



Makes Maths Fun

# Level 2 MASS

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

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## Mass

Level 2 is designed for students in their second year at school often called Year 1. The Mass strand allows students to estimate, measure, compare and record the masses of 2 or more objects using informal units.

**Knowledge:** Students will draw something heavier and something lighter than the object given.

↓ Students who demonstrate proficiency in this activity move on to Comprehension.  Students stop here as they require additional teacher support to master this activity.

**Comprehension:** Students will record the weight shown on each set of scales and draw the weight on each scale as requested.

↓ Students who demonstrate proficiency in this activity move on to Application.  Students stop here if time has run out or they require additional support with this activity.

**Application:** Students will identify the heavier or lighter weight as shown on each set of scales..

↓ Students who demonstrate proficiency in this activity move on to Analysis.  Students stop here if time has run out or they require additional support with this activity.

**Analysis:** Students will use a calculator and the mass comparison for the Moon to calculate the new weight of each item if they were on the Moon.

↓ Students who demonstrate proficiency in this activity move on to Synthesis.  Students stop here if time has run out or they require additional support with this activity.

**Synthesis:** Students are given the mass of objects and using a calculator must say whether each item is on Earth or the Moon based on what each item weighs and what each should weigh on Earth.

**Evaluation:** Suggested questions provide a starting point for discussions related to Length.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.



All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

Name: \_\_\_\_\_

# Lightest To Heaviest

Draw something lighter and something heavier than each item below.

1.

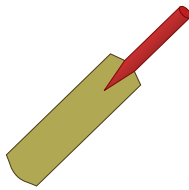
Lighter



Heavier

2.

Lighter



Heavier

3.

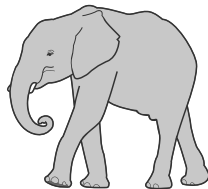
Lighter



Heavier

4.

Lighter



Heavier

5.

Lighter



Heavier

Knowledge  
Comprehension  
Application  
Analysis  
Synthesis  
Evaluation

Mass - Level 2 - Students will estimate, measure, compare & record the masses of 2 or more objects.



Let's Try This Again

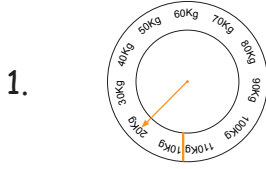


Progress To Comprehension

Name: \_\_\_\_\_

# Reading Scales

Read the weight shown on each set of scales and then draw on the given weight.



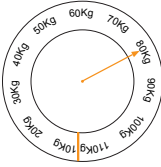
1.

Reading: \_\_\_\_\_



2.

Reading: \_\_\_\_\_



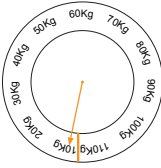
3.

Reading: \_\_\_\_\_



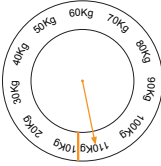
4.

Reading: \_\_\_\_\_



5.

Reading: \_\_\_\_\_



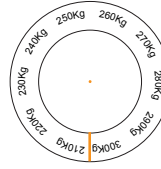
6.

Reading: \_\_\_\_\_



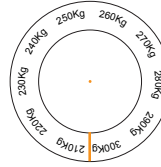
7.

Reading: \_\_\_\_\_



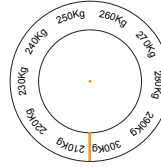
8.

280Kg



9.

220Kg



10.

210Kg



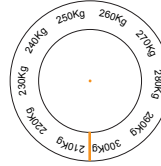
11.

270Kg



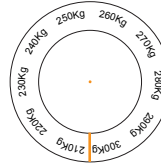
12.

240Kg



13.

260Kg



14.

290Kg



Let's Try This Again



Progress To Application

Name: \_\_\_\_\_

# Which Weighs More

Circle the heavier or lighter scale as requested in each pair.

1.			Lighter	9.			Heavier
2.			Lighter	10.			Heavier
3.			Lighter	11.			Heavier
4.			Lighter	12.			Heavier
5.			Lighter	13.			Heavier
6.			Lighter	14.			Heavier
7.			Lighter	15.			Heavier
8.			Lighter	16.			Heavier

Mass - Level 2 - Students will estimate, measure, compare & record the masses of 2 or more objects.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Let's Try This Again



Progress To Analysis

Name: \_\_\_\_\_


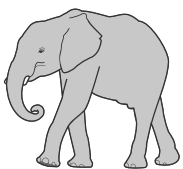
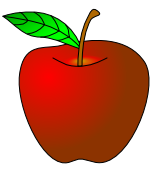


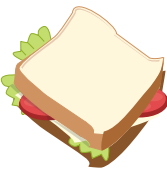

# Walking On Air

While a person's mass remain constant in space their weight changes. On the Earth a person is 6 times heavier than on the Moon. Use a calculator to find the weight of the objects below if they were on the Moon.

Knowledge  
Comprehension  
Application  
Analysis  
Synthesis  
Evaluation

Mass - Level 2 - Students will estimate, measure, compare & record the masses of 2 or more objects.



-  Weight on Earth = 600grams  
Weight on the Moon \_\_\_\_\_ grams
-  Weight on Earth = 4800 Kgs  
Weight on the Moon \_\_\_\_\_ Kgs
-  Weight on Earth = 240 grams  
Weight on the Moon \_\_\_\_\_ grams
-  Weight on Earth = 18 grams  
Weight on the Moon \_\_\_\_\_ grams
-  Weight on Earth = 350 grams  
Weight on the Moon \_\_\_\_\_ grams
-  Weight on Earth = 120 grams  
Weight on the Moon \_\_\_\_\_ grams
-  Weight on Earth = 500 grams  
Weight on the Moon \_\_\_\_\_ grams



Let's Try This Again

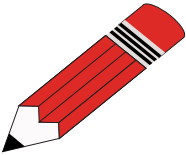
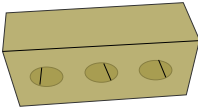







Progress To Synthesis

Name: \_\_\_\_\_

# What Should It Weigh?

Look at the weight for each item and decide whether this is an Earth weight or a Moon weight.

- |    |   |                         |                             |
|----|---|-------------------------|-----------------------------|
| 1. |    | Weight = 60 grams       | Moon Weight or Earth Weight |
| 2. |    | Weight = 1.5 Kilograms  | Moon Weight or Earth Weight |
| 3. |   | Weight = 5 grams        | Moon Weight or Earth Weight |
| 4. |  | Weight = 600 grams      | Moon Weight or Earth Weight |
| 5. |  | Weight = 1.8 Kilograms  | Moon Weight or Earth Weight |
| 6. |  | Weight = 110 grams      | Moon Weight or Earth Weight |
| 7. |  | Weight = 6000 Kilograms | Moon Weight or Earth Weight |



Let's Try This Again



Progress To Evaluation

# Mass Discussion

The following questions and activities are provide as a starting point for fun discussions related to Mass. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the Mass activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.



Let students make an equal arm balance using 2 small buckets and a coat hanger and weigh a number of items with students predicting which items will be heavier and lighter and then checking them in their scale,



Why do airlines limit the weight passengers can take onto planes. How does the weight affect the planes fuel load? Why don't they weigh the passengers?



How do scales work? Where do we find them ie. the greengrocer? Why are there scales in the fruit and vegetable section but not in the cereal aisle of the supermarket?



How can people make themselves heavier or lighter other than by eating more? When would people want to do this - such as when diving?



Why does weight change on other planets. If a student stands on a set of scales and pressure is applied to their shoulders does their weight change?

