KS3 Maths at Marwell
Feeding the giraffes
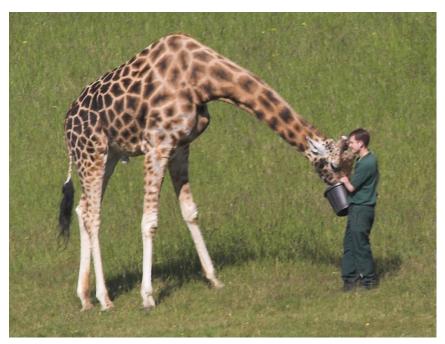
Feeding the giraffes

This activity focuses on solving ratio and proportion problems involving fractions.

The students will use their knowledge of ratios to work out how much giraffe feed a keeper can make up each day.

This activity is quite challenging so it may be worth asking the students to work through it in pairs or groups. Emphasise that it is important to show their working with a good, clear layout.

With many thanks to Jo Kershaw and Denefield School for their extensive contribution to developing this resource

Curriculum Links

MATHS
Ratio, proportion and rates of change
• express one quantity as a fraction of another, where the fraction is less than 1 and greater than 1
• understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction
• relate the language of ratios and the associated calculations to the arithmetic of fractions and to linear functions

Marwell Wildlife

Feeding the giraffes

Giraffe
Giraffa camelopardalis

Distribution: sub-Saharan Africa

Giraffes are the world's tallest land animals – even a new-born baby giraffe can measure up to 2m tall!

Questions

The daily feed ratio for the giraffes consists of:

Giraffe nuts	$\frac{3}{4}$ scoop
Alpha-A (dried alfalfa)	$1\frac{1}{2}$ scoops
Oats	$\frac{1}{2}$ scoop
Flaked maize	$\frac{1}{4}$ scoop

1) David wants to make up a bucketful of giraffe feed. A bucket holds 15 scoops.

   How much of each ingredient should David put in the bucket?

2) David only has 3 scoops of oats left.

   a) How many scoops of the other ingredients will he need to make up the feed in the correct ratio?

   b) How many buckets can he fill with that number of scoops? Give your answer as a mixed number.

Marwell Wildlife

Star challenge!

David has the following ingredients:

Giraffe nuts	10 scoops
Alpha-A	15 scoops
Oats	5 scoops
Flaked maize	2 scoops

a) Using your answer from Question 1, how many bucketfuls of giraffe feed can he make up? Give your answer as a mixed fraction. Remember to show your working!

b) How many scoops of each ingredient will be left over?

The next day David has the following ingredients:

Giraffe nuts	5 scoops
Alpha-A	10 scoops
Oats	5 scoops
Flaked maize	3 scoops

c) How many bucketfuls of giraffe feed can he make up this time? Give your answer as a mixed fraction. Remember to show your working!

d) How many scoops of each ingredient will be left over?