



# The Lewisham



# Town Centre Trail



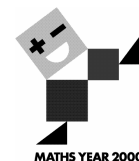
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### Quick Start

- Start at the Lewisham DLR Station
- Follow the instruction starting on page 4
- Keep notes of any interesting shapes or numbers on pages 12 and 13
- Keep notes of any bargains you see in shop windows or on the market on page 11
- The numbers on the map show different points on the route. So, if you are short of time, just do part of the route.
- Have a good time !

This trail was funded by the Construction Industry Training Board (CITB) to whom our special thanks. It was co-ordinated by Lewisham Education Business Partnership with assistance from Maths Year 2000. It was prepared by Chris Olley, maths education specialist with MMI consultants. ([chrisolley@mcmail.com](mailto:chrisolley@mcmail.com))



## About the Trail

Welcome to the Lewisham town centre trail. This booklet is intended to show you round the centre of Lewisham, taking a detailed look at some of the most interesting sites in the town. Along the way you will be looking at a range of numbers and shapes and sizes. During the trail there are spaces to make a note of things that you see. When you have finished, there is a range of activities to follow up the things you have been looking at. So, when you are tired out from the walk, sit down with a nice drink and reflect on what you have seen.

The trail and the activities are intended to be suitable for all age groups. We hope that families and school groups alike will want to do the trail. If there is something you don't understand or you are not sure about, then just skip that bit. We don't expect everyone will want to do everything, but we hope that you find things in here that are interesting and fun. We would be pleased if you want to find out more or you would like to look further into the ideas in this trail. The library makes an excellent place to start.

The trail goes from the Lewisham Docklands Light Railway station to the library. It doesn't matter if you start at the library and go the other way round. Just read the instructions from the end !

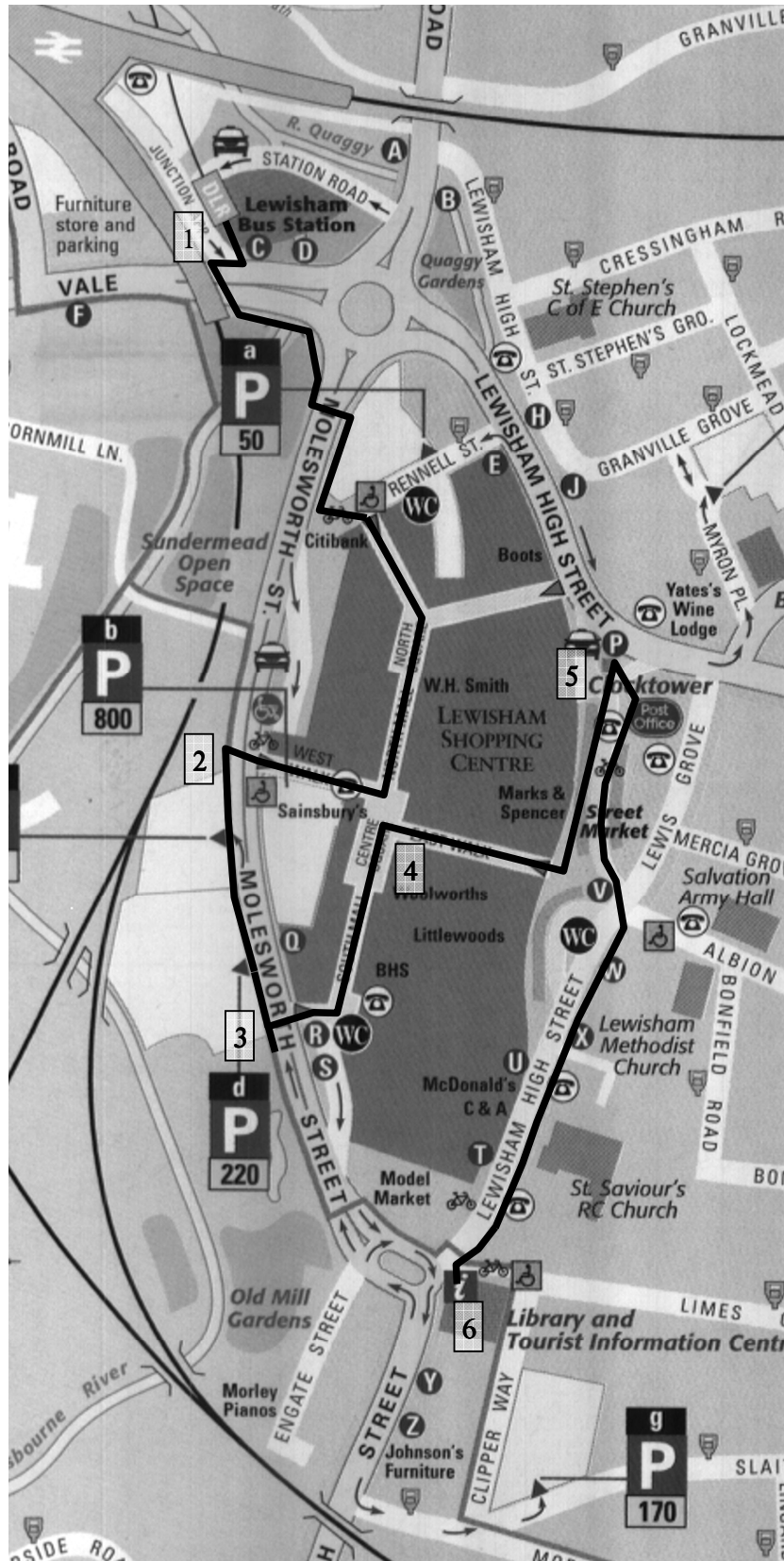
As you go round you may notice interesting numbers, or numbers in interesting or unusual places, that are not mentioned in the trail. There is a page at the back of this book to write down what you have seen.

Also, if you see any interesting or unusual shapes of objects, there is a special page for these. Draw a little sketch and name them if you can.

Finally, if you see any good bargains or special deals in the shops or on the market, write these down on page 11.

The trail map has numbers for various parts of the route. The numbers are shown again in the trail description. If you are short of time and just want to do part of the route, follow the numbers.

# The Trail Map





# The Trail

## 1 Start from the Lewisham Docklands Light Railway Station

Find the Timetable Information poster. Use it to answer these questions:

- When is the first train on Mondays to Fridays to Bank station ?
- When is the last train on Mondays to Fridays to Bank station ?
- How long does it take to get from Lewisham to Bank ?
- How long does it take to get from Lewisham to Stratford ?
- Why might it take longer than 37 minutes to get from Lewisham to Beckton ?

*Get across Station Road to reach the pedestrian crossing next to the railway bridge. Cross safely over Loampit Vale to reach the bridge over the river Ravensbourne.*

*Follow the road round onto Molesworth Street up to the next pedestrian crossing. Cross Molesworth Street and walk towards the shopping centre. Stop outside the entrance to Citibank.*

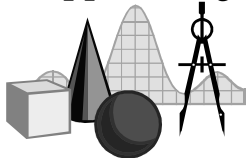
Look for the height restrictions for the two railway bridges. Find them on the large road sign. There is also a height restriction to get into the shopping centre car park. Look on the car park entrance ramp. Write down what they say (be careful to include the units):

One railway bridge:

The other railway bridge:

The car park:

### Interesting Shapes Opportunity



Look at the bridges and the street lamps.

### Interesting Numbers Opportunity



Look for bus numbers. Look for street-side telecommunications boxes with code numbers.

*Now enter the Lewisham Shopping Centre.*

Find a poster showing the opening times of the shopping centre. Work out how many hours (and minutes) the **Centre** is open for on each day (Not just the shops !). Write your answers here.

Monday

Friday

Tuesday

Saturday

Wednesday

Sunday

Thursday

*Walk into the shopping centre up to the children's play area.  
Stop on the opposite side of the play area to W H Smiths.*

*Interesting Numbers  
and Shapes  
Opportunity*



Look in the children's  
play area.



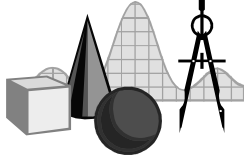
Look for the two signs showing all of the shops in the centre.  
How many are there ?  
Do not count them all up ! Find a quick method.

There are ..... shops.

How did you do it ?

*Walk up North Mall to Centre Square. Stop in Centre Square to have a look around. Then turn right and walk out of the shopping centre past Poundstretcher.*

*Interesting Shapes  
Opportunity*



Look at the shopping  
centre ceiling

*Best Bargains  
Opportunity*



Look in the windows of  
Sainsbury's and  
Poundstretcher

2

*Stop at the Lewisham History Mural.*

Write down all of this information:

- When did Lewisham join Deptford to become the London Borough of Lewisham ?
- When did the MV Empire Windrush arrive in England (and where from ?)
- When did the Boer War start and finish ? (Where did it happen?)
- When was the St. John's rail crash ? (How many people died ?)
- From 1940-1941, how many bombs and incendiaries fell ? (How many people were killed ?)
- London's first railway went from London Bridge to Greenwich via Deptford. When did it open ?
- When was Millwall football club founded ?
- When did the Lewisham Odeon cinema open and when did it close ?

### *Estimation Opportunity*

Estimate how many cars the main multi-storey car park holds ?



Working out space

- How many floors are there ?
- How many sections ?
- How many cars in each section ?
- How many cars from front to back ?

My estimate:

- 3 *Walk along Molesworth Street towards the library and cross at the first pedestrian crossing. Continue along Molesworth Street to the old mill (now called the Citibank Riverdale House).*



Riverdale house is an old mill. It used to make flour from corn. It was first written about in 1299. But it may be much older. The main building you can see was built in 1828. It closed for business in 1908. How long was this building working for ?

- 4 Cross back over Molesworth Street at the pedestrian crossing. Enter the shopping centre at Evans'. Walk through the centre along South Mall to Centre Square and stop by the lifts.

Look for two plaques on the side of the lifts which will help you answer these questions:

- What date did Lewisham Shopping Centre first open ?
- What date was it re-opened after being refurbished ?

### *Estimation Opportunity*

In the main aisle from the lifts to the main entrance in the shopping centre, how many floor tiles have been used ?  
How many tiles wide is it ?



How many tiles long is it ?

Work out how many tiles have been used.

Use this answer to estimate how many tiles are used in the whole shopping centre.

*Go down East Walk to leave the shopping centre by the main entrance. Walk along the high street towards the clock tower. As you reach Marks and Spencer's, look down to find a plaque in the pavement.*

### *Best Bargains Opportunity*



Look on the market stalls

Look for the plaque to commemorate a sad event in the second world war.  
Write down what it says.

**5** *Continue along the high street up to the clock tower.*

The large white building across the road is called Tower House. It has had several uses. Do you know what it was built as ? There are two dates on the tower. One of them tells you when it was built. Write it down.

Write down what the clock tower was built to celebrate.

Write down how much it cost.

*Walk round to the Post Office.*

Look at the stamp machine on the outside wall of the Post Office.

- What stamps do you get for £2 ?
  
- What stamps do you get for £1 ?

*Walk along the high street making your way towards the tall church tower. Stop at St. Saviour's church.*

On both sides of the front of St. Saviour's Church there is a memorial. Write down when the memorial was put up.

*Best Bargains Opportunity*



Look in shop windows along the high street

*Estimation Opportunity*

Estimate how tall the bell tower (campanile) of the church is.



- Use a bus to compare. Roughly how high is a bus ?
- How many buses high is the tower ?
- How tall is the tower ?

- 6 *Continue along the high street to the library. Stop outside the library and have a last look around. Then go into the library to finish.*

*Interesting Numbers Opportunity*

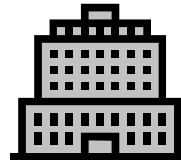
<http://www.software995.co>



Find another black telecommunications box. Also find the code for an underground gas pipeline and electricity cable.

*Estimation Opportunity*

Estimate how many window panes there are in the Prudential building ?



- Sort out the windows into different types.
- Count how many panes in each type.
- How many panes in total ?

On the back of every book in the library is an ISBN. (This stands for International Standard Book Number). Write down a few ISBNs. You can often find them just above the bar code.

## Best Bargains

On this page make a note of any good bargains you see in the shops. If you find a 20% discount, write down an example to show how much the item costs now. If you find 2 packs of 3 ice-creams for the price of one, work out how much each box costs and how much each ice-cream costs.



## Interesting or Unusual Numbers

On this page make a note of any interesting numbers you have seen, or any unusual places to find numbers. Make a sketch to help you remember and say where you saw them.

## Interesting or Unusual Shapes

On this page make a note of any interesting or unusual shapes you have seen. Make a sketch to help you remember and name the shapes, if you can. If not look them up when you get home.

## Making a Good Estimate

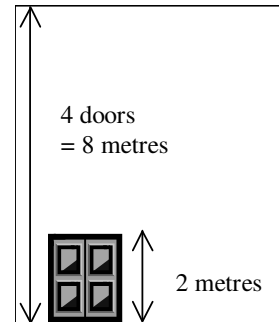
Don't forget, an estimate is *not* a guess ! To make a good estimate you should break the problem down to smaller parts. You can make a good guess for each small part. Then you calculate your estimate.

*For Example:*

I want to estimate the height of a tall room.  
The room is roughly the same height as 4 doors.

I guess the door is roughly 2 metres high  
(most doors are). So I calculate:

I estimate the height of the room is  $2 \times 4 = 8$   
metres high.



Use this space to do the calculations for your estimation opportunities. (The Lewisham shopping centre car park, the floor tiles in the shopping centre, the height of St. Saviours campanile, the window panes in the prudential building).

## Things To Do With Your Information

On this trail you have collected lots of information. These pages contain some questions you may like to think about. Also they have ideas about making use of the information you have collected.

### Numbers

- Some numbers are used to say how big something is. (E.g. “It’s 1.83 metres high”).
- Some numbers are used to say how many there are of something. (E.g. 500 sheets of paper).
- Some numbers are just codes to let you know which particular one something is. (E.g. bus number 61).
- You may be able to think of other types of uses for numbers.

Look at your page of interesting and unusual numbers. What have the numbers been used for ? Write about your ideas.

### Shapes

- Different objects are made in different shapes. Why ? (E.g. most windows are rectangular, but some are not).
- What are the most common shapes? Why ?

Look at your page of interesting and unusual shapes. Why have the shapes been used ? Why is one shape better than another to do each job ? Write about your ideas.

### Best Buys

- Look at the types of offers you have seen. Which are the best ones ?
- Would you prefer 30% off, or getting 3 for the price of 2 ?

Look at your page of best bargains. Write about your ideas.

## Units



What does 16' mean ?  
If you know that 6' = 1.83m,  
then how tall is 16'.

## Opening Hours



You can compare Lewisham Shopping Centre with other centres looking at how long it stays open for.

- Work out how long the centre is open for each day.
- Work out the average opening hours.
- Work out the range of opening hours (that's the longest day take away the shortest day).

Get the same information for another shopping centre. Is the Lewisham Centre better ? (On average does it stay open longer ? Is the range bigger or smaller ? What does that tell you ?)

## Money



Remember how much the clock tower cost to build.  
How much would that money be worth now ?

## Dates



You have collected lots of information about dates.  
Answer questions like these:

- How long did it last ?
- How long ago did it happen ?
- When will it's centenary be ?
- When will other anniversaries be celebrated ?

## Stamps



Look at the stamps you get in a £1 and a £2 book from the stamp machine. In June 2000 a first class stamp is worth 27p and a second class stamp is worth 19p.

- How much would it cost to buy the stamps in a £1 book (if you bought them separately) ?
- How much would it cost to buy the stamps in a £2 book ?
- Suppose a first class stamp cost 29p and a second class stamp cost 21p. How many of each stamp would you put in a £2 book now ?
- Investigate different stamp prices. How many would you put in a £1 or £2 book now ?

## ISBNs



The International Standard Book Number (ISBN) always has 10 digits. It tells libraries and bookshops about the book in one number. It is a code.

ISBNs are made up like this:

0	14	004181	8
Language	Publisher	Book	Check digit

The language for 0 is English. The publisher for 14 is Penguin. This book 004181 is a mathematical puzzle book called 'Tangram'. Check with a librarian.

Look for books by other publishers or in different languages. Compare their ISBNs.

The check digit allows a computer to check that an ISBN has been entered correctly. Here is how it works.

0 14 00 4181 8

we do:  $0 \times 10 + 1 \times 9 + 4 \times 8 + 0 \times 7 + 0 \times 6 + 4 \times 5 + 1 \times 4 + 8 \times 3 + 1 \times 2 + 8 \times 1$

which is:  $0 + 9 + 32 + 0 + 0 + 20 + 4 + 24 + 2 + 8 = 99$

We divide the answer by 11.

$$99 \div 11 = 9$$

If it divides exactly (which it did), then the ISBN is correct. If not there must be a mistake.

Check that the ISBN's you found in the library are correct.