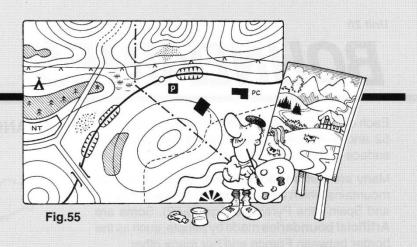
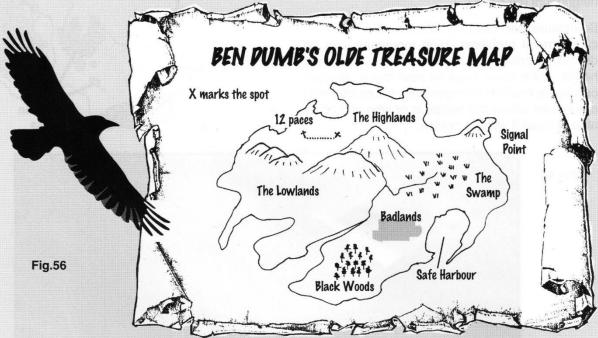
MAPS

A **map** is a bird's eye view of an area, drawn to scale. A map shows the shape and pattern of features within that area (see figure 55).

There are many different types of maps, some are good maps and some are poor.





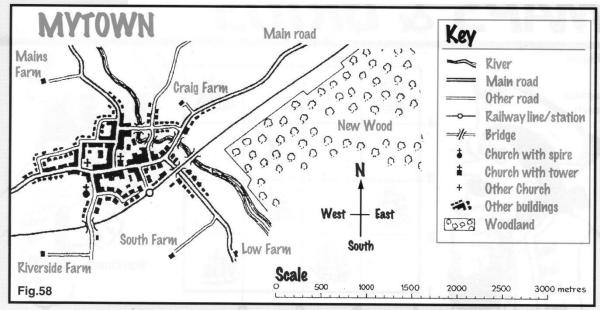
Ben Dumb's Olde Treasure Map (fig.56) can be improved. A **key** and **symbols** can be used to show the pattern of features in the area such as rivers, marshes, forests, farms and settlements etc. The map should show the direction of **North**. The map should also have a scale and be a true bird's eye or aerial view. If Ben Dumb's Treasure Map was to be drawn in this way then his buried treasure would more easily be found!

In the United Kingdom we use maps made by the **Ordnance Survey** (O.S.). Nowadays our maps are drawn by computers and based on satellite photos. People use all types of O.S. maps for many different purposes (fig.57).

Geographers make a lot of use of maps in studying people and places and other interesting features on the Earth's surface.







- 1 What is a map?
- 2 Study the map of **MYTOWN** (fig.58) above. Answer the following questions
 - i. Make a list of five features (such as roads) that are shown on the map and then a list of five features that are not shown.
 - ii. How many main roads lead into Mytown?
 - iii. How many churches are there in Mytown?
 - iv. How many bridges does the river flow under?
 - v. What is the direction......
 -from Riverside Farm to Low farm?
 -South Farm to Craig Farm?
 -Mains Farm to Riverside Farm?
 -Low Farm to Riverside Farm?
 - vi. Use the Scale to work out the distance between Low Farm and Craig Farm?
- Make a copy of and then fill in the table below: Choose from: Title, Names, North, Scale, Border, Symbols, Key

GOOD MAPS HAVE		
	To show what the map is about	
	A neat line around the map	
	To show how far places are from each other on the map	
	To make features simple to understand on the map	
	To say what symbols mean	
2	To help show direction on a map	
	of towns, streets, rivers, woods etc.	

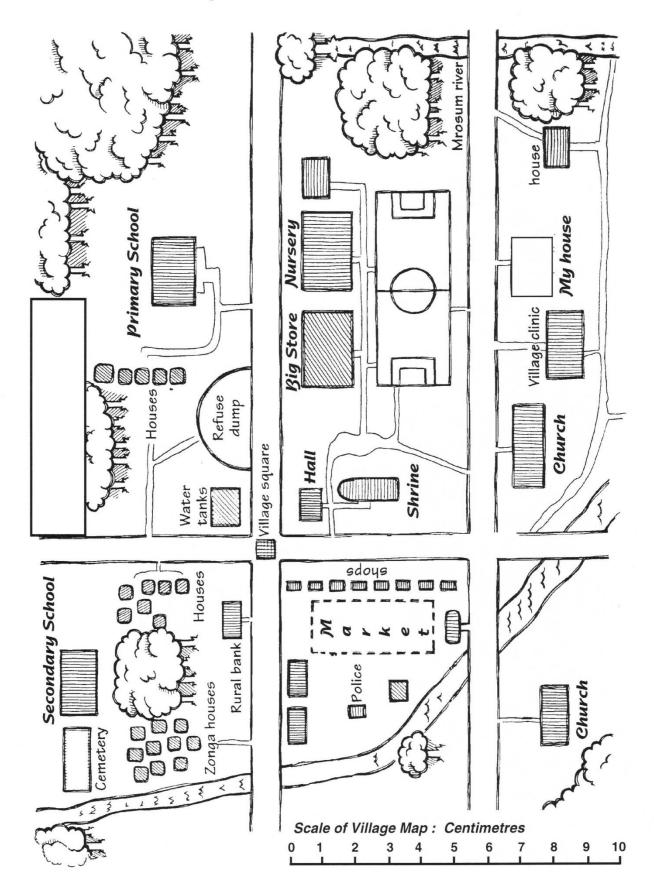
- 4 Study Ben Dumb's Olde Treasure Map (fig.56).
 - List all the reasons why it would be very difficult to find Ben's treasure using his map.
 - ii. Redraw Ben's map to make it easier to find his buried treasure (see Qu.3)
- Make a list of all the maps you see in a day. The one with the most maps is the winner. Look for maps in newspapers, diaries, on TV, at bus stops, etc.
- 6 Look at the photographs on pages 42 and 43 of the book. Which of the photographs shows a bird's eye or aerial view?
- 7 Write a sentence about why each of the people shown in figure 57 might need to use a map. Do the same for at least **two** other people who might need to use maps.
- **8** Why are the following **not** shown on maps?

cars sheep caravans people

Summary

A map is a bird's eye or aerial view of an area drawn to scale. A map shows the shape and pattern of features within that area. The O.S. make most of the maps used in the United Kingdom.

Village Map





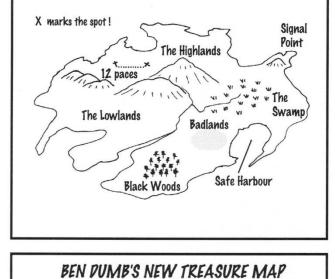
1.	What is a map?	
Look	at the sheet Village Map 1 and then answer these	questions.
2.	Shade in My house in red on the map. You will no	eed to find it first!
3.	a. How many houses are there in the village?	There are house in the village.
	b. How many churches are there in the village?	There are churches in the village.
	c. Use a red pen or pencil for this question. Draw two different ways of going from My house	e to the secondary school on to the map.
	d. Draw the shortest way from the cemetery to the Use a different colour of pen or pencil for this.	
	a Make a Key for the man in this box	Key to Village Map
	e. Make a Key for the map in this box . Choose different colours for the houses, churches, shops, schools, etc.	Houses
		Shops
	f. Now shade in the map of the village using the key above.	Churches
	g. Give the village a name . Write the name in the title box on the map.	
	h. The scale of the Village Map is -	
	One centimetre on the map stands for twenty metres on the ground.	
	Use a ruler to work out how far it is between	
	i. The Big Store and My House met	res
	ii. The Bank and the Village Clinic me	tres



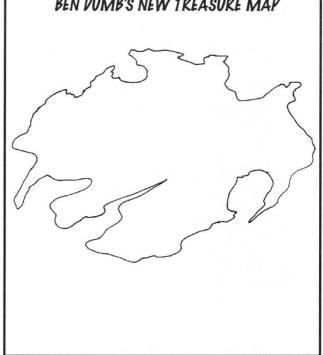
1.	What is a map?	
2.	Look at Ben Dumb's Treasure Map.	
	Why would it be very difficult to find Ben's treasure using this map?	L
		ı

- 3. Can you draw a better treasure map? What do all good maps have? Try to make it easy to find the treasure with your good map. Use the blank map in this box to help you.
- Write a sentence about why each of the people shown here might need to use maps.





BEN DUMB'S OLDE TREASURE MAP









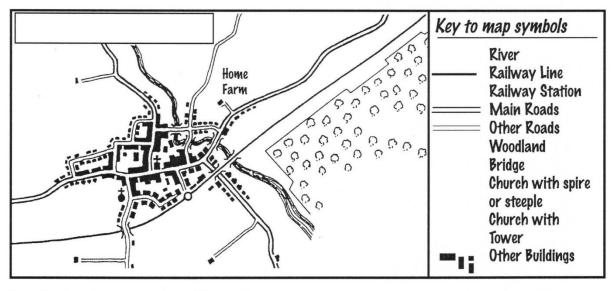
1. Make a list of **jobs** in which maps are needed. Here are two clues to help!

Jobs where maps are needed are:





her Estate Agent



2. Look at the map above and figure 58

i.

Fill in the missing words in	these sentences.	Choose from:	north key distance	title
All good maps have	a	to say what the r	map is showing,	
	a	to explain the sy	mbols on the map,	
	a Scale to sh	now	on the map,	
	an Arrow to s	show the direction	of	

- ii. Finish off the map above by :
 - a. Giving the settlement a **name** (write the name in the box)
 - b. Giving the four other farms a name (write the name beside each)
 - c. Giving the **woodland** shown a name (write the name in the woodland above)
 - d. Filling in the missing symbols in the key.
 - e. Add a North arrow to the map.
 - f. Shade in the map and key neatly.

3.	i.	How many churches are there on the map?
	ii	How many bridges are there on the map?

iii. Which are the main ways that can you travel to the settlement on the map?

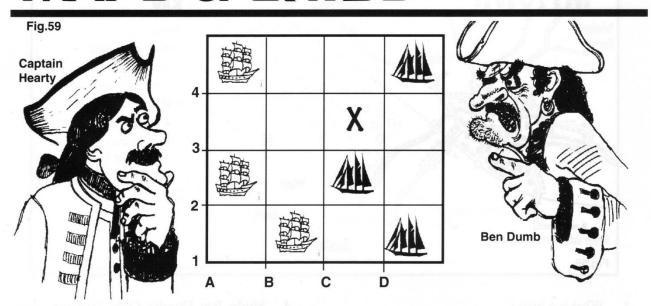


1.	Why are symbols like the ones below used on maps?

- 2. Look at the list of **map symbols** below. Ask your teacher for a **key** to map symbols.
 - a. What do the map symbols below stand for? Write their meaning beside each one below.
 - b. Draw the symbol for each of the following : Motorway Post Office Parking Golf Course Bus Station

		MAPSY	/NABOL C	
Symbol —	Meaning	WIAT ST	Symbol	Meaning
+				
6			الارديني	
1745				MOTORWAY
				POST OFFICE
<u> </u>				PARKING
<u></u>				GOLF COURSE
TH				BUS STATION

MAPS & GRIDS



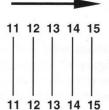
Pirates like Ben Dumb could have found their buried treasure (at **X** above) more easily if they had known about **grid references**. This is a way of telling exactly where a place is on a map. C3 is a **two figure reference** to the treasure. It tells us which square to look at on a map covered by a grid of lines (see fig.59). Horizontal lines (or

Northings) and vertical lines (or **Eastings**) make up a grid. To find square **A** on fig.60, first find the two lines which cross in the bottom left hand corner or the square. Next name the Easting (in this case **16**). Then name the Northing (in this case **24**). The **four figure reference** for square A is written like this (1624).

FOUR FIGURE GRID REFERENCES

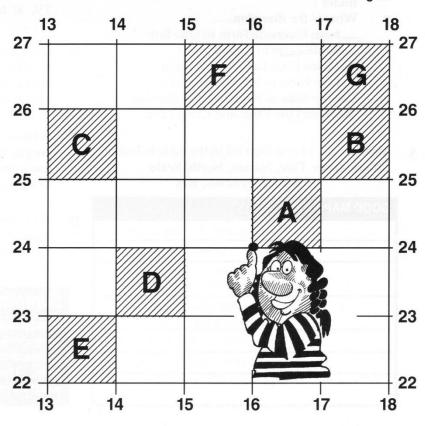
Fig.60

The vertical lines (up and down the map) are called **EASTINGS** as their numbers increase to the East.

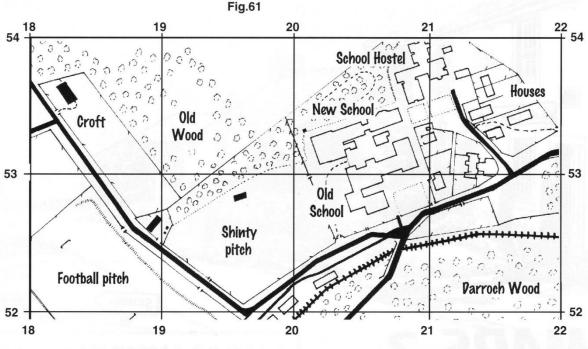


The horizontal lines (across the map) are called **NORTHINGS** as their numbers increase to the North.

A 77	77
T 76	 76
75 ——	 75
74 ——	 74
73 —	 73
72	 72



Maps & Orids

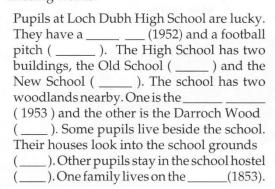


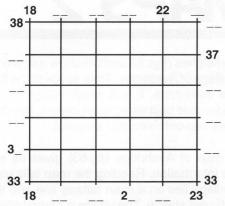
- 1 i. Make a copy of the grid opposite.
 - ii. Fill in the missing grid numbers.
 - iii. Which lines are the Eastings?
 - iv. Which lines are the Northings?
 - v. Why are the lines on a grid called Eastings and Northings?
 - vi. Why are grids useful on maps?
- 2 Study figure 60.

Give four figure references to the following squares -

- i. A (1624) ii. B () iii. C () iv. D () v. F () vi. G ()
- 3 Study figure 61.

Copy out the following paragraph and fill in the missing words.





4 In which squares are the pirate ships to be found in fig.59?



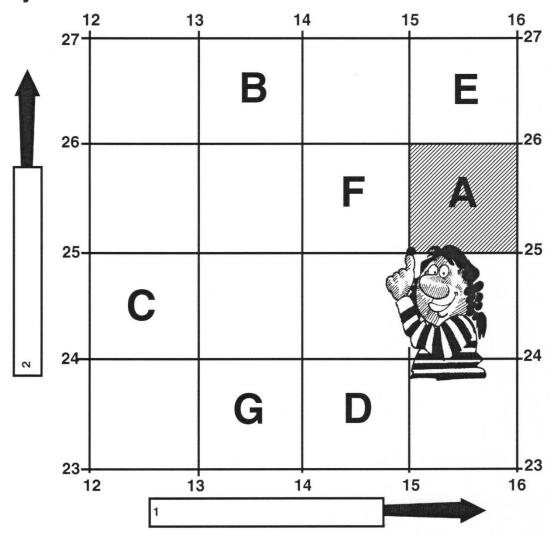
Ask your teacher for an O.S. map extract. Any map will do for this exercise. Write down four figure grid references for at least two examples of -

farm house telephone box where two rivers join together woodlands village or town

Summary

Grids are used to help us tell exactly where a place is on a map. They are made of Eastings and Northings. Four figure grid references are used with the Easting given first then the Northing.

Maps and Orids



FOUR FIGURE GRID REFERENCES

1.	Write the	words Easting	gs and Northin	nas in boxes	1 and 2.
----	-----------	---------------	----------------	--------------	----------

If square Δ has the four figure reference (15.25), give the references for the following squares:													
	2	If course	A hac	the four	figuro	roforonco	(15 25)	aive the	roforoncos	for the f	ollowing	edilares .	_

В	()	С	()	D	()
F	()	F	()	G	()

3. Write the letter and then **shade in** the following squares:-

H (15 23) I (13 24) J (12 25) K (13 25) L (12 23) M (14 26)

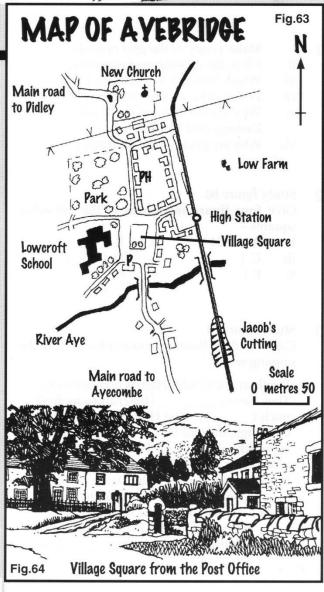


The sketches (figs.62 and 64) show a scene from the village of Ayebridge. They tell us some things about Ayebridge. It is a small village with old, large houses built along quiet streets. The village square has old trees and a school.

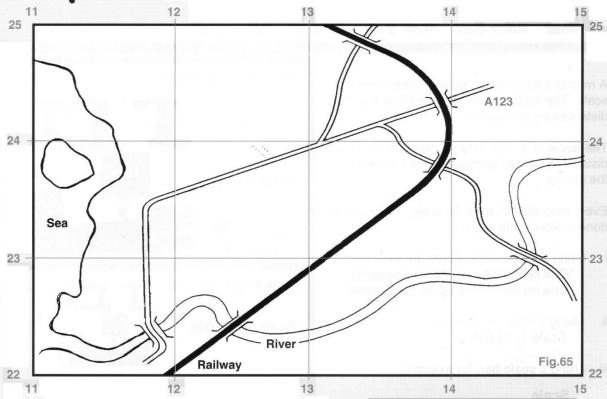
The map of Ayebridge (fig.63) gives us much more information. Reading the map tells us that the village lies on a main railway line and that it has its own station. The village is named after the River Aye and was built at the main crossing point on the river. The village has a church, a pub and a Post Office. There is a school to the west of main street as well as a park for children to play in. The map shows us the street pattern and where the village square lies. Measuring the map and using the scale tells us that the pub is 200 metres from the bridge.

But even the map cannot show everything that is on the ground in Ayebridge. If every feature (buildings, streets, wood) were named, the map would be covered with words and impossible to read clearly. Instead, map makers use symbols.

Symbols are simple drawings of the real thing, which are used on maps to make them clear and simple. A good map will have a **key** to explain what the symbols stand for. Sometimes capital letters are used to save writing the whole word. Do you think the Ayebridge map a good map?

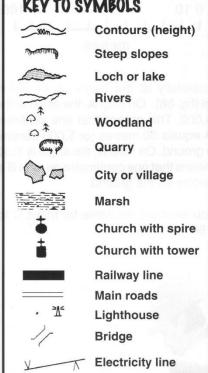


Maps 2



- Write a sentence to answer each of the following questions.
 - i. Why are **symbols** used on maps?
 - ii. What is a map key used for?
- Study figures 62 and 63 carefully. Answer the following questions
 - i. Write a paragraph to describe the village of
 - ii. Do you think the map of Ayebridge is a good map? Why?
- Make your own copy of the map in figure 65. 3
- Add the following features to your copy of the map
 - i. Give the **island** in grid square (1123) a name.
 - ii. Draw in a **railway station** in square (1322).
 - iii. Mark in an electricity line from North to South on your map.
 - iv. A marsh in square (1422).
 - v. Woodland between the main roads in square (1324).
 - vi. A quarry in square (1423).
 - vii. A church with a spire lies between the bridges in square (1222).
 - viii. Mark in a town along the main road in squares (1123), (1223) and (1324).
 - ix. A **lighthouse** in square (1122)
 - x. Shade in your map neatly.

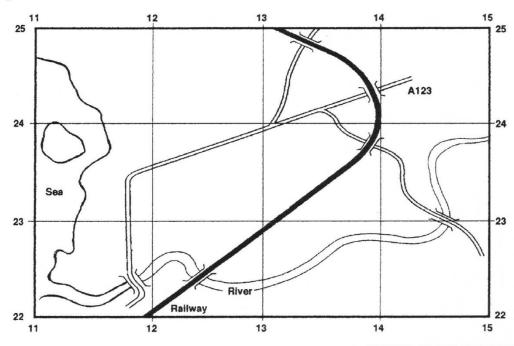
KEY TO SYMBOLS



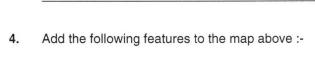
Summary

Symbols are used on maps to make them clear and simple. Symbols are simple drawings which show the most important features on maps. The symbols can be explained in a key.

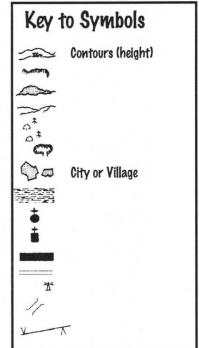
Maps 2



- 1. Why are **symbols** used on maps?
- 2. Fill in the Key to Symbols
- 3. What is a map key used for?



- i. Name the **island** in grud square (1123).
- iii. Mark in an **electricity line** from North to South on the map.
- vi. There is a quarry in square (1423).
- vii. A **church with a spire** lies between the bridges in square (1222).
- ix. A lighthouse is found in square (1122).
- 5. Shade in your map neatly.



- ii. Draw a railway station in square (1322).
- iv. There is a marsh in square (1422).
- v. There is a **woodland** between the main roads in square (1324)
- viii. Mark in a **town** along the main road in squares (1123), (1223) and (1324).

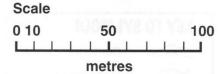
SCALE ON MAPS

A map is a bird's eye view of an area, drawn to scale. The distances on a map show the real distances on the ground.

The **scale** of a map tells you about the size or distance on a map compared to the real size on the ground.

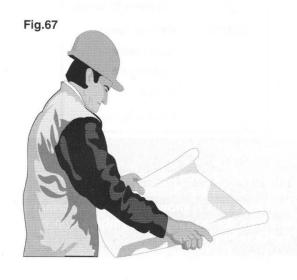
Every map should show its scale. This can be done in three main ways:-

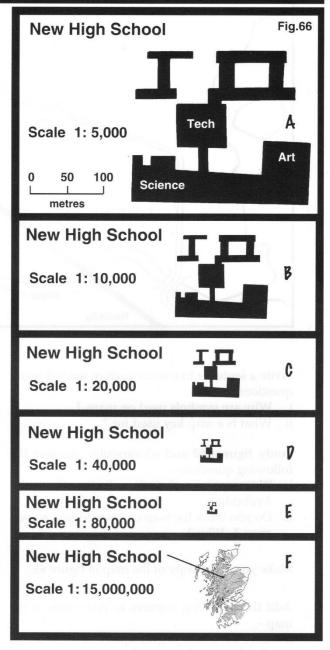
- Using a statement in words, for example,
 "One centimetre on this map equals one hundred metres on the ground"
- ii. Using a ratio, for example, Scale 1: 10,000
- iii. Using a scale bar, for example,



Look carefully at the maps of the New High School (fig. 66). On map **A**, the scale of the map is 1: 5,000. This means that one centimetre on map A equals 50 metres (or 5,000 centimetres) on the ground. On map **B**, the scale is 1: 10,000. This means that one centimetre on map B equals 100 metres on the ground.

Can you work out the same for maps **C** to **F** on figure 66 ?





What happens to maps A to F as the scale numbers increase?

Map **A** shows a small area around the New High School and has a large scale (1:5,000). Small areas are therefore shown on **large scale** maps.

Map **F** shows a very much larger area and has a scale of 1: 15,000,000. Larger areas are shown on **small scale** maps.

Ordnance Survey maps produced for the United Kingdom can range from large scale maps of streets in a town to small scale maps of the whole country.

Scale on Maps

- Write a sentence to explain what scale on a map is.
- 2 Study figure 66

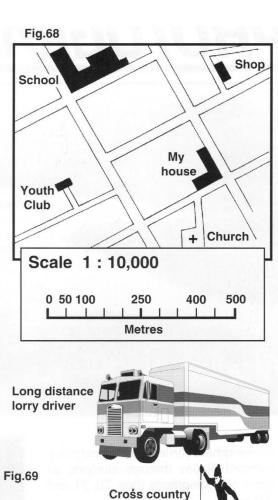
Copy the following table and then fill in the missing information...

Scale	In words
1: 5,000	One centimetre on the map equals 50 metres on the ground.
1: 10,000	
	1: 5,000

- 3a Look carefully at Figure 68. Write out the scale in words.
- **3h** Copy out then fill in the missing numbers in the sentences below. Use the scale and a ruler to work out the **straight line distances**:

My house is _____ metres from my school. I go to the Youth Club every Friday night. It is ____ metres from my house. I cycle the ____ metres to the shop for the newspapers on a Saturday. The church is close to my house and me and my mum walk the ____ metres to it on a Sunday morning.

- 3c Copy out the sentences above but this time fill in the missing numbers using the shortest road distances between places.
- **4a** There are large scale maps and there are small scale maps. Which do you think the person in fig.67 is using? Give your reasons.
- **4b** For each of the people in figure **69**, say what sort of map, large or small scale, each would use.
- 5 Use any **O.S. map** for this question.
 - i. What is the scale of the map?
 - ii. Is it a large or small scale map?
 - iii. Measure some distances between farms; between churches and between settlements.











Summary

The scale of a map tells you about the size or distance on a map compared to the real size the ground. Large scale maps show small areas. Small scale maps show large areas such as countries.

Scale on Maps

Scale on a map tells you about the size or distance on a map compared to the real distances on the ground. Every map should show its scale.

Scale can be shown on maps in three ways. What are they?		
a. b.		
C.		

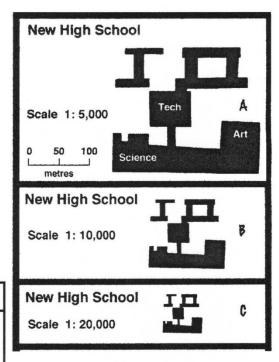
2. For each of maps A, B and C alongside, fill in the following table of information about their scales.

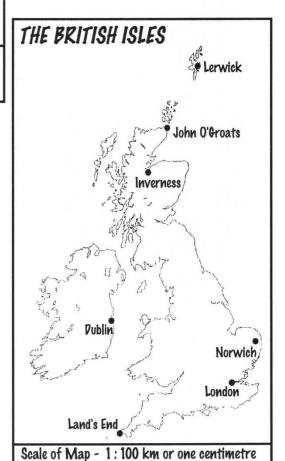
Мар	Scale	In words	
А	1:5,000		
В			
С			

3. Which of maps A to C is a large scale map? Give a reason for your answer.

4.

Map	
Look at the map of the Britis	sh Isles alongside
How far is it (in kilometres)	between :-
Lerwick and London	
Dublin and Norwich	
Land's End and John O' Groats	
London and Inverness	



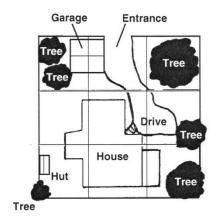


on the map equals 100 kilometres on the ground

Maps and Orids

MAKING MAPS USING GRIDS

Map of House and Garden



This map shows a house and garden drawn in a grid.

Grids can be used to help draw maps.

Grids can also be used to make maps smaller or bigger.

What you have to do is to make two maps.

1.	Use the small grid below to make a smaller map of
	the house and garden. Make a key to use.
	You will not be able to draw in all the features.

2. Use the large grid to draw a bigger map of the house and garden.

This time, you may wish to draw in more details on your map such as chimneys flower beds, grassy areas, etc.

- 3. Shade in both maps using the same colours.
- 4. What happens to the scale as maps become smaller or bigger ?
 Write your answer on the back of this sheet.

8,		

UPS AND DOWNS

A map is usually drawn on a flat piece of paper. But a map of the area shown in figure 74 - a steep sided valley in the Pyrenees between France and Spain-would need to show the slopes as well as the roads, farms and vine-yards. Look closely at the photograph. Can you see the grapes planted in lines? Most are planted along the steep slopes of the valley.

Map makers have the difficult task of showing all the ups and downs of the landscape on a flat piece of paper! Maps must show whether the land is high or low, where its slopes are gentle or steep or where the land is flat.

Height on maps is always measured above sea-level (usually known as 0 metres). Maps show height in three main ways (see fig.75).

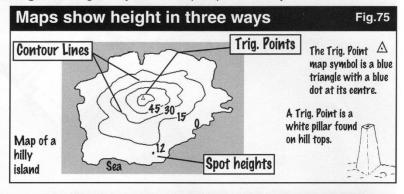
A point where the exact height above sea-level is measured is called a **Spot height**.

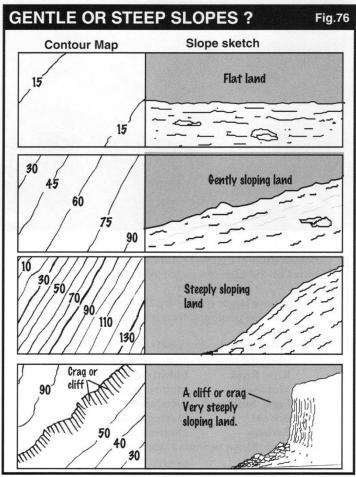
Lines which join places which have the same height are called **Contour lines**. They are usually shown as brown lines on O.S. maps. Where contour lines are far apart the land is flat (fig.76). Where the contour lines are close together the land is steeply sloping. Where the contours are so close together that the contour lines overlap each other, the land forms a **cliff** or **crag**.

Trig. (triangulation) **Points** are used by map makers when measuring height or distances. They are often found on hill tops.



Fig.74 A large vineyard on steep slopes in the Pyrenees.





Ups and Powns on Maps

- 1 Why is height on maps measured above sea-level?
- 2 Copy figure 77 and then write the following labels beside the correct number :-

Cliff

Wide valley

Sea

Narrow valley

River

Mountain

Low hill

Steep slope

Gentle slope

3 Write a sentence to explain what each of the following means:-

> **Contour lines** Spot heights **Trig. Points** Cliff or crag

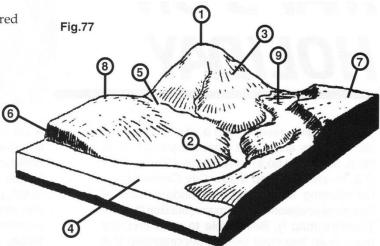
- How do contour lines show how 4a gentle or steep a slope is? Draw some diagrams to help explain your answer.
- Is there a general rule which helps 4b answer question 4a?
- 5a Copy the following information:-

"Contour lines give us information about the height and slope of the land. This is called the **relief** of the land. From the pattern of contour lines, we can find out the shape of the land."

- Look at figure 78 carefully. This is a contour map of figure 77.
 - i. What is the contour interval on this map? (Hint: by how many metres do the contours increase by?)
 - ii. Match the letters A to J on the map with the numbers on figure 77.
- Copy the maps in figure 79 then write 6 the correct label beside each.

Choose from:

Hill with steep east side. Rounded hill with even slopes.



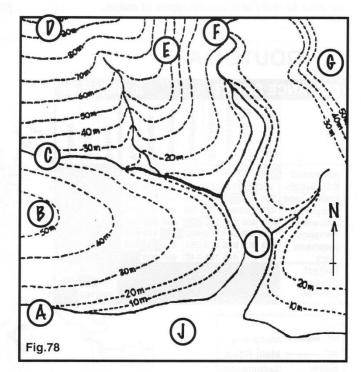
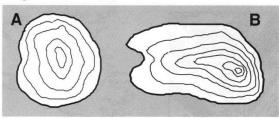


Fig.79

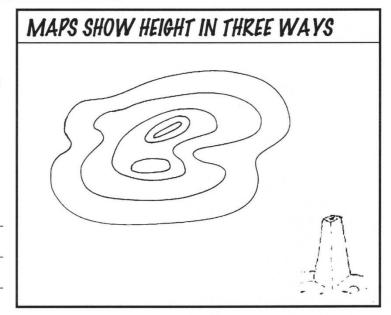


Summary

Height on maps is measured above sealevel. Maps show the height of land in three main ways - spot heights, contour lines and trig. points

Contour Lines and Landforms

- 1. Copy the information from fig.75 onto the diagram alongside to show the ways in which maps show **height**.
- Why is height on maps always measured above sea-level?



- 4a. Fill in the missing words from the following sentences about height on maps.
 - i. A point where the exact height above sea-level is measured is called a ______.
 ii. Lines which join places of equal height on a map are called ______.
 - iii. _____ are used by map makers in measuring height and distances.
- 4b. Find out what trig. points are used for and why they are known as trig. points
- Contour lines tell us the height of the land (as well as the depth of water). They also tell us about the slope and shape of the land. Use figure 76 to fill in the table below. For each contour map, make a simple sketch of the slope of the land and write a brief description of the landscape shown.

CONTOUR MAP	SLOPE SKETCH	DESCRIPTION OF LANDSCAPE
15		Low lying, very flat land with little slope. The land is about 15 metres above sea- level
30 45 60 75 90		
30 50 70 90 110 130		
90 Crag or Chilling of the Children of the Chi		

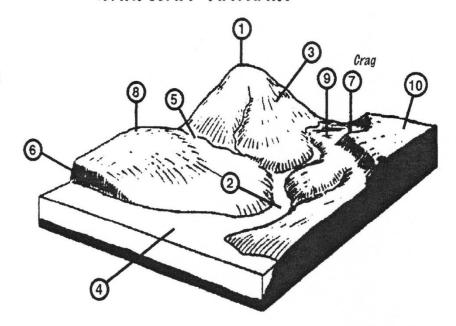
More Contour Lines and Landforms

LANDSCAPE DIAGRAM

 Write the correct label beside numbers 1-10 on the Landscape diagram.

Choose from:

Cliff
Sea
Crag
Low Hill
Steep Slope
Gentle Slope
Wide Valley
Narrow Valley
Mountain
River



2.	How do contour lines show how steep or gentle a slope is?	

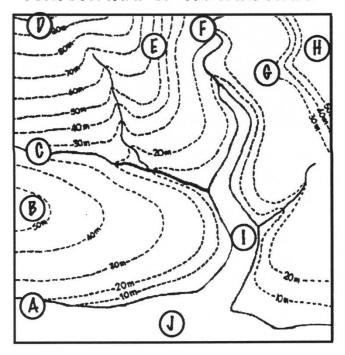
3. Look at the Contour map of the landscape alongside.

Fill in the table below by matching the letters **A to J** on the map to the numbers on the diagram above.

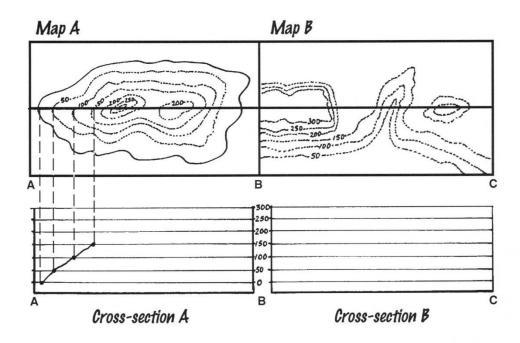
Number	Label	Letter
6	Cliff	A
	Sea	
	Crag	
	Low Hill	
	Steep Slope	
	Gentle Slope	
	Wide Valley	
	Narrow Valley	
	Mountain	
	River	

4.	What is the contour interval (difference		
	in height betwe	een the contours) on the	
	map?	metres.	

CONTOUR MAP OF THE LANDSCAPE

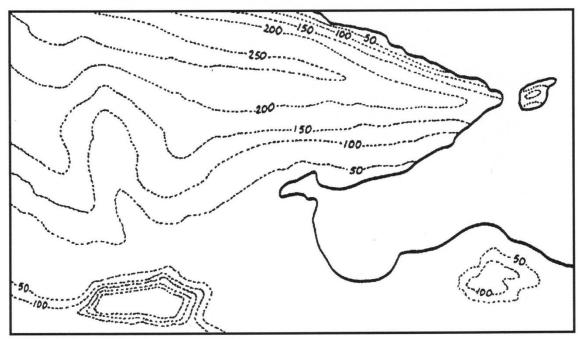


Contours, cross-sections and Landforms



- Use Maps A and B to draw their cross-sections above. Part of Cross-section A has been started for you. Shade in the landform in each cross-section above.
- 2. Look at the **Contour map** below which shows some basic contour shapes and their **landforms**. Write the following labels on the map below in the correct place.

Choose from : Gentle slope Steep slope Ridge Spur Valley Island Bay Plateau Low hill Plain Cliff



3. Draw two of your own landforms on the map above. Use contour lines to help you.

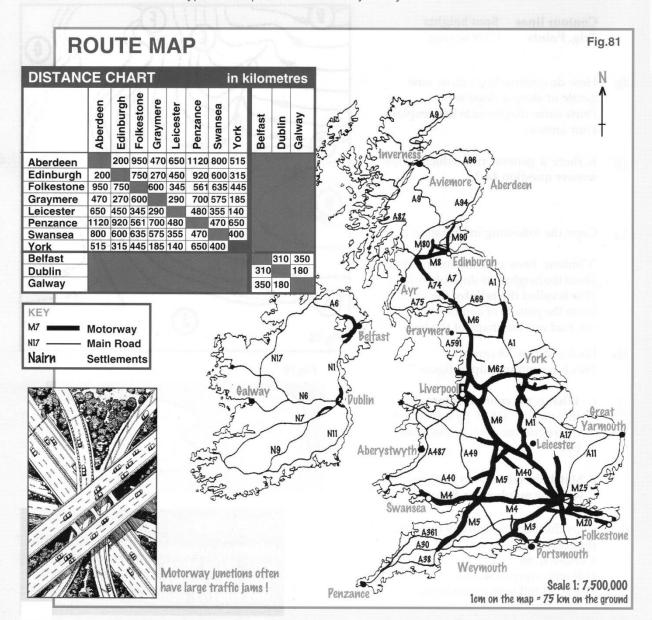
MAPS ON HOLIDAY

Maps can give geographers a lot of information about places and about what the people do in them. Maps can take many different forms - from O.S. maps, AA Road Maps, City Centre Maps, Orienteering Maps, maps of underground or motorways networks to old maps (like Ben Dumb's Treasure map!). Being able to read and use maps is an important skill for geographers. It is also very important for members of the public to be able to read and use all types of maps.



A car or holiday journey can often start heated arguments about the best way to get to the destination! Sayings such as "Let's go the fastest route", or "Let's try to miss motorway jams", or "Let's take the scenic (beautiful) route" can often be heard when a group or family is planning a holiday journey.

Route maps (fig.81) and distance charts can help when planning routes for long distance journeys.



Maps on Holiday

- Make a list of as many different types of map as you can find. Alongside each map, write down its scale and who might use it.
- Look carefully at figure 82.
 Three families are planning to go on holiday, by car, from Inverness.
 For each family write out a plan for their car journey, listing the names of all the roads they should take. How far will they travel?
- 3a Look at fig.83.

 The Graham family are staying at Yewtree
 Cottage in Graymere Village. What is the grid
 reference of their cottage?
- **3b** i. What route should the Grahams walk along to get to the Boat Hire & Teashop?
 - ii. How do you know that Graymere is a good place for a family holiday?



Fig.82



The MacPherson's want to drive to **Folkestone** as fast as possible in order to cross the English Channel by car Ferry.



The Mackenzie's want to drive to **York** taking their time and going by Edinburgh.



The Graham family are holidaying at **Graymere** village. They like to take a slow and scenic route. They set off along the **A82**.

To Keswick Graymere Village Hill Rd. 25km. The Prancing **Duck Hotel** Fig.83 **Public toilets** Village Services High St.Luke's Church Street 3 large Car & Coach Parks 6 Telephone boxes Youth Car & Coach Post Office Hostel Park **Poctor's Surgery** Long Rd. Yewtree Cottage Dentist River 5 Hotels Rottay Post Office 6 Public Houses Primary School Village Shopping 7 Cafes Centre 4 Restaurants Old Oak Farm 2 Public Toilets Sports Field Boat Hire & 2 Teashop 2 Petrol Stations Carr Rd. Mountain Bike Hire & Craft Scale of Map 1: 5,000 or Lakeside Rd. National Trust Graymere Visitor 1cm. on the map equals 50 Centre & Car Park Visitor Centre metresthe ground High Street, Graymere Graymere Lake Cafe Footpath to Main Road to Knotts Ambleside 6km A591 How 250m

4 Give the grid reference for each of the following on fig.83 Post Office Secret Island Village Shopping Centre

Summary

Being able to read and use all types of maps is an important skill for geographers.



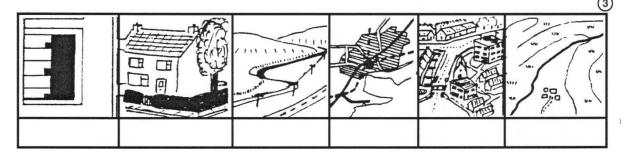
Name	Class	Date	/40

1. What is a map?

(2)

(4)

2. Only **three** of the following boxes show maps - but which are they? Write the word **map** in three of the boxes.



- 3. Answer True or False to each of the following sentences.
 - i. A scale on a map helps make it more interesting.
 - ii. All good maps show the direction of north.
 - iii. Large scale maps show small areas.
 - iv. The symbol stands for a woodland on an OS map._____
- 4. Look at maps A and B below.
 - i. Which map is a large-scale map?
 - ii. Which map is a small-scale map?
 - iii. Give reasons for your answers.

Map A World Map

Wegetable

Flowers

Lawn

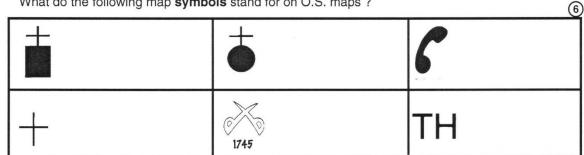
Potatoes

Garage

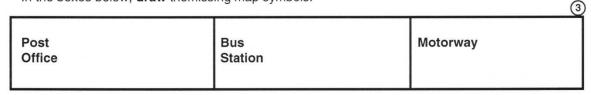
5. Name two people who would use the following maps in their daily work:-

Using Maps - Test 2

What do the following map symbols stand for on O.S. maps?



In the boxes below, draw themissing map symbols.

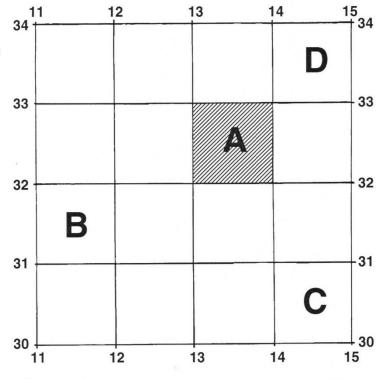


8. In which three ways do maps show height? Make a list below.

(3)

- Look at the map grid alongside.
 - i. Give four figure map references for each of the following:-

 - _____) (4) D
 - ii. Shade in the following squares with references :-
 - (11, 30)Ε
 - F (13, 33)
 - G (12, 32)
 - (14, 31)D
 - E (12, 30)



If each grid square has an **area** of 2 km² what is the area of the grid above? ____ km.²

(5)

What is another phrase for the difference in height between contour lines on a map?