilograms, and liters.
- **Money**: Using coins and bills to find totals, make purchases, and give change.

## How to Solve Real-World Problems Using Measurement and Money

1. **Measurement Problems**: Students need to understand units of measurement like centimeters, meters, and kilograms. Real-world problems may involve measuring how long, tall, heavy, or full something is.
2. **Money Problems**: Students will learn how to add and subtract different amounts of money to solve problems like buying things or figuring out how much money is left after a purchase.

## Example Problems

### Measurement Example 1: Measuring Length

- **Problem**: Emma has two pieces of ribbon. One ribbon is 50 centimeters long, and the other ribbon is 30 centimeters long. How long are the ribbons combined?
- **Solution**: Add the lengths of the two ribbons.
  50 cm + 30 cm = 80 cm.
  The ribbons together are 80 centimeters long.

### Measurement Example 2: Measuring Weight

- **Problem**: A watermelon weighs 3 kilograms, and an apple weighs 1 kilogram. How much do they weigh together?
- **Solution**: Add the weights.
  3 kg + 1 kg = 4 kg.
  The watermelon and apple together weigh 4 kilograms.

### Money Example 1: Counting Coins

- **Problem**: Lisa has 3 quarters, 2 dimes, and 1 nickel. How much money does she have?
- **Solution**: Add the value of the coins.
  3 quarters = 75 cents

2 dimes = 20 cents
1 nickel = 5 cents
75 + 20 + 5 = 100 cents = $1.
Lisa has $1.

**Money Example 2: Making a Purchase**

- **Problem**: Tom wants to buy a toy that costs $8. He has $5. How much more money does he need?
- **Solution**: Subtract what Tom has from the total cost.
  $8 - $5 = $3.
  Tom needs $3 more to buy the toy.

## Word Problem Practice

1. **Measurement Problem**:
   o **Question**: Sarah has a piece of string that is 80 centimeters long. She cuts off 30 centimeters. How much string does she have left?
   o **Solution**: 80 cm - 30 cm = 50 cm. Sarah has 50 centimeters of string left.
2. **Money Problem**:
   o **Question**: Jake buys a book for $7. He pays with a $10 bill. How much change will he get?
   o **Solution**: $10 - $7 = $3. Jake will get $3 back.

## Practice Activity

1. **Create Your Own Measurement and Money Problems**:
   o Students create their own word problems involving measurement or money (e.g., measuring classroom objects or planning purchases) and exchange with a partner.
2. **Solve and Share**:
   o Students solve the problems and explain their reasoning to the class.

## Conclusion

By solving real-world problems involving measurement and money, students learn practical skills they can use in daily life. Whether measuring items around them or calculating purchases, these skills help students understand the value of math in the world!