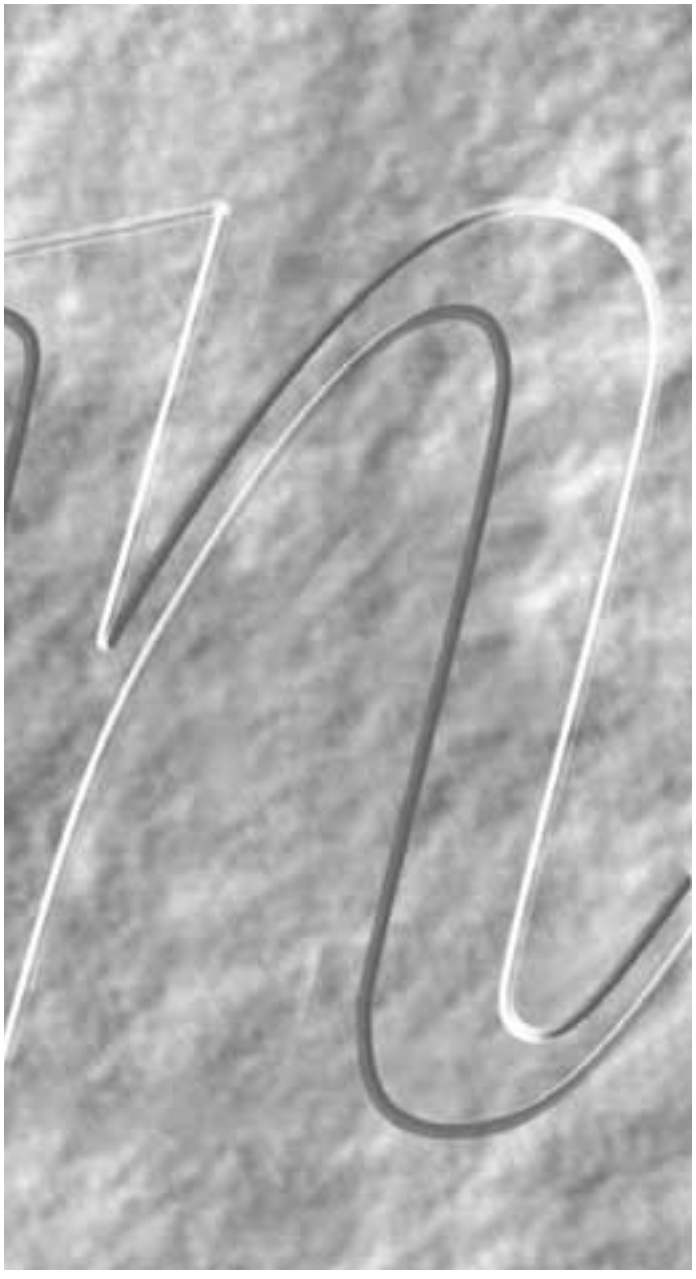
ISLE *of* WIGHT



NUMERACY SPECIFIC TOPICS

FOR KEY STAGE 2

AGED 7 - 11

IN YEAR GROUPS 3 - 6

ADDITION
SUBTRACTION
MULTIPLICATION
DIVISION

numeracy WORK PACK

ISLE *of* WIGHT NUMERACY

NOTES FOR TEACHERS

NUMERACY-SPECIFIC TOPICS FOR KS2 CHILDREN AGED 7-11 IN YEAR GROUPS 3-6

Although the activities have clear links to the Island, they have been written so they can also be used independently, in the classroom, without first hand knowledge of the Isle of Wight.

The mathematical topics provide contextual practice of everyday skills which research has shown children often find difficult. The activities include the key objectives relating to time, money, fractions, decimals, percentages and measures. Assessment results frequently show these to be weak areas - understanding of these objectives can be developed by placing them in real life contexts which children can relate to. The sheets provide a context in which to use and apply their skills and knowledge.

All the work sheets are suitable for key stage 2 covering objectives from the years 3, 4, 5 and 6 NNS teaching programmes, but are sectional so as to provide opportunities for differentiation when appropriate. They could be used as independent pupil/paired/group work or as teaching aids.

The use of probing questions will give children the opportunity to explain and reflect on their methods of working.

The National Numeracy Strategy objectives covered are listed below:

Dinosaur Train **Money, money, money** **Roman Mosaic** **Travelling around the Island**

Dinosaur Train

Year 4
- solve word problems involving time, using one or more steps
- use, read and write vocabulary related to time
- use am and pm and the notation 9:53 read simple timetables

Year 5
- as above plus
- read the time on a 24hr digital clock and use the 24hr clock notation. Use timetables

Money, money, money

Year 3
- solve word problems, involving money, using one or more steps, including finding totals and change
- understand and use £ and p notation

Year 4
- begin to relate fractions to division and find simple fractions of numbers or quantities
- understand decimal rotation of tenths/hundredths and use in context.
- solve word problems involving money and including converting pounds to pence

Year 5
- as above plus
- begin to understand percentage as the number of parts in every 100 and find simple percentages of small whole number quantities
- begin to express a quotient as a fraction or as a decimal when dividing £ p
- solve word problems involving money and finding simple percentages explain methods and reasoning

Year 6
- as above plus
- find simple percentages of whole number quantities

Roman Mosaic

Year 3
- recognise unit fractions and use them to find fractions of shapes and numbers
- begin to recognise simple fractions that are several parts of a whole
- begin to recognise simple equivalent fractions

Year 4
- all above plus
- recognise the equivalence between the decimal and fraction forms of $^1/_2$, $^1/_4$ and tenths such as 0.3

Year 5
- all above plus
- relate fractions to division
- use decimal notation for tenths and hundredths
- relate fractions to their decimal representations
- begin to understand percentage as the number of parts in every hundred and find simple percentages
- express $^1/_2$, $^1/_4$, $^3/_4$, $^1/_{10}$, $^1/_{100}$ as percentages

Year 6
- all above plus
- recognise relationships between fractions
- use fraction as an operator to find fractions of numbers or quantities

Travelling around the island

Year 3
- understanding addition/subtraction
- use mental calculations to add numbers in any order
- use calculations to add/subtract 3 or 4 small numbers
- understand multiplication as repeated addition
- use known number facts and place value to carry out simple multiplications
- understand and use £ p notation
- choose and use appropriate operations to solve word problems
- know the relationship between km and m

Year 4
- all above plus
- recognise the equivalence between the decimal and fraction forms of one half and one quarter
- begin to know x facts for 6, 7, 8 and 9 times tables
- choose and use appropriate number operations and appropriate ways of calculating to solve problems
- understand decimal notation and place value for tenths and hundredths and use it in context
- word problems involving converting km to m, know and use the relationships between familiar units of length

Year 5
- all above plus
- know rough equivalents of mile and km
- develop calculator skills and use effectively

Sue Roper (B.Ed.) has taught in Primary schools on the Isle of Wight and is currently the Teacher Consultant for Numeracy.

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NAME: _____

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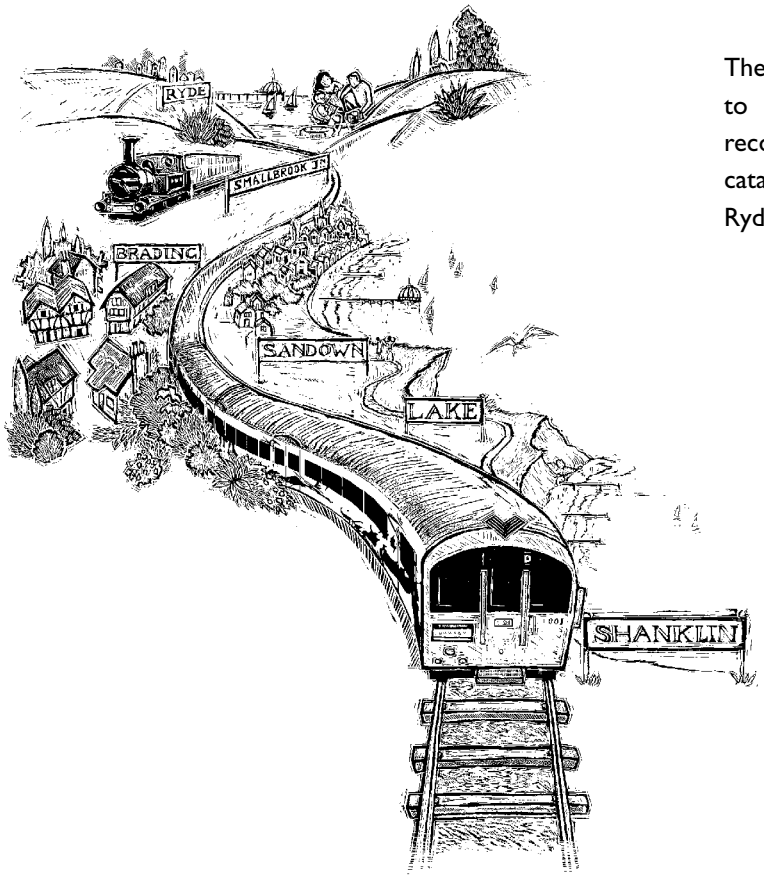
ISLE *of* WIGHT
DINOSAUR TRAIN



The electric railway on the island runs from the end of Ryde Pier to Shanklin. It is painted with dinosaurs so it is instantly recognisable. Visitors arriving on the island via the Wightlink catamaran can catch the train at Ryde Pier Head and can travel to Ryde Town, Brading, Sandown, Lake and Shanklin.

Timetable						
Ryde Pier Head	8.00	9.10	10.50	11.45	14.05	15.36
Ryde Esplanade	8.05	9.15	10.55	11.50	14.10	15.41
Ryde St.John	8.08	9.18	10.58	11.53	14.13	-
Brading	8.13	9.23	11.03	11.58	14.18	-
Sandown	8.19	9.29	11.09	12.04	14.24	15.50
Lake	8.23	9.33	11.13	12.08	14.28	-
Shanklin	8.25	9.35	11.15	12.10	14.30	15.55

Not true timetable

USING THE TIMETABLE

1 How long does it take the 10.50 Ryde Pier Head train to reach Brading? .....

2 What time train do I need to catch from Ryde Pier Head to be at Sandown for 9.30? .....

3 How long is the journey from Brading to Shanklin? .....

4 One train does not stop at three stations, how long is its total journey from the Pier Head to Shanklin? .....

5 If Jenny misses the 9.23 train from Brading to Lake, how long will she have to wait for the next one? .....

6 Kevin has spent the morning looking round Ryde and has arranged to meet a friend for lunch at 12.30 in Sandown. Which train will he need to catch from Ryde Esplanade? .....

7 Plan a day so you could spend an hour at Brading and 2 hours on Sandown beach before meeting friends at Shanklin at 15.00

.....

8 Make up a timetable for trains for the return journeys from Shanklin to Ryde Pier Head.

Shanklin						
Lake						
Sandown						
Brading						
Ryde St.John						
Ryde Esplanade						
Ryde Pier Head						

NAME: _____

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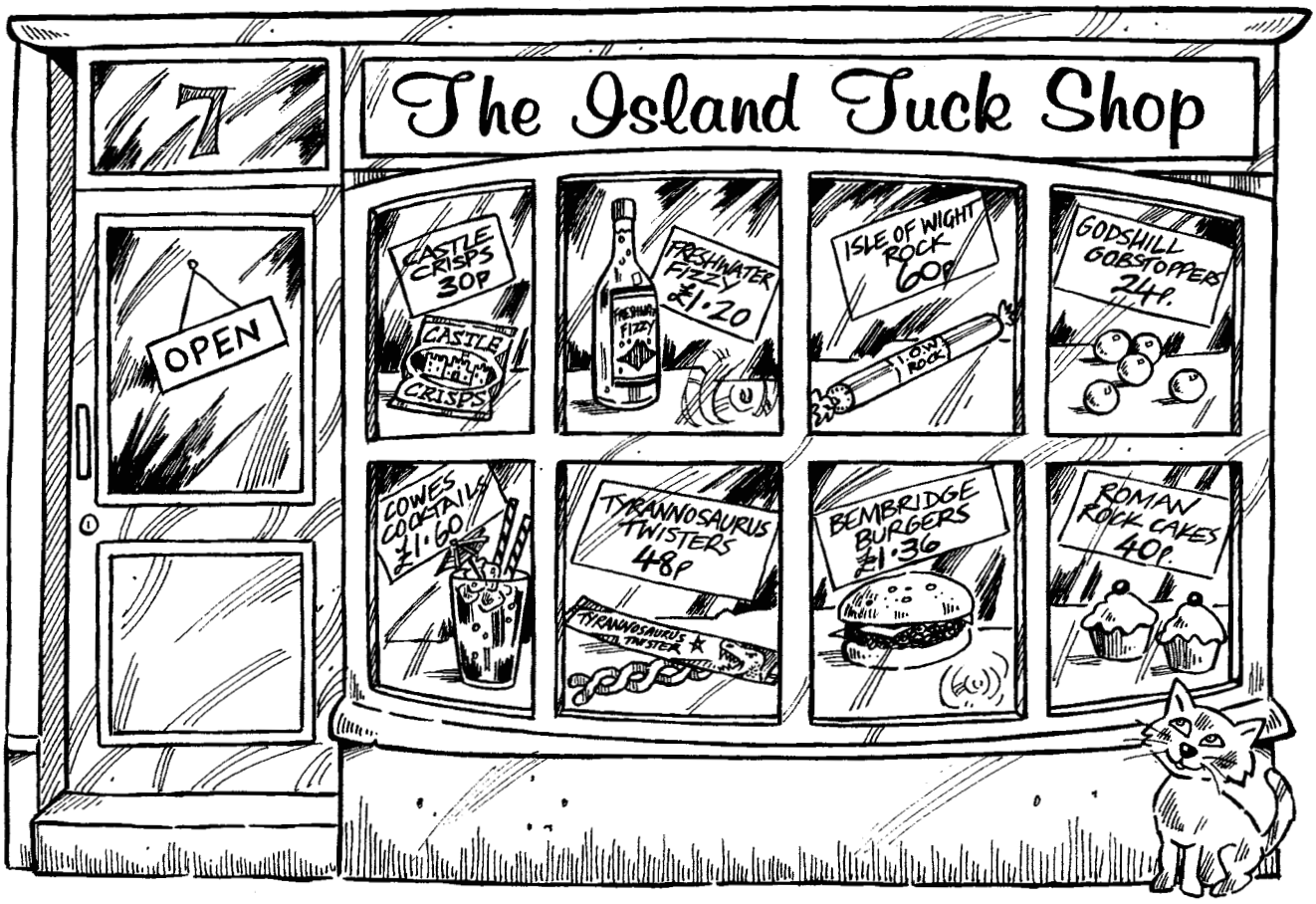
ISLE *of* WIGHT

MONEY, MONEY, MONEY...



CHOOSING AND BUYING

1 You have £1.50 to spend, what would you choose? .....

What is the total you would pay? .....

2 Ben buys 3 sticks of rock for his family. How much change would he have from £2.00? .....

3 Sue buys 8 things the same for a total of £3.20. What did she buy? .....

4 The teacher buys 30 Gobstoppers for the class! How much will it cost? ..... Will it keep them quiet? .....

5 Will £10.00 cover the cost of 8 Fizzy drinks? .....

EXTRAS AND REDUCTIONS

1 Cocktails are on special offer for a day, with 1/4 off the price. How much do they cost today? .....

2 The burgers can have cheese added for an extra 10% cost. What would a cheeseburger cost? .....

3 The price of a Freshwater Fizzy increases by 15% in July. What is the new price? .....

4 If you buy 10 twisters, you get 30% off the total. What would you pay? .....

5 At the end of the holidays, all prices are reduced by 50%. What will the new prices be?

Castle Crisps	.....	Freshwater Fizzy	.....
Isle of Wight Rock	.....	Tyrannosaurus Twister	.....
Godshill Gobstopper	.....	Roman Rock cakes	.....
Cowes Cocktail	.....	Bembridge Burger	.....

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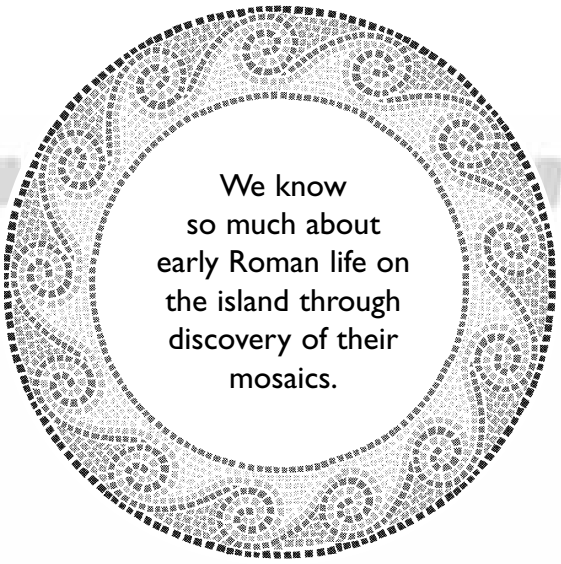
ISLE *of* WIGHT
ROMAN MOSAIC



Use the squared grid below to create a colour mosaic - it can form a simple picture or a pattern.

Colour: 1/4 Blue 1/5 Green 1/10 Red 6/20 Yellow

The remainder (3/20 = 15/100 = 15% = 0.15) may be any colour

Complete this table:

	Fraction	Number of Squares	Percentage	Decimal
Blue				
Green				
Red				
Yellow				
Others				

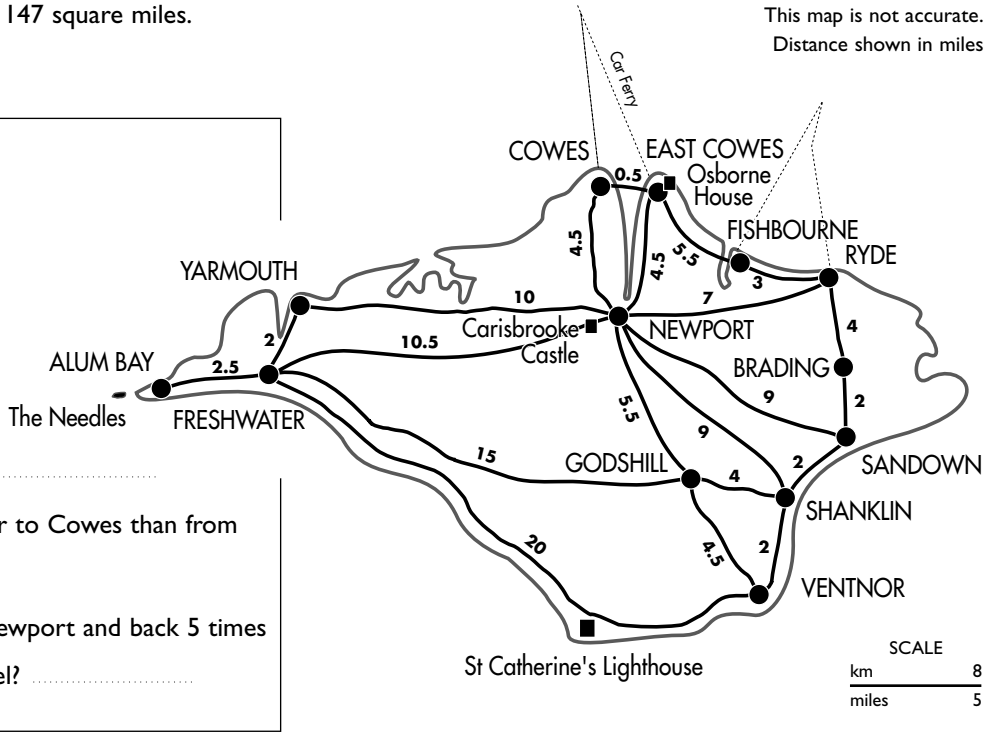
NAME: _____

DATE: _____

ISLE *of* WIGHT

TRAVELLING AROUND THE ISLAND

The island is 23 x 13 miles with an area of 147 square miles.
There are 60 miles of coastline.



GETTING GOING

1 How far is it from
Yarmouth to Ryde? .....
Shanklin to Cowes? .....

2 Which is the quickest route from
Freshwater to Brading?
Ryde to Ventnor? .....

3 How much further is it from Ventnor to Cowes than from Ventnor to Ryde? .....

4 A bus driver drives from Ryde to Newport and back 5 times a day. How many miles does he travel? .....

REAL LIFE PROBLEMS

1 A bus charges 30p a mile each person. How much would it cost to travel: Shanklin to Newport .....
Ventnor to Freshwater .....
Freshwater to Cowes .....

2 A coach arrives at East Cowes on the car ferry. It is taking a class of children to the beach at Sandown. It charges £7 per mile. What is the total cost for the return journey?

.....

3 Travelling from Freshwater to Godshill, my car breaks down half way. How many more miles have I left to go? .....
The breakdown truck comes from Sandown, how far has it to travel before it reaches me? .....

CHALLENGES

1 The island has 60 miles of coastline. To raise money for charity, Paul walked the coastal path. His average walking speed was 3 miles an hour. He started at 5.00am. What time did he finish? .....

2 It is 3.2km from Shanklin to Sandown. Billy can cycle at 200m in 1 minute. How long will the journey take him? .....

3 The scale shows that 5miles = 8 kilometres.
How many kms is it from:
Newport to Ventnor? .....
Shanklin to Brading? .....
East Cowes to Ryde? .....

PUZZLE

1 Mrs Smith wants to take her class to visit The Needles, Carisbrooke Castle, St Catherine's Lighthouse and Osborne House. She promised they could also spend some time at Shanklin beach. Plan a route from East Cowes car ferry and back and calculate the total miles. .....

2 If the coach charges £8 per mile, how much will the trip cost? .....