WEIGHTS

3.20.2019

Subject

Mathematics

Prepared By

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Grade Level

5

Overview

This lesson plan covers teaching content for;

1. Word problems on weight

Objectives

Students should be able to;

1. Identify the appropriate unit of weight to use to measure certain items
2. Solve word problems on weight.

Activity Starter/Instruction

1. Mass is used to measure the weight of an object. For example, you are measuring the mass of your body when you step on to a scale.
2. In the metric system of measurement, the most common units of mass are the gram and kilogram.
3. How much is a gram?
4. A small paperclip has a mass of about 1 gram.
5. How much is a kilogram?
6. A wooden baseball bat has a mass of about 1 kilogram.
7. Converting kilograms to grams
8. 1 kilogram = 1000 grams
9. To convert kilograms to grams we multiply the number of kilograms by 1,000.
10. Converting grams to kilograms
11. 1 gram = 1 / 1000 kilogram
12. To convert grams to kilograms, we divide the number of grams by 1000.

Teacher Guide

Day 1/ Lesson 1: 20mins

1. Mary is boxing up bread at the bakery. She wants to see how many loaves of the same type of bread she can fit in one box. If the boxes have a weight limit of 15 kilograms. How many loaves of each type of bread can she fit in one box?

Loaf of Bread	Mass
Cinnamon Swirl	752g
Cranberry Orange	2.5kg
Banana Bread	1 1/2 kg
Honey Wheat	869g

2. How many loaves of Cinnamon Swirl Bread can Mary fit in one box?
   Box limit: 15kg
   15kg × 1,000g = 15,000g
   Cinnamon swirl bread: 752g
   752g × 19 loaves = 14,288g
   14,288g < 15,000g, so Mary is within the weight limit.
3. How many loaves of Cranberry Orange Bread can Mary fit in one box?
   (weight already given in kg)
   2.5kg + 2.5kg + 2.5kg + 2.5kg + 2.5kg + 2.5kg = 15kg
   Mary will hit the weight limit exactly!

Materials Required

- White Board
- Marker
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Additional Resources

- https://www.math-only-math.com/worksheet-on-word-problem-on-measuring-mass.html
- https://healthfully.com/562318-teaching-children-about-weights-measurements.html
- https://www.theschoolrun.com/what-are-standard-and-non-standard-units
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Additional Notes

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. We will discuss here how to solve the word problems on measuring mass (i.e. addition and subtraction).
2. Addition and subtraction in grams (g) and kilograms (kg) is done in the similar way as in the case of ordinary numbers.
3. Alex purchased 4 kg 350 g of rice. Davis purchased 3 kg 209 g more rice than Alex. Find the quantity of rice purchased by Davis.
4. Quantity of rice Alex purchased is 4 kg 350 g
5. Quantity of rice Davis purchased more than Alex is 3 kg 209 g
6. Therefore, total quantity of rice Davis purchased = 4 kg 350 g + 3 kg 209 g = 7 kg 559 g
7. Adrian purchased 7 kg 350 g of apples. Mike purchased 2 kg 562 g less apples than Adrian. Find the quantity of apples purchased by Mike.
8. Quantity of apples purchased by Adrian is 7 kg 350 g
9. Quantity of apples Mike purchased less than Adrian is 2 kg 562 g
10. Therefore, quantity of apples Mike purchased = 7 kg 350 g - 2 kg 562 g = 4 kg 788 g
4. How many loaves of Banana Bread can Mary fit in one box?
   15kg × 1000g = 15,000g
   Banana Bread: 1 ½ kg
   1 ½ × 1,000 = 1,500g
   1,500g × 10 loaves = 15,000g
5. Mary will hit the weight exactly.
6. How many loaves of Honey Wheat Bread can Mary fit in one box?
   15kg × 1,000 = 15,000g
   Honey Wheat Bread: 869g
   869g × 17 loaves = 14, 773g
7. 14,773g < 15,000g, so Mary is within the weight limit.

Guided Practice

Day 3/ Lesson 3: 20mins

1. Sarah and Tony are twins. When they were born, Sarah weighed 600 grams more than Tony. A few days later their weights were equal due to Tony eating a lot. If Tony weighed 2.25 kilos at birth, then how much did Sarah weigh at birth?
2. In order to respond to the question, we must add both masses, but remember: we cannot add them just yet because they are expressed in different units.
3. In order to be able to add we are going to change the first part to kilograms.
4. Therefore, we have to divide by 1,000:
   1 kg = 1,000 g
5. Then 600 g = 600 / 1000 kg
   = 0.6 kg
6. Now we add:
   2.25 kg + 0.6 kg = 2.85 kg
7. Thus, the answer to this problem is:
8. At birth, Sara weighed 2.85 kg.

Summary

1. Let the students share their answers as a whole class. This gives those students who still do not understand another opportunity to learn it.

Assessment Activity

1. Students should be familiar with the units of weight and ways to measure.

Assessment Activity

Assess if students can;

1. Identify the appropriate unit of weight to use to measure certain items.
2. Solve word problems on weight correctly.