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A PRIMARY TEACHING PACK

NOISE

BASED ON DARLINGTON, ENGLAND'S QUIET TOWN EXPERIMENT

FOREWORD

Thanks to the rapid advance of science and technology, our generation enjoys unprecedented material advantages. But the path to progress of any kind is paved with pitfalls. Not many of us who board our flight for a holiday abroad spare a thought for the distress that aircraft noise may cause; not all of us remember that a power-drill or motor-mower, thoughtlessly used, can ruin our neighbours' peace and quiet.

The Noise Advisory Council, of whose Education Group I am Chairman, was formed in 1970 to advise Government on the noise problems generated by our society. Since almost all of us want to have our cake and eat it too, there are no easy solutions. A lot depends on us as individuals. We can choose - at work, at home and at leisure - whether to make more noise or less. It was to assess the extent of which individual members of the public might play their part in reducing noise that the Darlington Quiet Town Experiment (the first of its kind in the world) was mounted from 1976 to 1978.

No dramatic reductions in ambient noise levels were expected - that would have been unrealistic over a two-year period - but the hope was that at least one town in the United Kingdom would become more conscious of the need to cut noise wherever possible. 'Say No to Noise' was at once the campaign slogan and the main objective. Since the Council also wanted to see a national campaign to contain and reduce noise, the intention was also to identify which information and education techniques worked, and which did not.

As test-bed for the Experiment, Darlington proved a first-rate choice. No backwater but a busy industrial

town, it is gifted both with civic pride and an enviably distinctive character. Its Borough Council was already committed to noise abatement measures; its community spirit ensured the Experiment's success.

There could be no better testimony to the 'Darlington spirit' than this Noise Pack. It was produced voluntarily by the Experiment's Schools Group. Just one of many important contributions they made, it distils the essence of the classroom experience gained during the Experiment. It has been tried and tested, and the hope now is that with its help primary teachers throughout the United Kingdom will be able to focus more attention than hitherto on the noise choices before us.

Some teachers shy away from the subject of noise because it seems a difficult one. This is an understandable view, but it is unfounded, as a glance at the Pack is enough to show. The scope for project-work and participation is really very wide, and children do enjoy it.

Thanks to Darlington's pioneering spirit teachers everywhere now have the chance to help children decide for themselves whether to 'Say No to Noise'.

ARTHUR PERCIVAL
Chairman, Education Group
Noise Advisory Council

April 1979

NOISE

This Teaching Pack has been prepared for Primary Schools under the auspices of the Darlington Quiet Town Experiment, a joint venture between Darlington Borough Council and the Department of the Environment. The Management Committee established a School's Working Group which, with the help and advice of teachers, has produced this set of Work Cards, Teacher's Notes, Pamphlets and References which form the basis for Centres of Interest using the theme of 'Noise'. It is hoped that the materials will form a useful aid for Teachers wishing to spark off oral and written language, discovery of information through reading, investigation, observation, recording, surveying and collecting as well as creative, artistic, imaginative, dramatic, mathematic and scientific activities covering the breadth of the curriculum.

The cards at the beginning of the Pack are for the use of Infants and Lower Juniors while the language and types of activities become progressively more difficult to challenge the abilities of older children. Apart from this, there is no particular sequence and the cards are easily detachable from the folder so that they can be used individually. An index is provided of the activities involved in each Card and the appropriate Teachers' Notes for each separate Card suggests further activities which might be encouraged.

In addition to worthwhile educational activities, it is hoped that these Cards, with the Teacher's support, might lead the children to a new awareness of their immediate environment with particular accent on the problems of Noise and through practical involvement help them to distinguish between the acceptable and unacceptable levels of Noise which are ever increasing in their lives and to formulate positive judgements with a critical ability to evaluate the need for control of Noise levels for their own welfare and that of their fellow citizens, both at work and at play.

Darlington Quiet Town Experiment
Schools Education Working Group - April 1979

NOISE - A PRIMARY TEACHING PACK

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Arising from the Darlington Quiet Town Experiment and carried out
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The help and advice of the following is gratefully acknowledged.

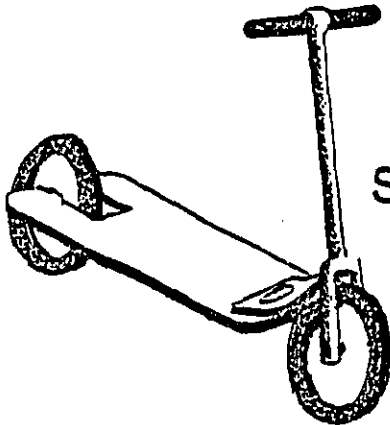
Mr. Cullen, Rise Carr Junior School.
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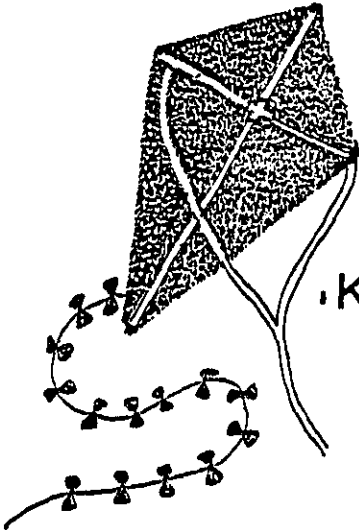
Toys



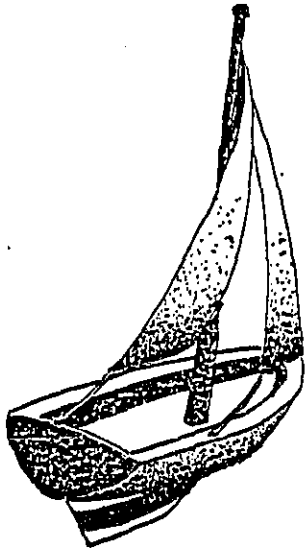
Drum



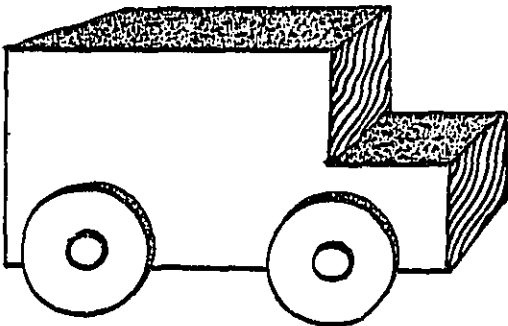
Scooter



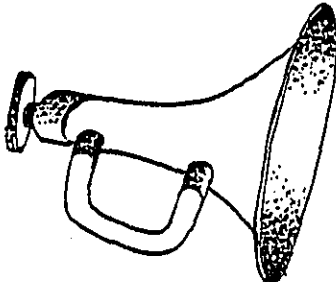
Kite



Yacht



Truck



Bugle

TOYS

1. What sounds does a drum make? _____
- scooter? _____
- bugle? _____
- wooden truck? _____
- yacht? _____
- kite? _____
2. Which of the following toys make quiet sounds?
drum; kite; mamma doll; engine; sailing boat; trumpet; rattle.
3. Which of the following toys make loud sounds?
teddy bear; scooter; tiddlywinks; gun; music box.
4. Which toy when used would be noisy?
football; whistle; car; hooper; pram; bicycle; tractor; aeroplane.
5. Which real-life thing makes the most noise?
car; bus; ship; jet plane; steam hammer; helicopter.
6. Which toy could you play with quietly?
(a) racing car; steamroller; play-bricks; play-dough; pedal car.
(b) doll's house; trumpet; hammer and nails; jigsaw; construction set.
(c) mecano set; cookery set; wendy house; shop; painting set.
7. Place the following toys in order from those making least noise to those making most noise:-
fire engine; rattle; mouth organ; bass drum; flute; bat and ball.
8. Which sounds, if made over and over again would be a nuisance?
crash; scream; tinkle; patter; bang; screech; clatter; tap; rumble.
9. When you are playing, which noises do grown-ups object to most of all?
(a) laughing; giggling; shouting; muttering; talking; screaming;
(b) tapping; knocking; clattering; banging; stroking; clapping;
(c) gasping; humming; screeching; mumbling; growling; hiccupping.

At Home



Here are some words which may be useful, there are many others.

scratch
sputter

bang
sizzle

rattle
rackety

swish
deafening

crash
piercing

1. Draw a picture of someone making a meal in the kitchen; label it with describing words to show the sounds and noises made.

2.

vacuum cleaner
vase
television
radio
bookcase
ash tray
hair dryer
table lamp
sewing machine
spin dryer

carpet
food mixer
coffee grinder
mug
washing machine
picture
tumbler dryer
chair
door bell
settee

Make two lists from the above named household objects with the headings

(a) noise making objects

(b) silent or quiet objects

3. Write a short sentence about each item on your 'noisy' list and describe the sound it would make.

4. Collect pictures of noisy machines and stick them on a card to make a 'Noise Poster.'

5. What noises would you hear in the kitchen when:-

- (a) mother is cooking breakfast
- (b) the dinner is being prepared
- (c) when the washing is being done

Draw pictures or collect pictures of all the items in the kitchen which when used can make noise.

Label them with describing words which tells of the noise they make.

Make sets of those which are used on their own and those which are sometimes used together and those which are always used together.

6. If you can borrow a soundmeter from school, make accurate measurements of noise levels of:-

electric equipment; other equipment; equipment that is used together.

Make a chart showing the noisiest items in the home and the quietest. Compare your findings with a particular make of equipment with other makes which other children in your class may have.

Make a booklet like 'Which' recommending which pieces of equipment are the best from the noise point of view.

Sound Meters

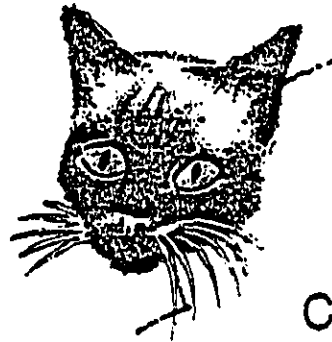
Information on soundmeters is included in the pack and includes -

- Where to obtain them
- How to use them
- How to measure sound and noise

Pets and Animals



Dog



Cat

The following words may help you to answer the questions below:

howl	bark	squark	screech	yelp	yap
bray	neigh	mew	snuffle	squeak	chirp
choop	cry	call	growl	snarl	snap
whine	tweet	twitter	warble	cackle	cluck

1. Make a list of sounds which a cat, dog or your own pet might make when:-
 - (a) Happy or excited
 - (b) Sad or in pain
 - (c) Afraid or fighting
2. Underline the words in your list which are unpleasant sounds or noises.
3. List the kinds of noises which make your pet afraid.
4. What special precautions do you take to help your pet
 - (a) on Bonfire Night?
 - (b) at Christmas Party Time?



5. How does your pet behave when it hears the following noises:-
 - (a) a car backfire?
 - (b) Fire Engine Siren?
 - (c) a Jet Plan overhead?
6. Make cartoons of your animal pets reaction to noise.
7. Make up slogans about noise and your pets.
8. Which noises make your pet happy?

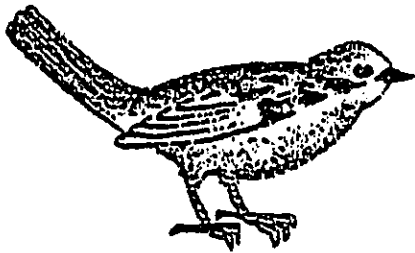
Draw a picture or cartoon of one of these situations.



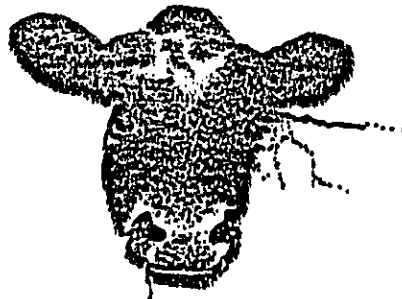
Horse



Pig



Bird



Cow



Donkey



Duck

Animals of the Countryside

Match the animal to its sound:-

Horses say Pigs say Birds say

Cows say Donkeys say Ducks say

Dogs say Chickens say Cats say

Turkeys say Cockerels say

What other sounds might you hear in the countryside?

What are the names of the babies of the following:-

Horse Cow Hen Cat Dog

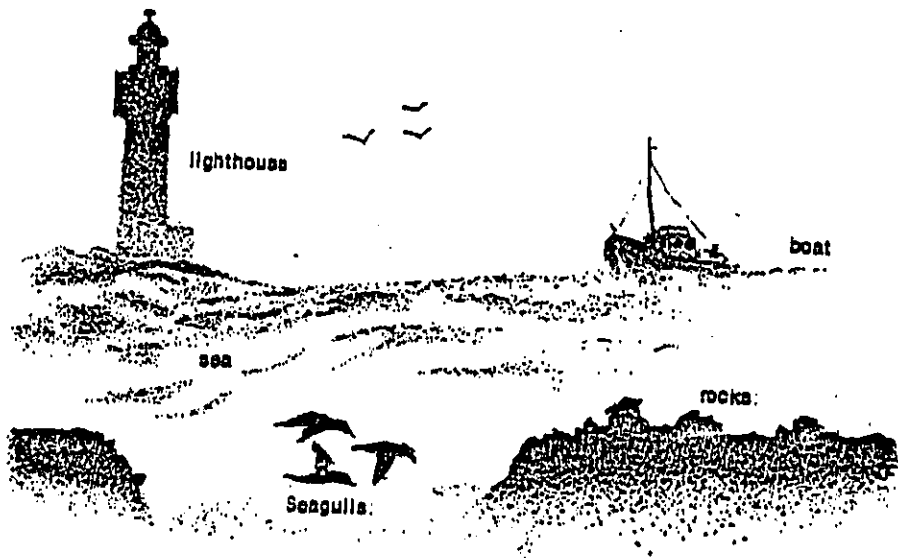
How does the sound of the baby animal differ from the parent animal?

Why do animals sometimes make a louder noise?

Name as many sounds of different birds, which you can think of.

Which animals of the countryside make loud noises?

The Seaside



1. Underline the correct answers in the brackets:-

In the picture we are at the (docks; seaside; market; countryside)

The tall building is a (skyscraper; harbour; lighthouse; tower)

Birds which live near the sea are (robins; finches; owls; seagulls)

The rocks are washed by the sea's (waves; water; salt; sand)

The boat uses the lighthouse for a (landing site; starting post; warning of danger; to light its way)

The rocks are a danger for (the sea; the birds; the boat; the lighthouse)

2. Underline the correct sounds:-

The lighthouse may send out a (buzz; screech; fog warning)

The birds (sing; twitter; screech) as they are feeding from the sea

The waves (thunder; rattle; wash) against the rocks.

The boat's engine (rumbles; works; chugs) in the distance

3. What sounds would you be able to hear on the beach?

4. Underline the words listed below which show the sounds you could hear at the seaside:-

the blast of a siren; the falling of timber; the splash of waves; the sound of machinery;
the sound of boats engines; cries of children playing; the sound of an aeroplane's
engine; the squelch of sea boots; the chinking of glasses; the sound of a spade in sand;
the bouncing of a ball; the rumble of traffic; the bleat of sheep; the rippling of water;
the music from amusement arcades; the barking of dogs; the quacking of ducks; the
sounds of an ice-cream van.

5. Which of the above would be unpleasant noises?

Which would be pleasant noises?

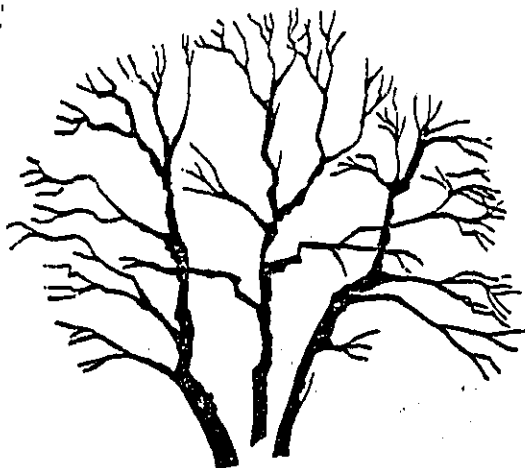
Can you think of any other noises which you might hear but which you would not like?

Which noises would be irritating to the following people:-

the fisherman; the lighthouse keeper; the seagulls; the old man sleeping on a deck
chair; the little girl making a sand pie?

Which noises of happiness might you hear?

THE PARK



THE PARK (Visit a Park)

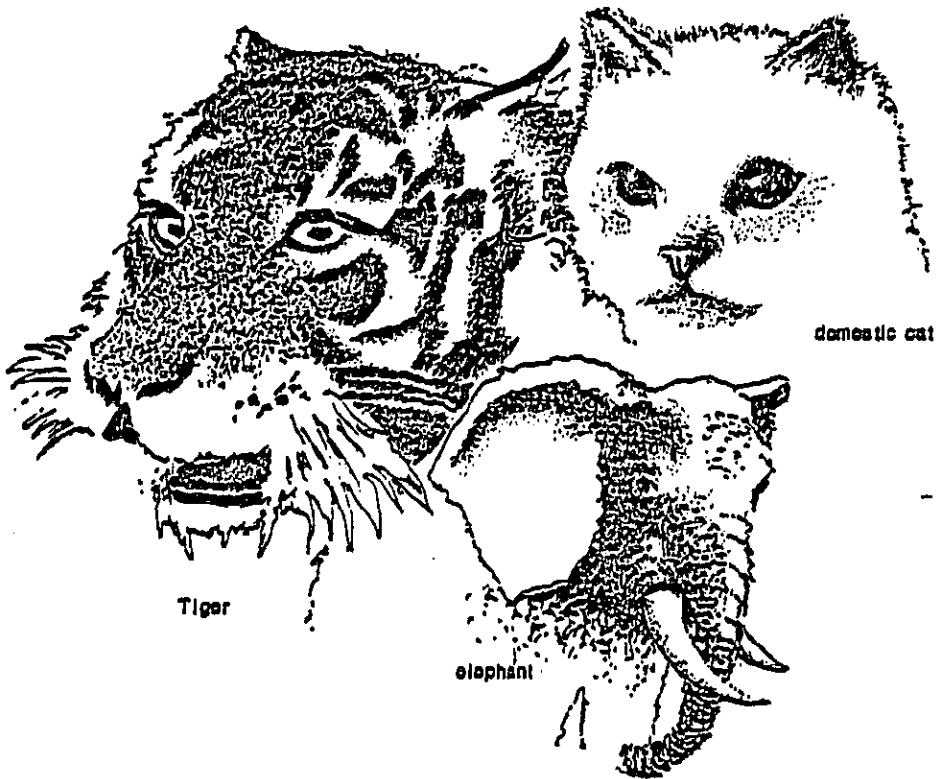
1. Paint a big picture of the park.
2. What sounds did you hear?
3. Make a list of the noises you did not like.
4. Make a list of the sounds you enjoyed.
5. Which part was noisiest and why?

N.B. Take a soundmeter with you and measure the levels of noise in various parts of the park and in particular the various sections of the play area.

6. If you had to plan a play area in a park; indicate what you would include.

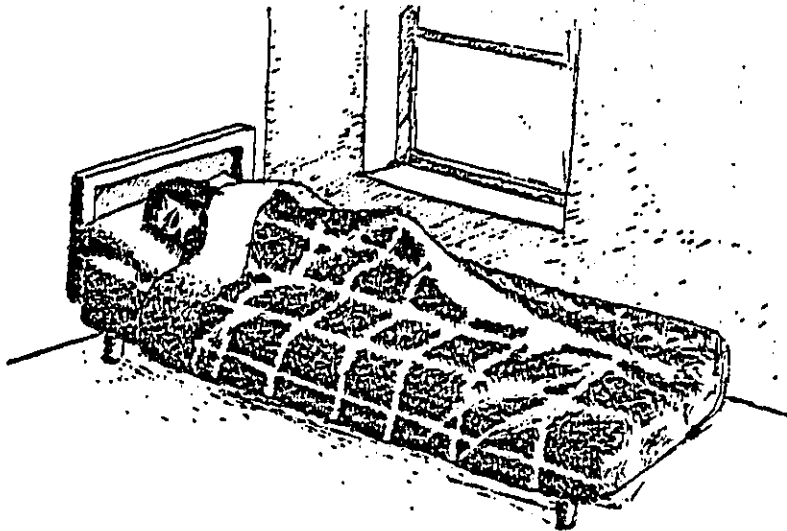
Draw a plan of the park and the houses around it and show where your play area would be.

WILD ANIMALS



1. Make a list of the names of as many wild animals as possible.
2. Collect pictures from newspapers, magazines etc. of wild animals and make a collage for class display.
Indicate on the chart the sounds that the animals make.
3. Make sets of the following by collecting pictures or paintings:-
 - (a) wild animals and tame animals
 - (b) noisy animals and quiet animals
 - (c) large animals and small animals
 - (d) furry animals and smooth animals
 - (e) cold blooded and hot blooded animals
 - (f) meat eating animals and vegetation eating animals
 - (g) animals above the ground and animals below the ground
 - (h) animals when they are calm and animals when they are alarmed
 - (i) animals which live on land and animals which live in water
 - (j) animals which make noise and animals which do not make noise

Going to Bed



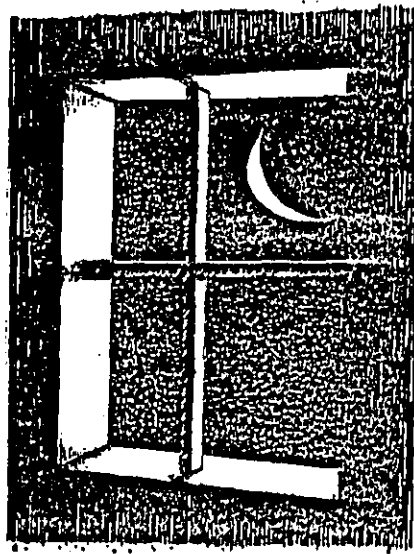
1. Imagine you are in bed, or listen when you go to bed tonight, and make a list of all the sounds you can hear.

2. On the list that you have made put an x against all of the unpleasant sounds or noises.

3. laughs	talks	bangs
shouts	whimpers	rattles
cries	babbles	hums
screams	chatter	whistles
wails	whisper	sings
howls	gargle	

Which of the above sounds are pleasant (sounds)? and which are unpleasant (noises)?

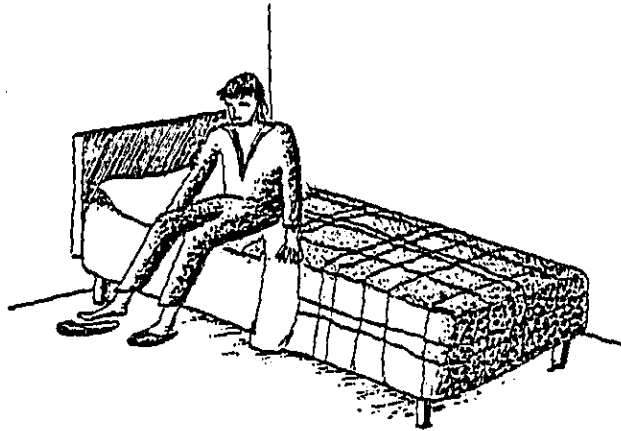
4. Write a sentence using the words above, which describe unpleasant sounds. Each sentence should describe who or what makes the sound.



5. Make a pictorial chart which shows:-

- (a) all the noisy things which disturb you as you are trying to go to sleep
- (b) noises which can wake you during the night
- (c) noises which wake you up in the morning
- (d) noises which are annoying and should be stopped

Getting Up



ping	ring	peal	splash	squawk	knock
slam	rattle	tinkle	click	hum	patter
crash	splash	bubble	gargle		

Some of the words listed above may help you to answer the questions below but there are many other words which you can use.

1. What sound or noise wakes you up in the morning?
2. As you lie in your bed, before getting up, what sounds can you hear in the rest of the house or from outside?
3. Draw a picture of yourself having a wash and add to the picture describing words which suggest the sounds you are making.
4. Write a list of sounds you would hear whilst having your breakfast. Put a star against those which are 'noisy'.

5. Using some of the words given below write six short sentences to describe some of the sounds you would hear early in the morning.

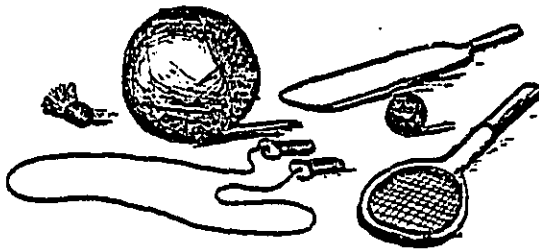
distant	stealthy	muffled	soft	low
rowdy	deep	gentle	deafening	hissing
sizzling				

6. Make a painting of yourself getting up in the morning and add describing words which suggest the sounds you hear:-

- (a) as you are dressing
- (b) as you are getting washed
- (c) as you are having your breakfast

Put a star by the ones which you think are noisy.

The Playground



1. Go into the playground at playtime and make a list of words which describe the sounds you hear.
2. Go into playground when school is in and list the sounds you hear.
When you are writing in the classroom, what noises do you hear in the playground?
List the games you play in the playground.
Draw a picture of children playing the noisiest game.
If you listen very carefully can you hear any sounds which are not being made by the children playing? Make a list of the sounds which do not come from the playground.
3. Make a map of your school neighbourhood showing the sources of noise which might disturb the school.
Is the playground and school in the right place, and if not, show where you think it should be.
Which game is the quietest?
When do you prefer to play the quietest game?
What do you like about a noisy game?
When would you prefer not to play a noisy game?
Where do you play games at home?

Make a map of your neighbourhood and show where you play games.

Make a map of your neighbourhood as if it was ideal for playing.

Read Pamphlet - "Noise in everyday Life."

List the noises in your playground which you think are:-

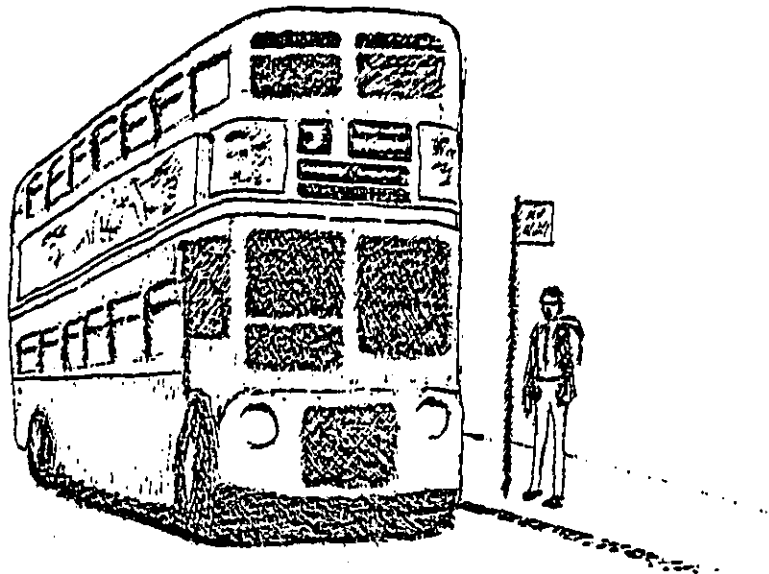
- (a) Neighbourhood noise;
- (b) Road Traffic noise;
- (c) Aircraft Noise;
- (d) Industrial Construction noise.

What might limit the action which can be taken to reduce noise?

What would be the priorities in your school neighbourhood if you had to make the decisions to reduce noise on a limited budget?

If you were a School Manager determined to reduce the level of noise around your school, how would you raise the money required and estimate the cost of doing this?

Going to School



1. Make a list of all the 'noises' you heard on the way to school. The list below will give you some help but you will be able to add many more.

yell	hoot	roar	bellow
snigger	shout	squawk	screech
bark	whimper	whistle	

2. Take six of the words from your list and write short sentences to describe how or by whom the noises were made.
3. Find out how the pupils in your class came to school, (by bus, car, bicycle, walked, etc.). Make a block graph of the numbers using each method of coming to school.
4. How do most pupils in your class come to school?
5. You would hear many noises on the way to school. Draw a picture of a street scene and put on the name of the things which made the most noise.
6. What do all of these 'noisy' things have in common?

7. Draw a map showing your route to school and indicate the noisiest places on the way.

8. Take a traffic census of the road near to your school and show your results in chart form.

9. If you travel by bus or train to school:-

List the sources of noise:- (a) outside the bus

(b) inside the bus

Record the times and places where the noise was the greatest.

Make a map showing the route taken by the bus/train and show the noisiest places.

Make up rules for bus travellers for keeping noise under control.

Make up rules for the Corporation who control transport for lowering the levels of noise.

Discover all you can about the buses/trains used and what precautions, if any, are taken to lower noise.

Invite the Transport Manager into School to discuss with you the future developments of Corporation Transport.

The Street



Visit a street. Take a sound meter to measure the levels of noise.

1. Make a frieze showing the moving and noisy objects which can be seen in the street.
2. Label the sound or noise which each object makes.
3. Put crosses against each object to indicate the level of sound made.
(The most crosses for the noisiest).

4. Take a traffic census of this street and of other streets and compare the levels of noise and the census. Record either with:-

- (a) models
- (b) pictures
- (c) block graphs
- (d) other kinds of graph

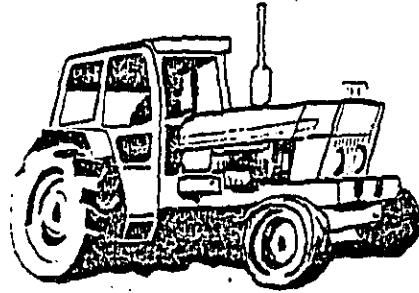
5. Make a drawing of an imaginary street showing:-

- (a) the traffic
- (b) other causes of noise.
- (c) things which would cause noise that would be a nuisance
- (d) noises which could be controlled
- (e) noises which could be removed.

Make another street and design it so that it would be ideal from a noise control point of view:-

e.g. indicate traffic restrictions; alternative routes; play areas etc.

The Countryside

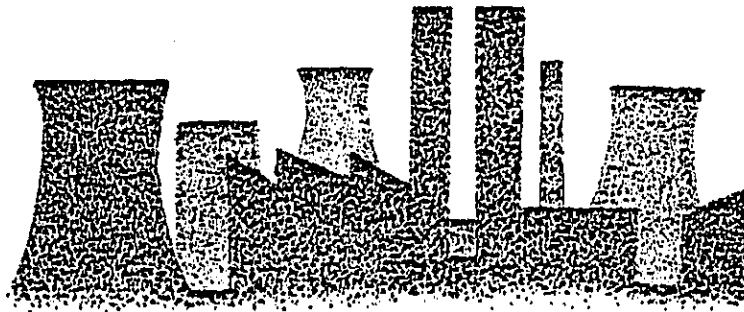


Read the Country Code

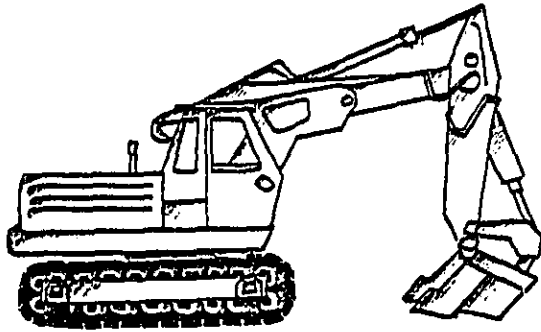
Guard against fire
Fasten all gates
Keep dogs under control
Keep to paths on farmland
Do not damage hedges or fences
Leave no litter

1. Make up a Noise Code or a Quiet Code.
2. Draw a small picture to go with each idea.
3. Stick the pictures on big piece of paper and write the rule under each picture.
4. Write Quiet Code on the top.
5. Is the countryside always quiet? What disturbances are there?
6. What noises would you hear on a farm?
7. (Find out about farm machinery) - What kinds of machines are used?
8. Which is the noisiest machine a farmer will use, and when will he make most use of it?
9. What sounds do you like to hear in the countryside?
10. Go for a country walk and list all the sound that you hear. Which of these sounds would you consider to be noise?

Noise Around Us

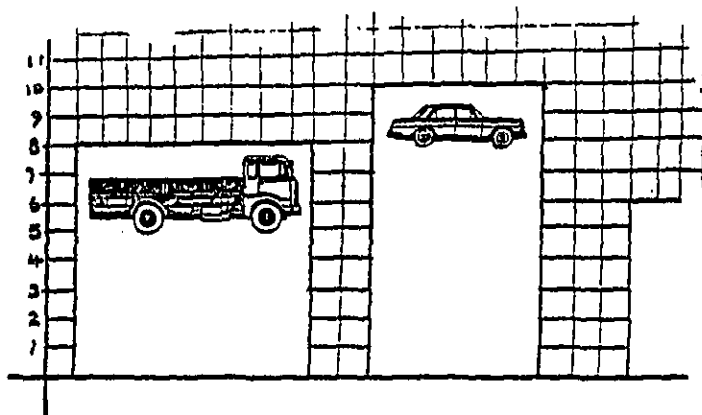


1. What sort of factories are in your area?
2. Are any of the factories noisy?
 - (a) from the outside
 - (b) from the inside
3. What makes a factory noisy?
4. How can busy factories create extra noise in towns?
5. What times of day are often the noisiest on roads near factories?



6. Does anyone in your school live near a factory? What do they and their parents think of the noise from it?
7. Do you think a building site would be noisy? Write about the noises you would expect to hear.
8. Do you think the noises on the building site are necessary? Why?
9. Can you suggest a way by which the noise can be stopped?
10. Do you know of any other noisy places, besides factories and building sites, where people have to work?

Noise in the Town



1. Count the number of vehicles that pass your school between:-

(a) 9.45 am - 9.55 am

(d) 1.45 pm - 1.55 pm

(b) 10.45 am - 10.55 am

(e) 2.45 pm - 2.55 pm

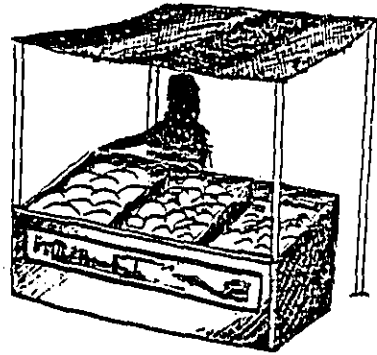
(c) 11.45 am - 11.55 am

(f) 3.45 pm - 3.55 pm

Make a graph to show your results.

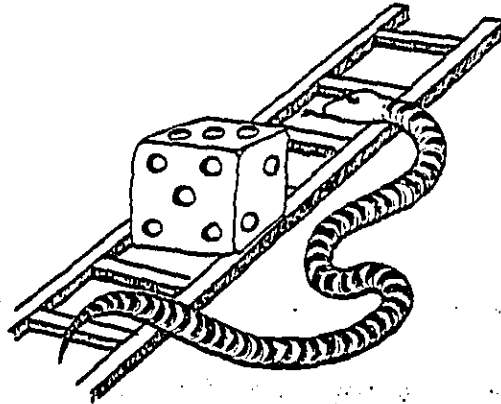
2. Make a list and draw pictures of all the noisy vehicles in your town.

3. Write a story describing those things in your town which are too noisy.



4. Is there any particular day in your town which is noisier than other days. Can you explain why?
5. Which parts of your town are noisier than other parts?
6. Which noises in a town can be disturbing?
7. Some noises in a town can be essential. What are they?
8. Make a Noise map of the centre of your town.
9. Make a model of an imaginary town with all its noise problems.

In Your Spare Time



1. Think of the noises which you make at home and list the ones which might annoy the people around you.

Read Pamphlet 'Neighbourhood Noise'.

Make up your own rules on how you should behave at home to control noise.

2. List the toys and games you play which are noisy.

Make sets as follows:-

- (a) quiet games and noisy games
- (b) games involving movement and games which are static
- (c) noisy games; noisy games which could be a nuisance; quiet games
- (d) safe toys; dangerous toys; noisy but safe toys; quiet safe toys; noisy dangerous toys; quiet dangerous toys
- (e) make up other sets like this.

3. Tell about the parts of your home where you play games and describe the sorts of games you play.

What special arrangements are made if it is wet and you wish to play?

List the games you like best.

List the games which are likely to cause annoyance to grown-ups and give the reasons.

4. Borrow books about noise from the public library or from school.

Read the pamphlets 'Noise from Lorries' - 'Drive a quieter car'.

Make a booklet showing:-

(a) The noisiest cars to the quietest cars.

(b) What can be done to make cars quieter?

Read: 'Noise Policies in the U.K. Legislation and Control':-

Make a list of the most interesting laws on noise control.

What is a Noise Nuisance?

Make a Cartoon up about someone making too much noise.

List the ways in which you can tell if you are causing a noise nuisance.

Visit an aerodrome and measure the noise of the planes as they come and go.

5. Read Pamphlets on 'Noise Control and Industrial Noise' - 'Office Noise':-

Where is noise likely to come from:-

(a) inside the building?

(b) outside a building?

Make a chart and test different buildings: Use a sound meter:-

a garage; your own home; your school.

Ask the teacher to organise a visit e.g. Fire Station, and record your findings.

What makes a noise in an office?

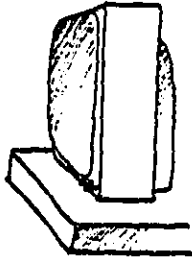
What can be done about office-machinery to reduce noise?-

What can be done to buildings to reduce:-

(a) inside noise?

(b) outside noise?

TELEVISION



1. List your favourite T.V. programmes and give reasons.
2. Choose a particular programme and list all the sounds you hear. Put an x if it is noisy and a ✓ if it is quiet.
3. Watch a programme with the sound completely off and see how much of it you can understand. It must be like this to be completely deaf. Loud noise can affect your hearing. What helped you to understand the programme when you were unable to hear?
4. Watch and listen to some adverts on T.V. Notice how they use words over and over again. Sometimes they use humour and sometimes shock. They sometimes sing the message.

Invent your own advertisement for controlling noise. Tape it and play it back to your class.
5. Notice the strength of sound and the use of sound during the advertisements as compared to the programmes.

Make up a different advertisement about noise but use varying levels of sound as well as words as a means of getting your message across.

6. List the times when the sound of Television becomes a source of irritation to you.

Explain why this is so?

7. Imagine you are a T.V. interviewer:-

- (a) With other children acting as a panel of experts, tape an interview with them on the control of noise.
- (b) Act as a Quizmaster and hold a quiz about noise.
- (c) Interview a man who is being charged by the police for making too much noise.
- (d) Interview people living near an aerodrome which intends to use the Concord.

*If you have the equipment, record this on video tape and show other people your programme.

8. Make a play for T.V. which carries a strong message about the folly of making too much noise:-

e.g. boys and girls at a disco: complaints from people living nearby, order by Council to close it.

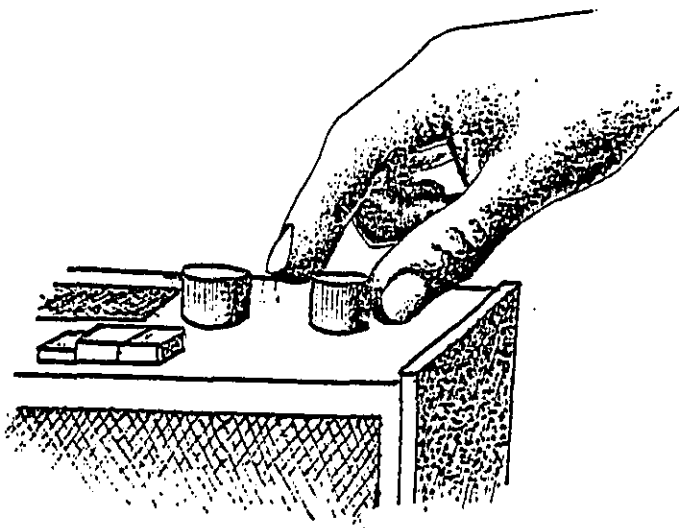
*If you have the equipment record this on video tape and show other people your programme.

9. Make up Puppet characters and hold a puppet play:-

e.g. Characters:- policeman; old man; teenager.
Play:- row between old man and teenager over noise.
Policeman and perhaps other characters brought into the situation.

*If you have the equipment record this on video tape and show other people your programme.

TURN IT DOWN



1. Cut some pictures out of magazines of things which are noisy.
2. Stick the pictures in a book.
3. Think of how you could "quieten" the noise down, and then add these onto your pictures.
4. People can be noisy too, as noisy as machines. How do you think you could get people to make less noise? Write down the ideas you have.
5. Do you think that people who are noisy know they are noisy? Think of when your mother or father tell you to be quiet.
6. How does your teacher get you to be quiet?
7. Put your hands over your ears and listen to a story which a friend is telling you. Press your hands to your ears very hard - does it make the sound quieter or louder?
8. How does a man who is digging up the road stop the noise getting into his ears?
9. (a) Noise can be made quieter by putting something over or around the noise - a box or cloth can be placed over a noisy alarm clock - try this.
(b) Noise can be reduced by putting something underneath which absorbs sound, stand a clock on a table and then stand the clock on some carpet or foam rubber.
(c) You can move a noisy thing further away to make it quieter or you can move away from the noise.
(d) Things can be fitted over openings where the noise comes out or the opening closed - e.g. a car exhaust can be repaired or a window closed.
(e) If music is being played then the volume knob can be turned down to make it quieter.
(f) If you have a transistor radio you can try all the ideas and see if they work. Write down your findings.

10. Find out the fine for making a noise. (Look at the Booklet 'Bothered by Noise'.)

Ask your friends these questions and record their answers:-

(a) Is making a lot of noise against the law?

	TOM	PAT	ANNE	MISS
YES				
NO				

How many people got the answer right?

(b) What is the fine for making a lot of noise?

	TOM	PAT	ANNE	MISS
up to £50				
up to £400				

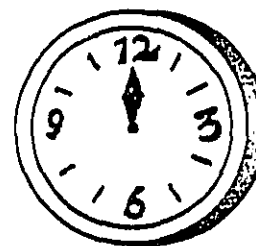
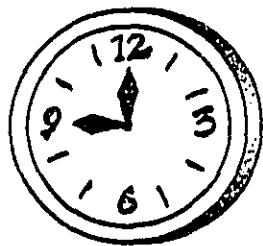
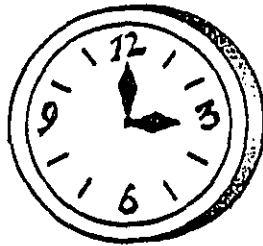
How many people got the answer right?

How can you make sure that everybody knows that making too much noise is against the law?

- Do you think you could invent a machine to stop noise?
- Draw a picture of the machine.
- Make a model and paint it.
- Write down how it works and what sort of noise it stops.
- Do you think anyone would want to buy your machine? - who?
- How much would it cost?

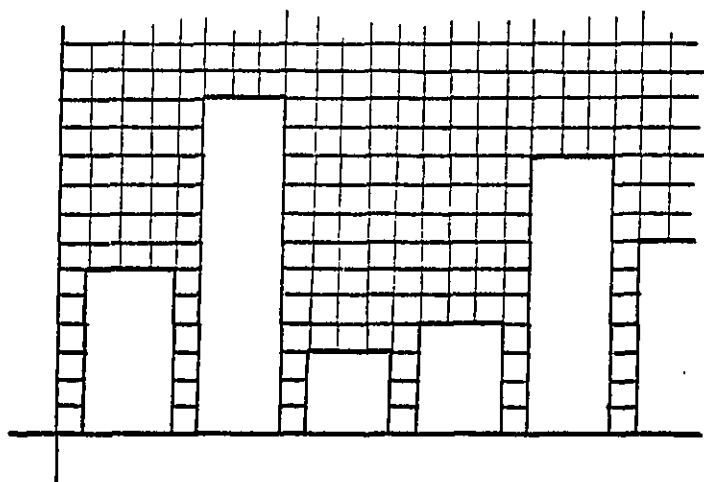
11. Find the sheet music entitled "Turn It Down" and ask your music teacher to play the accompaniment so that the members of your class can sing it together.

QUIET



1. Make a list of all the places which are Quiet.
2. Make a list of all the things which are Quiet.
3. Draw a picture of a place which can be both Noisy and Quiet.
Why and when is it Noisy?
4. Try and work for fifteen minutes without making any sounds. - Isn't it difficult?
Did you find it strange? It would be very difficult to live without some sounds.
5. Time somebody who is working, for 10 minutes - count how many noises they make.
6. If you could not hear, what sounds would you miss? Make a list of them.
7. When is the quietest time of day in School and at home? Why is it quiet at these times.
8. Consider those people who are either deaf or blind
 - (a) What must it be like not to be able to hear?
 - (b) Why are sounds important to blind people?
9. How can those people who are dumb communicate without sound?

NOISE SURVEY



1. Carry out a noise survey using the survey form overleaf - you can ask children at school to fill it in or you can ask your family at home.
2. When you have carried out the survey, present the results and answers to the questions in the form of a graph or a block chart.

SURVEY FORM

These questions are about what you think about noise at home. There aren't any right or wrong answers. The questions are simply to help us on our survey. Just mark the answer you think is right, with a line through the circle, for example:

- yes
- no

THANK YOU VERY MUCH INDEED FOR YOUR VALUABLE HELP

1 Does noise from outside ever bother or annoy or disturb you in any way when you're indoors at home?

- very often
- fairly often
- occasionally
- hardly ever
- never

5 Do you think the noise around your home has been increasing or decreasing during the last year or so?

- increasing
- decreasing
- about the same, no change

2 Would you rather hear some noise, or no noise at all, from outside when you are indoors at home?

- some noise
- no noise

6 On the whole, would you say there is too much fuss, or too little fuss, made about noise nowadays?

- too much fuss
- too little fuss
- just about the right amount

3 Is the quietest room in your house at the back or at the front?

- at the back
- at the front
- it's the same back and front

7 Would you agree or disagree with people who say that "Noise is one of the biggest nuisances of modern times"?

- agree strongly
- agree a bit
- neither disagree or agree
- disagree a bit
- disagree strongly

4 Do you ever get upset or irritable about any of these noises when you're indoors at home during the day or during evening?

- road traffic
- aircraft
- industry (factories and so on)
- railway
- children
- lawn mowers
- anything else?

(write in)

How about at night? Does noise ever stop you getting to sleep?

- yes, often
- sometimes
- no, very rarely

If "yes", what is the noise?
.....
.....

8 If it does get noticeably noisier in your neighbourhood, would this matter to you?

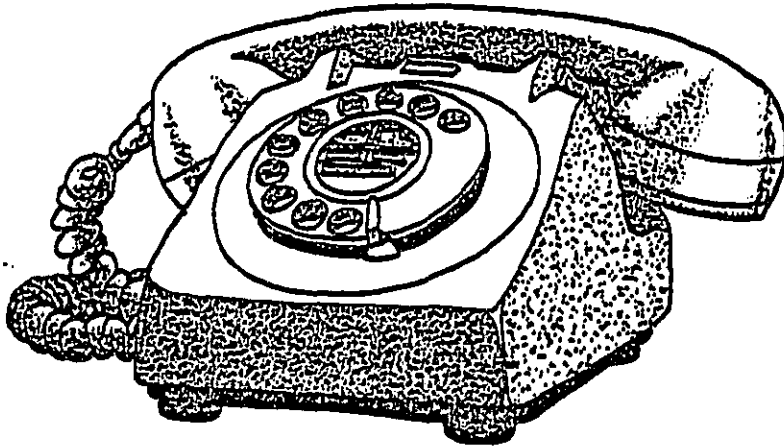
- very much
- a little
- hardly at all

9 In general (and not just at home) do you find noise

- very disturbing
- disturbing
- a little disturbing
- not at all disturbing

THANK YOU VERY MUCH

Useful Noises



Some sounds and noises are useful to us - they tell us something. The sound which is made is made for a reason, not like other noises which are not made for a reason. The sound of a telephone bell ringing tells us that someone is telephoning us and that we should pick the telephone up.

1. Draw pictures of three things which make useful sounds.
2. Write down the sounds which come from them.
3. Make a list of things which make sounds which tell you something.

Things which warn me of danger

.....

Things which tell me to do something

.....

Things which try to get my attention

.....

4. Which of the groups has the most things in it?

5. How do you try and attract the attention of your friends?

Are there any other ways you could get them to look at you and listen to you? Try and attract a friend's attention without shouting at him.

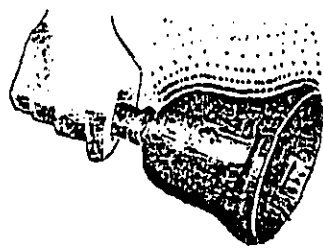
Notes:

Groups of things which make useful sounds are:-

- (a) Bells - telephone bells, doorbells, church bells, bicycle bells, school bells, burglar alarm bells;
- (b) Sirens - Police, Fire Engines, Ambulances;
- (c) Beeps - beeps at pelican crossings, beeps of car horns;
- (d) Whistles - Police whistles, referees' whistles, dog whistles; school whistles.

Usually things which are useful to us are SOUNDS. Sounds which are not useful to us are NOISES e.g. the noise of a car engine, the noise of a dustbin lid rattling.

Enjoyment and Annoyance



1. Make a list of sounds which are pleasing to you, at school or at home. Why do they please you?
2. Noises can be a nuisance. Make a list of noises, which cause you, or your parents to be annoyed. These can be at school or at home. Why do they annoy you?
3. Write a sound story about a day you have spent when nothing seemed to go right.
4. Does the sound of something which pleases you cause someone else to be annoyed? Write it down.

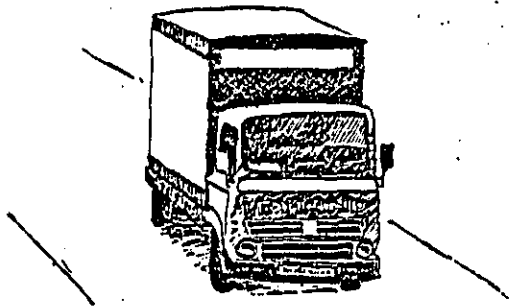


5. Does the same sound please you at times and at other time annoy you? Draw a picture of your face when you are pleased with a sound and beside it draw your face when you are annoyed with a noise.
6. During a free activity lesson when paint is available for finger-painting, ask if you can listen to a record used for music and movement lessons (Electronic Sound patterns is ideal).

While listening to the record move your fingers, which have been dipped in paint, around the paper, using the mood of the music to guide you. It could be straight lines, swirls or zig-zags.

If you are pleased with the result, perhaps after it dries you could use a variety of yarns and threads to make a collage.

THE DANGER OF NOISE



1. Describe what you hear when you either:-

- (a) burst a balloon
- (b) fire a blank in a pistol
- (c) bang two pieces of wood together

How did you feel about these sounds?

What happens when you are not expecting these sounds?

2. Make a list of the sounds you like and the noises you dislike:-

Sounds I like	Noises I dislike
e.g. recorder played well	e.g. children screaming

3. Ask your friends which are the sounds they like the most and hate the most. Make a list and see if there are any noises which everyone hates or likes. Ask people to give reasons for their choice.

4. Make up some questions about noises and ask other children if they like them or not. e.g.

Do you like the noise of an ice-cream bell chiming?

	Yes	No
John	✓	
Ann		✓
Tracy	✓	
Mark	✓	

Which set has the most ticks?-

READ THE PAMPHLET 'NOISE'

5. How is sound measured?

6. Use a sound meter to measure and classify sounds from machines either at home or at school:-

Name of Machine	Soundmeter Rdg. Decibels	Range of Sound		
		Harmful	Dangerous	Safe
e.g. Jet Engine	140	Yes		

7. Draw a diagram of the ear showing how we hear sound.

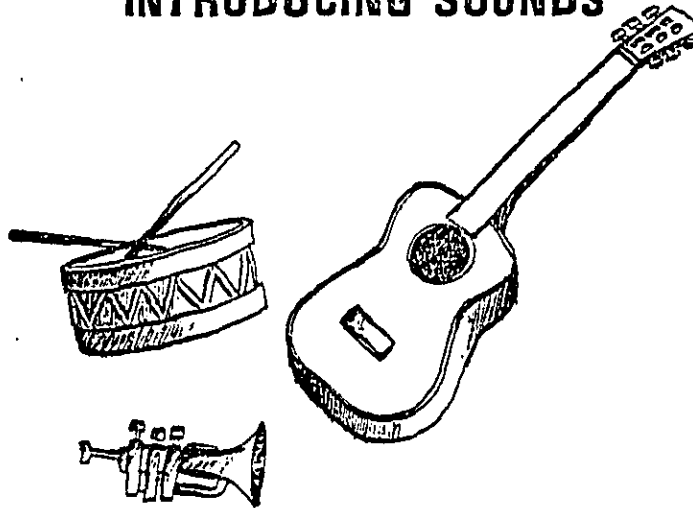
8. Carry out an experiment to discover how different people vary in the amount of noise they can stand:-

Make a loud noise, record it on tape, ask many people what they think of it. Try varying the level of noise by adjusting the volume control. Record your results:-

Name of person tested	Noise	Level Decibels	Rating		
			Unbearable	Unpleasant	Bearable

9. What harm can loud noise do to people and how can they be protected?

INTRODUCING SOUNDS



1. Ask your teacher to play a sound-effects record or make a tape-recording of some sounds yourself.
 - (a) Play a guessing game with other children and see if they can recognize the sound and what made it.
 - (b) Ask other children whether the sound played was 'noise' or 'sound' and why they thought it was 'noise' or 'sound'.
2. Gather some objects together which can make noise e.g. tins, cups, bottles or visit the music table and make noises by banging, blowing or plucking etc. Write down the 'sound' or 'noise' which is made and what you did to make the sound.

Sound	How it was made
Whistle	Blowing across the neck of a bottle

How and why do you think that a particular sound was made?

3. Imitate a sound e.g. a horse 'whinnying', dog 'barking', car horn 'beeping'. Make the sound and ask other children if they can recognise the sound and what it is supposed to be.
4. Make a collage of noisy things cut from newspapers, comics etc. and stick words on describing the noise they make.

USING A LIBRARY

1. Newspapers often carry articles about Noise, particularly Noise complaints.

Visit the local Reference Library and ask for back numbers of local or national papers. Make charts about the articles e.g.

Date	Type of Noise (traffic, jets, people, etc.)	Effect

From these charts find out the common causes of complaint or sources of noise.

What effects were complained about?

2. Look at Motoring Magazines, particularly the advertisements and test reports. How many advertisers or reports mentioned safety, acceleration, economy, low noise levels? Make charts for each of these. How many mentioned Noise as compared with other comments?

What types of Noise were mentioned by the testers? Did the testers think Noise was significant in commenting on a car or recommending it?

Count the number of advertisements for making car noisier (horns, special exhausts, etc.) and count the number which help to make it quieter (insulation kits, fans, carpets, etc.)

3. Finding out about Noise

Use the Reference Library and Public Library (the Librarian will show you how) to find out which books about Noise there are in the Library. Write down the titles, make charts or graphs about the sorts of noise which the book is about, e.g., industrial noise, aircraft noise.

Find out from classified catalogues or reference books:-

- (a) Firms who make Noise Control Equipment.
- (b) Associations and organisations concerned about Noise.
- (c) Magazines and publications about Noise.
- (d) British Standards dealing with Noise.

Note: Some of the above will be found under headings other than Noise-e.g., Sound, Environmental Pollution.

HISTORY

1. Transport has changed throughout the ages. Make a list of the transport used at various times and write down the sounds produced.

e.g.

Time Period	Transport	Noise
Roman	Chariots	Chariots wheels on road Horses hooves on road

2. Make a list of the different weapons used throughout the ages and write down the noise associated with them.

e.g.

Time Period	Weapon	Noise
Norman	Bow and Arrow	'Whoosh' of arrow flying through the air.

3. Imagine how your town or village has developed since it was founded. Write down all the sounds which changed as it developed. Compare and contrast these sounds and explain why they changed.
4. Trade and industry has changed throughout the age, write down the noises which each period produced.
5. In our lives today we produce certain noises. Pick one period of history and compare the noises which were made then with now.
6. Important milestones in history occurred when certain inventions were made e.g. Steam Engines. Think of some inventions which also produced noise and make a list.
7. Is our world becoming noisier as it develops? Write down a short essay on this theme.
8. Write a story about the future 2000 AD and include in the story the noises which might be heard.
9. Trace the development of a road since it began. It might be a footpath or an animal path, write down and include the sounds which were produced when it was being used and built.

SUGGESTIONS FOR DRAMATIC ACTIVITY



1. You are involved as a community with a noise hazard, e.g. motorway being built or juggernauts from a local factory being diverted through your area or street. It is in the planning stage. What objections would the local residents raise?

A meeting is held. Each member of the class is to take a role - lorry driver, children, mothers, fathers, local policeman, factory directors, councillors, etc. One might have a local enquiry and receive a Whitehall Inspector, a judging panel, etc.

Each group of 'residents' can develop their own approach. As the final meeting is not rehearsed, the crossfire of questions and opinions should prove illuminating.

What sound effects could one use to reproduce the noise hazard in question?

2. Make a play up together and include road repair workmen, market stallholders, protest marchers, football supporters.

When the noise reaches its loudest, decide what can happen to change the situation.

3. Make up a play about a competition to make the best machine which can reduce noise to a minimum. Let each member of the group be part of the machine and by using suitable noises (percussion instruments or records can be helpful), decide on movements which will give the impression of a working machine. Decide what should go wrong with the machine at the end.

4. Make up a burlesque of old-time music hall with comedians, dancing girls and clowns. All the jokes should be connected with noise. Make up a song, which will get the audience singing with you, about keeping noise under control.

5. Imagine you are in a world of silence - make up movements of noisy activities but carry them out in silence and in slow motion.

6. Make up a play about a Time Machine which lands in cave-man times by accident. The people in the machine cannot believe the silence of the world. Perhaps the play can develop to the cave-men being transported to the modern world to hear the noise for themselves.

7. Make up a play about a king who was only interested in money and valuable things, and a professor who invented strange but invaluable noisy things. Perhaps the greed of the king and his courtiers angers the professor and his helpers who plan to punish him by creating noise when he sleeps.

8. Make up a play about a king and queen who like noise so much that they organised a competition and those who made the most noise would win the prize. Show how the people became annoyed by this and eventually plotted against them to change their ideas about noise.

9. Make up a pantomime about Aladdin - but change the magic powers of the lamp to a trumpet which, when blown, makes noisy people quiet or quiet people noisy. Make Aladdin's mother, Widow Twanky (Clanky!!) noisy and make the Emperor quiet. Show how the powers of the trumpet and the Genie of sound change the lives of Aladdin, Aladdin's mother and the Emperor.

10. Make a play about a king who had over sensitive ears who could not bear sound at all and the difficulties people had to live with him. Bring in a magician who can cure the king of his malady but at a price.

POETRY AND CREATIVE WRITING

1. Read this poem:

NOISE

Noise is a baby crying, a train on the track,
There's noise on the building site,
People shouting, hammers banging,
Drills drilling holes in the ground,
The sound of aeroplanes at the airport is NOISE,
A school full of chattering children,
A Football Match,
A disco, a park, is NOISE,
The noise of music and bells, people shouting at the fair,
At the swimming baths people shouting and screaming,
To me noise is a DISTURBANCE.

Allison Taylor Age 10

- There are many word pictures in this poem, choose one and make a painting of it. Write all the noises in words and stick them onto the picture.
- List all the words you can think of that describe the noises suggested in this poem.
- How many of these words actually make the sound of the noise when spoken?
- Write a poem or a paragraph which explains what you consider a noise.

2. Read this poem:

NOISE TAKES OVER

I had taken over, every machine grew louder,
blaring forth, car horns hooting, bicycle brakes
screeching to a halt. Doors slamming and heaters
clanking. Everything grew noisier with my help.

Silence was dead! Gone for ever! Banished from
earth! My next assignment was to deafen people
with NOISE. It worked. Vacuum cleaners swelled
and grew noisier as if they had a life of their
own. Flowers no longer grew with the deafening
sounds, grass shrivelled up with the immense
pressure. Birds were dying. Animals no longer
roamed the earth's surface. The population of
the human race was being wiped out.

But unfortunately, I did not know that three or
four bits of silence had escaped banishment and
were in the process of declaring war upon me.

One day, ever so suddenly, things grew quieter.
All my strength was drained out of my body in
trying to keep the noise level up. But I failed.
I was dying. Slowly silence was taking over once
more.

Penelope Smith Age 11

Comprehension:

- (a) Who do you think the writer was trying to be?
 - (b) What was the effect when she took over?
 - (c) What had happened to silence?
 - (d) As the noise grew louder, what happened to the animals, birds and people?
 - (e) Why did the writer fail in her task?
 - (f) What happened to her in the end?
3. Some poems are about noise. Try to find one. Which did you like best? Why?

NOTE: A collection of poems, etc., "Children on Noise", is available from Darlington Teachers' Centre, North Lodge, Darlington, Co. Durham, price 75p.

4. Read this poem:

NOISE

Noise! What is noise!
A bang, a crash or a shout.
Is it a car hooter or is it a slam?
Is it dogs barking and children shouting?
Is it the wind as it walls through the trees?
Is it a door as it bangs in the breeze?
Is it you and me as we run around?
What ever it is it spoils our town.

Lesley Williams. Age 11

Now write a poem yourself about noise being a nuisance.

5. Write a story or a poem called:

"The Mysterious Noise".

What is it? Where has it come from? Who, or what, made it? Describe how it sounds.

6. Write a story, including as many noises and sounds that you would hear, about one of the following:-

- "The Football Match"
- "Saturday"
- "A Visit to the Airport"
- "Market Day"

7. Creative Writing: Write about

- (a) The dangerous Monster Noise.
- (b) A perilous journey through a noisy kingdom.
- (c) A cautionary tale about a child who could not be quiet.
- (d) The king who hated noise.
- (e) Adventures of a noisehound.

A TRUE STORY

One sunny day some people were sitting in their garden, sunbathing and enjoying themselves.

Their neighbours came out and switched on a translator radio and started to cut the lawn with an electric mower. They also started to repair their car, using an electric drill.

The people in the garden were disturbed and annoyed.

The next day, when the people who made the noise were having a lie-in, the neighbours who had been in the garden turned their radio up and started knocking nails in the wall.

The neighbours looked out of the window and said -

"Stop that noise, we are having a lie-in"

The other people said -

"You never thought about us yesterday, when we were sunbathing, so how do you like it?"

- (a) What do you think happened next?
- (b) What did the two people do?
- (c) Act out this story with your friends.
- (d) Were either of the people right to disturb the other?
- (e) Write down what you would have done.
- (f) Imagine you are the sunbathers and write a letter to your local paper about the way some people make noise in their gardens.
- (g) Make up a code or guide for people in their garden so that they do not disturb others.
- (h) What do you feel about inconsiderate people who make loud noises late at night?
- (i) How could you and your neighbour help to make your street quieter?
- (j) Write a story about the noisiest time of day in your street.

9. (a)

"Beanz Meanz Heinz"

"You can't tell stork from butter"

"Drinka Pinta Milka Day"

These are slogans. Can you think of any to help reduce noise?

(b)

"Actions speak louder than words"

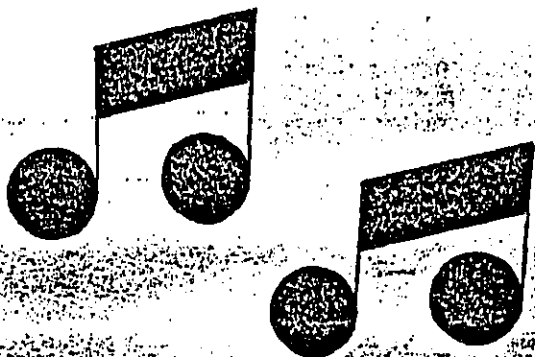
"Empty vessels make most noise"

"He's fond of blowing his own trumpet"

These are proverbs or sayings about sound. Explain what they mean.

Can you think of any more sayings about sound and noise?

MUSIC



1. What sort of music do you like and why?
2. What sort of music do you dislike and why?
3. Which are your favourite songs?
4. Which songs do you dislike?
5. Gather together non-tuned percussion instruments such as:-

tambourine, bells, cymbals, claves, marracas, triangles, woodblocks, gourds, castanets, snare drums, guiro.

6. Find out how the instruments are played and try to play them. Write down what you had to do to each instrument to make a sound and the sound which was made.
7. Make a chart to show the ways in which different instruments are played.
8. Measure the levels of sound produced when the instruments are played normally.

Read the worksheet on sound meters to learn how to measure the level of sound. Always remember to use the meter at the same distance from each instrument, if you do not, then your results will not be true.

Label each instrument according to its decibel level and make a display table.

9. Gather together tuned percussion instruments such as:-

tambour, timpani, glockenspiel, xylophone, metalophones, autoharp chime bars, tuneable tambourines.

Measure and label their decibel levels etc. when played normally.

10. Take any one of these tuned percussion instruments and measure its noise levels when the instrument produces:

- a. low notes
- b. middle notes
- c. high notes

11. Compare varying level of sounds which any one of the following instruments can make when played normally:

- a. violin
- b. piano
- c. flute
- d. recorder
- e. clarinet
- f. trumpet

Make a chart of your findings like the one below

Instrument	Level of noise when played normally		
	High Notes	Middle Notes	Low Notes

12. Choose a combination of any three untuned instruments, using a sound meter find the highest and lowest readings it is possible to obtain.

Do the same by selecting any three tuned percussion instruments.

If any of the following instruments are available, try it with them:

Woodwind: Clarinet, Oboe, Flute

Brass: Trumpet, Trombone, Tuba.

N.B. This experiment may be disturbing to others.

13. If an orchestra was to play a rousing piece of music, which instrument would be used?

Which ones would mainly be used if they were to play a lullaby?

14. Choose an instrument and play a chord (a chord consists of several notes which blend together). Measure the sound level produced.

Play a discord (a discord consists of notes which do not blend but oppose). Measure the sound level again.

Try this with various notes.

Are there any conclusions to be drawn from your results?

15. Make up a song about Noise, words can be made to be sung with an existing tune or a new tune can be made.

NOTE: The words and music for a song 'Turn It Down' are provided with the pack. You can sing the words and play instruments with the Teacher's help.

ART WORK (INCLUDING HANDICRAFTS)



1. Draw or make an imaginary 'Noise Tree' from which grow all sorts of noise. Instead of flowers and fruit, noises emerge to float off into the air and attach themselves to particular items. At the end of each branch, pictures or models can be placed showing a variety of noises.
2. Invent, draw and make a 'noise-eating' machine or robot with various parts and projections that devour, digest and regurgitate noise. What does this new noise become?
3. Make a frieze of noisy situations.
4. (a) Look at some posters on the School notice board. Notice the colours and how the words have been arranged.
(b) Design your own poster to stop people making noise.
(c) Think of a slogan for your poster.
(d) Either write your slogan with felt tips or cut letters out of magazines.
(e) Show your teachers your poster and ask if you can put it on the classroom wall.
(f) If your poster was chosen to be put up in your town or village where would you put it?
5. Noisy Characters
 - (a) Use your imagination to create two characters - one who makes noise wherever he goes (look at the Noisy Gnome leaflet) and one who fights noise (in the same way as Wombles collect litter.)
 - (b) Think about these two characters and what they look like

Are they large or small?
Do they have big or little mouths?
Do they have big or little feet?
Do they have big or little ears?
Where do they live?
How do they talk to each other?
 - (c) Draw these two characters and give them names.
 - (d) Draw a poster against noise which uses these characters.
 - (e) Write a short story to go with your pictures.

- (f) Make up an adventure about your characters and write it down.
Draw some pictures to illustrate the story.

Some ideas:-

These characters go for a walk, what do they do and who do they meet?

A meeting between the two characters.

A fight between the two characters, who wins?

- (g) Make models (perhaps paper mache) and puppets of the two characters.

- (h) Make up a play (like a Punch and Judy Show) using the puppets and models.

6. A Noise Measuring Machine

- (a) You are going to make a model of a machine for measuring noise.

- (b) Think what parts such a machine will have and work out what materials you will need, for example:-

boxes, tubes, cartons, etc.

- (c) Stick the parts together and paint it when it is dry.

- (d) Think of a name for your noise measuring machine. Paint a picture of someone using your machine.

- (e) How can you find out about real machines for measuring noise?

- (f) Have you seen anyone measuring noise? What were they measuring?

- (g) The Environmental Health Officer at the Town Hall will have machines for measuring noise. Think of some questions to ask him about them, some examples are:-

I How much does it cost?

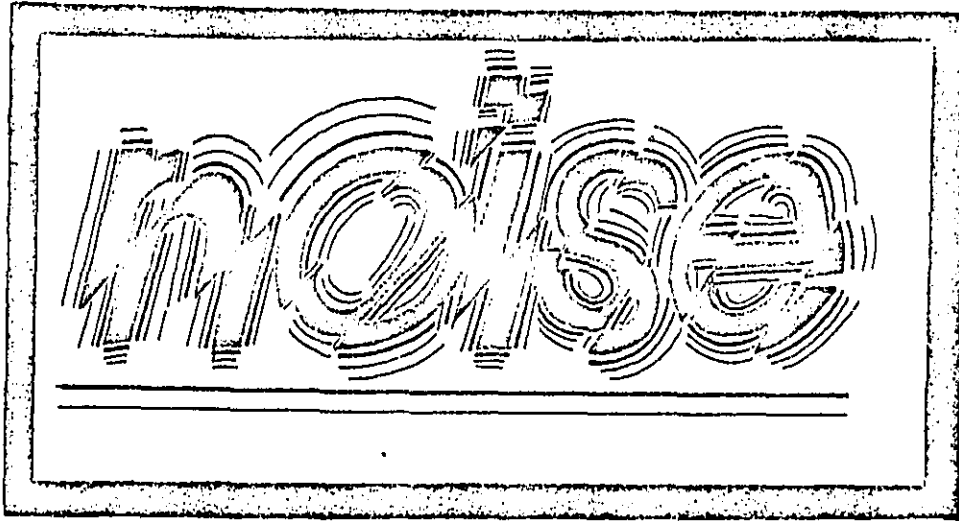
II How loud will it measure?

- (h) If you contact your Environmental Health Department you might be able to go and see some machinery and hear about it, or a visit could be made to your School.

SPORT



1. Write down the name of your favourite sport and why you enjoy it. Do you like to play or watch best?
2. Write down the noises that are heard when you play or watch your sport. Who makes these noises and why?
3. People who referee a game or start an event have to attract the players attention. Write down as many things that are used to make a noise and when they are used.
4. Why are spectators at some sports quiet and noisy at others? Write down lists of these 'quiet' and 'noisy' sports.
5. How do the crowds of spectators behave:
 - (a) When they are at an event?
 - (b) When they are going to it, or away after it has finished.



TEACHERS NOTES

TOYS

This worksheet is mainly an exercise in describing sounds which are made when playing with toys.

If there is a toy table then children can play with the toys and experiment with the different sounds produced.

Activities

Describing, making comparisons and making sets.

Materials Required

Paper and pencils - this is an introductory worksheet and no other materials are required, however some of the toys could be provided.

Topics for Discussion

How and why do children 'rate' or 'scale' things as "quiet" or "noisy".

Is the toy 'noisy'? or is it the child playing with it 'noisy'? or are they both 'noisy'?

Ideas for Further Activities

A tape recording can be made of some noises or a sound effects record played and children can describe the sound and guess what made it.

PETS AND ANIMALS

Children form close relationships with their pets and this experience is drawn on and investigated.

Activities

Making Lists: Making Up Stories: Stogans: Cartoons.

Materials Required

Paper: Pens: Pencils: Paints.

Topics for Discussion

Do children prefer quiet or noisy pets?

Do pets prefer quiet or noisy people and situations?

ANIMALS OF THE COUNTRYSIDE

The identification of animal sounds and their meaning is the basis of this sheet.

Materials Required

Paper
Pencils

Topics for Discussion

'Sounds' are those which are pleasing e.g. 'purring' of a cat, 'barking' of a dog when it sees its owner.

'Noises' are those sounds which are unpleasant or upset you or others, e.g. a dog 'howling' in pain upsets you and a dog 'howling' when shut outside, because it wants attention and company, may upset neighbours.

Sound is associable with pleasure and enjoyment, noise with annoyance, disturbance and irritation.

Children should also note how various sounds and noises cause reactions in animals and people, depending on the sound made and the situation of the person/animal hearing it, e.g. 'A dog barking when seeing its owner will give pleasure to the owner, but perhaps annoyance to the person next door: if they are engaged in a quiet activity - reading or an activity which requires concentration.' Also the warning 'roar' of a wild animal.

THE SEASIDE

As well as man-made sounds there are some natural sounds around us in the world. The seaside is used to illustrate this concept.

Activities

Listing, Making selections.

Materials required

Paper
Pens
Pencils
Copies of the Questions for Pupils to
fill in Answers.

Topics for Discussion

Are naturally occurring sounds, e.g. wind rustling leaves, water trickling, generally pleasant and not annoying?

Are man-made noises generally unpleasant, annoying and irritating?

Why is music played at fairsgrounds and sideshows?

Ideas for Further Activities

Pupils can question other pupils and their family why they chose a particular place, resort or country to go for their holidays and make a chart of the results. Do some people deliberately choose 'quiet type' holidays, e.g. camping, climbing and pony trekking to get away from the noise of modern society?

THE PARK

Leisure and sporting activities can be a source of noise in parks and can be annoying and irritating to people seeking quietness and peace in the park. This worksheet leads children to consider conflicting uses of land, positive "planning" to overcome the problems inherent in "Mixed" use areas. One of the basic concepts of noise control is introduced - separation of "noisy" and "quiet" areas.

Activities

Visit to a park, painting, making lists, noise measurement, planning.

Materials Required

Drawing paper
Pens, pencils, paints
Writing paper
Sound Meter

Topics for Discussion

Why are parks provided?

If you do not have a sound meter - are there other ways in which the level of noise could be described (e.g. No. of people, peoples' activities, NOISE associated with play and sport; QUIET associated with walking and sitting, people talking, shouting or silent). Is the sound of people enjoying themselves NOISE?

Ideas for Further Activities

Find out if the Council have made "Rules" or byelaws about peoples' behaviour in parks e.g. are transistor radios and model plane flying banned. There may be copies of rules displayed in the park or the Parks Manager at the Town Hall may have copies of rules. Why are rules made? How can you let people know about such rules?

WILD ANIMALS

This work sheet is concerned with wild animals and the SOUNDS they make.

Activities

Making lists, collecting, making a collage, labelling, making sets.

Topics for Discussion

Are there any sets or types of animals which are noisier than others i.e. generally do larger animals make more noise than smaller animals? What do the sounds which animals make mean?

Ideas for Further Activities

A map of the World can be taken/drawn and pictures of animals stuck on where they live.



AT HOME

To encourage children to -

1. Investigate "noise" in their homes;
2. discover that the home is a source of "noise" which can affect people in the house.

Activities

Drawing, labelling, making lists, sentence writing, collecting pictures, set making, a sound meter is required for one activity, refer to "Sound Meter Card" for availability and instructions on use and suggestions for measuring.

Materials Required

Drawing paper, pens, pencils, writing paper, women's magazines or "home" magazines, glue, graph paper, sound meter - for further work.

Topics for Discussion

1. The types of quiet and noisy activities in the home.
2. The types of quiet and noisy machines and objects in the home.
3. Are there "quiet" rooms and "noisy" rooms in the home?
4. Quiet times and noisy times in the house.
5. How can "noise" from machines be reduced?

Ideas for Further Activities

Display the results of sound measurements from different pieces of equipment. How can the "noisiness" be shown pictorially? Follow work up by applying the questions to different buildings - schools, offices, hospitals.

Note: Lists of equipment should be divided into two areas:-

- (i) Equipment - hoovers, washers, mixers, etc.
- (ii) Sound reproducing equipment - radios, T.V., Stereos etc.

the distinction can be made between them, hoovers etc. - the 'noise' level' cannot be reduced or controlled - only the time and duration of use. Radios etc. can have their 'noise' level' controlled by the user, - as well as the time and duration of use.

GOING TO BED

Pupils are encouraged to use their homes (bedrooms) as a source of information for work.

Activities

Observation: Making Lists: Sentence Construction: Chart Making

Materials Required

Paper
Pens
Pencils

Topics for Discussion

Where do the noises which are heard come from? They can be grouped into - inside the home, from neighbours homes and from outside.

Do the pupils find some noises disturbing them when they would not be disturbed by the same noise during the day?

What 'effects' does noise have on you? Why does it have these effects?

Ideas for Further Activities

Different rooms in the house are used for many activities. Draw up lists of activities which happen in each room. Do any of these uses conflict?

GETTING UP

Childrens activities in their houses at morning time are used as the basis for mainly language exercises dealing with sounds and describing them by use of onomatopoeia and alliteration.

Activities

Sentence construction: Drawing: Labelling.

Materials Required

Paper: Pens: Pencils.

Topics for Discussion

Do 'sounds' wake people up at the desired time? e.g. alarm ringing or mother shouting, and do 'noises' wake people earlier or disturb them? e.g. Milkman, Lorry Engine etc.

Discussion on the use of onomatopoeia and alliteration.

Some 'noises' are produced deliberately e.g. works siren, alarm clock ringing - can the purpose they serve be replaced by something which does not make a noise, a flashing light for instance? Is it because they are cheaper and more convenient that such methods are used? .

GOING TO SCHOOL

Starting from examination of modes of transport to school, this card moves on to consider transport as a major noise source.

Activities - making lists; sentence construction; personal survey; making graphs; map making; transport survey; rule making; using reference books.

Materials Required

Paper: Pens: Pencils: Graph Paper.

Topics for Discussion

Must transport always produce noise? Are there quiet modes of transport?

Should there be stricter controls on noise levels of vehicles?

Should the producers of noisy vehicles be penalised in some way for producing noisy vehicles?

Has the world become noisier mainly because of the use of motor vehicles for public and private transport?

THE PLAYGROUND

Playtime and leisure activities are very important to children, a great deal of their time is spent on amusing themselves. Their play experience is drawn on in this worksheet.

Activities

Observation, Listing, Drawing, Map Making, Designing

Materials Required

Paper,
Pens
Pencils
Paints or Crayons
Pamphlet 'Noise in Everyday Life'
Pamphlet 'Hearing Hazards and Recreation'

Topics for Discussion

The noise that accompanies some games is an integral part of the game - shouts from spectators and participants - is this really 'noise' by definition 'unwanted sound'?

How much should the noise that could arise from a proposed discotheque, be taken into account when planning permission is being considered? What other factors could be taken into consideration and how are the advantages and disadvantages considered and 'weighed up' before making a final decision?

Ideas for Further Activities

Some sporting and recreational activities produce noise levels which can effect the hearing of participants - see booklet 'Hearing Hazards and Recreation'. Pupils can suggest where this might occur and how participants can protect themselves.

THE STREET

Childrens observations of streets and roads are used as a basis for comparing, contrasting and set making.

Activities

Visiting a Street, Observations, Recording, Comparisons, Set Making, Designing, Noise Measurement.

Materials Required

Paper
Pens
Pencils
Sound Level Meter

Topics for Discussion

Can noise be described or rated in different ways? e.g. what or who makes it? - the mimicking of the actual noise, e.g. beep-beep of horn, vroom-vroom of motor cycles - words used to describe the movement or action of people, animals or equipment - barking of dogs - screeching of brakes - rating by annoyance factor, distinction can be made between:-

- (1) Loudness of the noise
- (2) Annoying factor of noise e.g. whistle, whine, etc.
- (3) Continuous and Intermittent
- (4) Frequent or Infrequent noise
- (5) The time the noise occurs - more annoying at night and quiet days such as Sundays.

Would you like to live in a quiet street?

THE COUNTRYSIDE

To encourage children to develop their own ideas on "noisy" and "quiet" behaviour.

Appreciation of the countryside as a "quiet resource",

Activities

Sentence construction, code making, drawing, labelling, setting out, finding out exercises, making lists, forming opinions.

Materials Required

Writing paper
Drawing paper
Pens, pencils
Glue

Topics for discussion

How can people learn about the Quiet Code?
Are "natural" sounds really noise, e.g., horses neighing, birds singing, leaves rustling?
How can a tractor driver protect his hearing?

Ideas for further activities

Develop the idea of the "quality" of the countryside by making a check list for future visits to "grade" or "scale" noise. Also develop scales for other environmental matters, e.g. litter, animals, provision of trees and hedges.

NOISE AROUND US

Our environment is a valuable resource, not just from the ecology and pollution viewpoint, but also a resource which can be used in teaching. Pupils are encouraged to think about the noise environment and write about their observations and views.

Activities

Observation, Interviewing, Writing, Role-Playing

Materials Required

Paper, Pens and Pencils, Paper
Pens and Pencils
A map of your village, town or city is helpful

Topics for Discussion

Do people accept noise as inevitable? e.g. from traffic, industry and building sites.

What can people do if they are bothered by noise from factories or building sites? - Refer to Noise Advisory Council booklet 'Bothered by Noise'.

Are there any particular groups of people who will be bothered by noise more than others? - shift workers, people confined to their homes, sick and elderly.

Ideas for Further Activities

The class or group can imagine they are residents in a street where noisy building works have started. Other children can take the roles of Councillors, Council Officials, the Building Site Manager, Newspaper Reporters, etc.

A meeting has been arranged between these parties. The children can act out the meeting with each person or group making their point.

NOISE IN THE TOWN

The town is used as 'Resource Material', children are asked to observe and make judgements about noise in towns.

Activities

Counting: Drawing Graphs: Making Lists: Writing: Map and Model Making.

Materials Required

Paper: Pens: Pencils: Graph Paper; Materials for Map and Model Making.

Topics for Discussion

How can traffic noise be reduced in a Town Centre?

Should towns be planned to make them as quiet as possible? How can this be done?

Discussions based on the childrens observations and findings may also be rewarding.

Ideas for Further Activities

An 'ideal' noise free town can be designed or drawn by pupils.

Measurements can be made of noise levels in different areas of the town, using a sound level meter.

IN YOUR SPARE TIME

This worksheet enables children to investigate noise from a different viewpoint - that of noise associated with leisure activities. The sheet then leads on to a wider examination of noise in the environment.

Activities

Rule making, listing, set making, reference to other publications. Making charts, visits to Library and other buildings; language.

Materials

Writing paper
Pens and pencils
Access to a library
Sound meter
Graph paper

Leaflets -
Neighbourhood Noise
Noise from Locomotives
Drive a Quieter Car
Noise Control and Industrial Noise
Office Noise
Noise Policies in the U.K. -
Legislation and Control

Topics for Discussion

Are there specific times and places where children can play and not annoy anyone else?

If cars are made quieter by manufacturers will people still drive them noisily?

How can the laws on noise be effectively enforced? Can people be "educated" into making less noise, rather than enforcing the noise laws?

Should new cars and machines have a label with the noise level attached?

Ideas for further Activities

Look at "Which" Motoring magazines or other Motoring magazines and make lists of cars and testers' opinions of the cars' "noisiness" (earlier Motoring "Which" magazines have actual noise levels.)

TELEVISION

Sound is essential to modern society, particularly with regard to communication (telephones, radio, etc.), also sound is an inseparable part of entertainment.

This worksheet is based on these two concepts and uses television programmes as an 'information source'. Children are asked to examine critically television and its role.

Activities

Watching television programmes and 'commercials', interviewing, role playing, play writing and critical appraisal.

Materials Required

Television
Tape Recorder
Paper/Pencils
'Props' for Drama
Video Recording Facilities if available.

Topics for Discussion

Are 'commercials' louder than programmes? If so, why?

Why do you think that 'theme' music is played at the beginning and end of a programme?

Why is music used during a programme? Are there particular 'types' of music which are played at certain times to accompany or complement the programme - e.g. dramatic car chases or romantic scenes.

Ideas for Further Activities

Pupils can mime certain 'noisy' activities and the remainder of the group have to guess the activity.

Watch or listen to the various schools programmes on noise (see appendix T.V. and Radio Programmes for Schools for current Broadcast Calendar).

TURN IT DOWN

Since basic principles of noise reduction are introduced - enclosure, insulation, isolation and absorption. Simple scientific experiments are used to examine these principles.

Activities

Collecting pictures, book making and labelling, simple experiments - methods of observation and results.

Materials Required

Magazines for cutting out.
Paper, Glue
Pens

For Experiments

A noise source (radio, alarm clock etc.)
Boxes, cloths, foam rubber

Topics for Discussion

Why are machines and equipment sold which are noisy? - can they be quietened? e.g. vacuum cleaners. Should radios, record players have a "stop" on the volume knob so that they cannot be played too loud? Should people use earphones when listening to radios and stereos? Can people do something themselves to reduce noise from machines and equipment?

Ideas for Further Activities

The experiments can be made more "scientific" by measuring noise levels with sound meters, if these are available.

QUIET

Periods of quiet or silence are essential for working or resting. Quietness is a resource that we are in danger of losing. The value of quietness is arrived at by investigation and by self questioning.

Activities

Making lists, drawings

Materials required

Paper
Pencils
Watch

Topics for Discussion

1. Comparisons of the different 'values' placed on quietness.
2. People talk about 'noise' in a negative way e.g.

The standards of sound level in new houses are known as 'Noise Levels' - should we not think positively of 'Quiet Levels'?

Ideas for Further Activities

Children can carry out a survey of other children or their families to find out what they think about Quietness.

NOISE

An exercise which allows children to collect 'raw' data on people's attitudes and reactions to noise. The information which is collected is then interpreted and presented by the pupil.

Activities

Interviewing, designing a 'survey', collecting and collating information, presentation of data.

Materials Required

Survey sheets (can be copied from the Worksheet), pens and pencils and graph paper.

Topics for Discussion

The findings of the survey provide much material suitable for discussion e.g. people's attitudes to noise. Do people accept noise as inevitable? What should you do with the results of the survey?

Ideas for further Activities

As an alternative to using the set survey sheet children can make-up their own questions about noise.

A social survey of this type was carried out in Darlington as part of the Quiet Town Experiment. Summaries of the report can be obtained from the Department of Environmental Health, Town Hall, Darlington, Co. Durham for discussion or comparison.

USEFUL NOISES

When objects are used, as well as performing the function for which they are intended, they also produce unwanted effects, e.g. by products and side-effects of a motor car are - noise, air pollution, accidents. This worksheet considers how one normally unwanted side-effect, noise, can be useful to us.

Activities

Drawing, Making lists and Sets

Materials required

Paper
Pens
Pencils
Paints

Perhaps some items which can be used to demonstrate
'Useful Noise' - alarm clocks; school bells; whistles

Topics for Discussion

Are there certain types of noise which we associate with certain activities? e.g. sirens on - ambulances, police cars, fire engines - why use sirens - why not roars or hums?

Which of our senses is most important to us? How important are our ears?

How can you take care of your ears to make sure they function perfectly?

Ideas for Further Activities

Think of some important uses of sound - sonar; geological testing; mineral exploration;
Illustrate the concepts used - reflection; propagation of sound waves through different media
- water; air; rock.

ENJOYMENT AND ANNOYANCE

Many sounds and noises convey meanings and emotions and are important for communicating our feeling.

Activities

Making lists, Story Writing, Drawing and Painting

Materials required

Paper
Pens
Pencils
Paints

Topics for Discussion

Can you generalise about sounds which are Pleasant? e.g. 'soft sounds' 'regular, rhythmic sounds'.

Can you generalise about sounds which are Unpleasant? e.g. loud, impulsive, sudden, high frequency and irritating.

Can you use these generalisations of enjoyment and annoyance to make up 'descriptions or dictionary meanings of 'sound' and 'noise'

Ideas for Further Activities

Peoples facial and body expressions often convey their feelings. Draw some faces or figures showing feelings and link them with the feelings they are expressing and sounds which they might make.

THE DANGER OF NOISE

Excessive noise can damage our hearing, this is investigated by examining the annoyance or discomfort which occurs at noise levels which do not damage our ears, and then progressing to examine higher noise levels and their effects.

Activities

Making lists, interviewing, making sets; measuring noise, drawing, experiments with noise.

Materials required

Paper
Pencils
Pamphlet 'NOISE'
SOUND METER
Tape recorder
Sound level meter card

Topics for Discussion

Where would you expect to find noise levels which could affect your hearing?

When you leave school would you like a job in a noisy place?

Ideas for Further Activities

Look at the humorous noise scale in the pocket of the file. Children can make up their own noise thermometer using noises which are common and to which people can easily relate.

INTRODUCING SOUNDS

Our ears are a very important link with the world, this card investigates sounds and their recognition.

Activities

Making and recognizing sounds, Making a collage.

Materials Required

Sound effects record
Tape Recorder
Music Table
Items which can be used to make Sounds
(bottles, tins etc.)
Newspapers, Magazines
Glue, Scissors, Paper

Topics for Discussion

How many different ways can sound be produced? Do these ways have one thing in common? (All vibrate to produce sound)

-How can you change the level of sound which is produced?

**List of Firms which Manufacture/Supply Sound
Measuring Equipment**

C.E. Offord,
Hurst Green,
Etchingham,
Sussex,
TN19 7QT.

Noise Abatement Society,
6 Old Bond Street,
London, W1.

Ardent Industrial Services,
Ardent House,
Thomas Avenue,
Windsor,
Berkshire.

Channel Electronics (Sussex) Ltd.,
Gadley Hill Industrial Estate,
Seaford,
Sussex,
BN25 3JE.

Cosmocord Ltd.,
Eleanor Cross Road,
Waltham Cross,
Hertfordshire.

General Radio Company (U.K.) Ltd.,
Burne End,
Buckinghamshire,
SLB 5AT.

P.C. Werth Ltd.,
17 Stratford Place,
Oxford Street,
London,
W1N 0DH.

Dawa Instruments Ltd.,
Concord Road,
Western Avenue,
London,
W3 0SD.

B. & K. Laboratories Ltd.,
Cross Lances Road,
Hounslow,
Middlesex, and -

Custom Electronic Associates Ltd.,
(Castle Associates),
Redbourn House,
North Street,
Scarborough,
Yorks, YO11 1DE.

Bradshaw Trading Estate,
Greengate,
Middleton,
Manchester.

Computer Engineering Ltd., (C.E.L.),
Cadwell Lane,
Hitching,
Herts, SG4 0SJ.

Many firms make Sound Level Meters, these are sophisticated instruments which comply with British Standards. However, for simple survey and measurement work a sound level indicator can be purchased at a cost of about £50.00.

Several booklets are available which give guidance on the use of sound meters.

Suggested Projects which use Sound Meters (15p):-

C.E. Offord,
Hurst Green,
Etohingam,
Sussex,
TN19 7QT.

A Primer of Noise Measurement (free):-

General Radio Ltd.,
Bourne End,
Buckinghamshire,
SL8 5AT.

Tel: 06285 - 28611

Measuring Sound (free):-

B. & K. Laboratories Ltd.,
Cross Lances Road,
Hounslow,
Middlesex,
TW3 2AE.

Tel: 01-570-7774

Noise Measurement Techniques (free):-

Dawe Instruments Ltd.,
Concord Road,
Western Avenue,
London,
W3 0SD.

BOOKS FOR CHILDREN

The How and Why Wonder Book of Sound		Transworld
The How and Why Wonder Book of Science Experiments		Transworld
Hearing	Kate Miller	O.U.P.
Science in the Making. Stages 1,2 and 3	A. C. Hilton	Longmans
Sounds. A day to day learning book	J. D. De	Hamlyn
Steps to Science. Sound things	R. Sh	G. P. Alexander
Sounds. Things I like	Blakeley & Thomas	A. C. Black
Sound	Basil Blackwell	Oxford
Sounds all around	Pine and Le	Blackie
Noises. Starters Science	Albert James	McDonald Educational
Making Music. Starters		McDonald Educational
The Ear Book. Beginner Books	Al. Perkins	Collins and Ha
The Listening Walk. Lets Read and Find Out Science Book	Paul Sha	Black
My Five Senses. Lets Read and Find Out Science Book	Aliki	Black
Poems for Writing I	S. M. Lane & M. Kemp	Blackie
Things to Hear		Franklin Watts
A Wrigley Book about Sound		Lutterworth Press
Junior True Book of Sounds We Hear		Muller
Our World - Listening		Burke Publishing Co.
Sounds		Ladybird
Echoes	Kohn	Wheaton
Mr. Noisy	Roger Hargreaves	Thurman Publishing Ltd.
Mr. Quiet	Roger Hargreaves	Thurman Publishing Ltd.
Children on Noise (A Book of Poems and Prose)	Darlington Quiet Town Experiment	Teachers Centre, North Lodge, Darlington.
Noisy and Quiet	Opposites	McDonald Educational
What a Noise	Robenc Backles Wilson	Heineman
The World of Sound		Cavendish
The Noise We Hear (Pollution Series)	C. Jones et al	Dent 1973
Noise Pollution (Environmental Pollution Series)	P. O'Donnell et al	Addison-Wesley 1971
Henry and the Monstrous Din	Russell Hoban	Worlds Work
Ready to Play - Stories with Percussion Sounds	Blades	B.B.C.

ORGANISATIONS, GOVERNMENT DEPARTMENTS AND FIRMS WHO PROVIDE INFORMATION
LEAFLETS, POSTERS ETC. RELATING TO NOISE

Association of Environmental Health Officers, 19 Grosvenor House London SW1	Publishes annual 'Environmental Health Report' which contains section on Noise	
British Association for the Control of Aircraft Noise, 30 Fleet Street, London EC4	Aircraft Noise	
Building Research Station, Bucknalls Lane, Garston	Noise research relating to buildings, road and air traffic noise	Papers and Research Reports
Department of Trade & Industry 1 Victoria Street London SW1	Aircraft Noise	Booklets
Medical Research Council, 20 Park Crescent, London W1N4AL (Applied Psychology Unit)	Aircraft Noise	
National Engineering Laboratory (Dept. Trade & Industry) East Kilbride, Glasgow	Work on noise control and vibration	
National Physical Laboratory, Teddington, Middlesex	Noise Research	
Noise Abatement Society, 6 Old Bond Street, London W1X 3TA Tel. 01 493	An organisation aimed at reducing noise levels	
Road Research Laboratory, Crowthorne Berks.	Traffic Noise	Papers and Research Reports
Science Research Council, State House, High Holborne, London WC1R 4T4	Sponsored Noise research	
Southampton University Inst. of Sound & Vibration Res. Southampton SO9 5NH	Issues series of abstracts on cards 'Noise Abstracts'	
Society of Occupational Medicine Royal College of Physicians, 11 St. Andrews Place, London NW1	Noise Research	

Lufthansa, 10 Old Bond Street, London W1	German Airline	Booklet - The Quiet Fight against noise
British Safety Council, National Safety Centre, 62/64 Chancellors Road, London W6 9RS	Concerned with industrial noise and its effect on hearing	Noise in Industry (Booklet 20p) The Noise Problem (Pamphlet 10p)
Royal Society for Prevention of Accidents, Royal Oak Centre, Brighton Road, Punley, Surrey CR2 2UR	Concerned with preventing noise induced deafness in industry	Booklets, Stickers, Posters
B. & K. Laboratories Ltd., Crosslances Road, Hounslow TW3 2AE	Manufacturers of noise measuring equipment	Posters on two sizes of humorous decibel measuring scale. Booklets on noise and vibration measurements
Bilson International Ltd., P.O. Box 56 Henley-on-Thames, Oxon. (Tel. 049 12 4388)	Manufacturers of hearing protection	Booklets on noise and its effects on hearing. Posters, Stickers
Noise Advisory Council, Becket House, 1 Lambeth Palace Road, London SE1 7ER (01-928-7855)	Part of the Dept. of Environment provides in- formation and advice on noise	Booklets, Posters
General Radio Ltd., Bourne End, Buckinghamshire SL8 5AT	Manufacturer of noise measuring equipment	Booklets on Noise, Measurement and Control
Dave Instruments Ltd., Concord Road, Western Avenue, London W3 0SD	Manufacturers of noise measuring equipment	Booklet on Noise, Measurement Techniques

Films, Filmstrips, Slides

- | | | |
|---|---|---|
| 1. Bilson International Ltd.,
P.O. Box 56,
Henley-on-Thames, Oxon.
Tel. 049 12 4288 | 10 mins. Nice to Hear 16 mm. Colour -
13 " Contraphon 15 mm "
Slides - 31 from a film
Its Just That Simple. | - free loan for short
periods, or sale.
3 weeks' notice |
| 2. Concord Films Council Ltd.
Nacton, Ipswich,
Suffolk, IP10 0JZ
Tel. 0473 76012 | 16 mm. Who Stole the Quiet Day
- colour
30 mm. Eh What? - colour | Hire Buy
£2.60 £75
(£2.00 £120.
£4.00 £120.
(£3.00) |
| 3. Centre for Extension Studies,
University of Technology,
Loughborough,
Leicestershire LE11 3TU
Tel. 050 67494 | 25 mins. Noise & People - colour 16mm
" " The Science of Sound "
" " The Control of Noise " | £15 (2 days) (£7.50)
£24 (1 wk.) (£12)
Buy £250 single
£625 set of 3 |
| 4. C.O.I.

Govt. Buildings
Bromyard Avenue, Acton,
London, W3 7JB.
Tel. 01 743 5555 | 12 mins. Colour - Ear Protection
in Noise
16 " Dangerous Noise I/W.
21 " Dangerous Noise 1. Col.
22 " Dangerous Noise 2. Col. | £2
£4. per day
40p each add. day |
| also Hercules Road,
London, SE1 7DU
Tel. 01 928 2345 | 7 " Quiet Town - Col. 16mm | £43.20 |
| 5. Quietflo Engineering Ltd.,
West Drayton, Middlesex
Tel. 43341 | 14 mins. Unwanted Sound
8 mm. Cassette | free, short periods |
| 6. Guild Sound & Vision Ltd.,
Woodstan House,
Oundle Road,
Peterborough, PE2 9PZ
Tel. 0773 63122 | 20 mins. Listen While You Can - 16mm
23 " Medical Aspects and
Hearing Conservation -
video cassette | 2 Days £8.80

(week £13.20
Purchase £110 |
| 7. National Audio-Visual Aids
Library,
Paxton Place, Gipsy Road,
London, SE27 9SR.
Tel. 01 870 4247 | 10 mins. Noise Pollution 16 mm. | 1 day - £3.13
+ 40 p. extra
per day |
| 8. B.B.C. Enterprises,
Film Sales,
Villiers House,
The Broadway,
London, W5 2PA.
Tel. 01 743 8000 | 25 mins. "Noise" - From the Working
for Safety Series - 16mm -
colour

50 mins. The Noise Invasion - 16mm
black and white | £20. for 2 days
£30 for 1 week

£5.00 for 2 days
£7.00 for 1 week |

<p>9. The Open University Film Library, Woodstan House, Oundle Road, Peterborough, Tel. 0733 52257.</p>	<p>Motorway Noise - black and white Is Music Noise? - colour Tape - Noise at the 8th ICA Noise While You Wait</p>	<p>£6.80 + V.A.T. " " Purchase £2.30</p>
<p>10. Scottish Central Film Library, 15 mins. - Noise Polluting the Environment - colour 16-17 Woodside Terrace, Charing Cross, Glasgow, G3 7XN Tel. 041 332 9888.</p>	<p>30 mins. - A Look at Sound - colour</p>	<p>£2. 52 £5.00</p>
<p>11. Camera Talks Ltd., 31 North Row, London, W1R 2EN, Tel. 01 493 2761.</p>	<p>Slides, Filmstrips - Noise and Hearing 1 + 2 + tape commentary</p>	
<p>12. Rank Audio Visual Ltd., P.O. Box 70, Great West Road, Brentford, Middlesex TW8 9HR.</p>	<p>30 mins. - Keeping out the Noise - colour 17 mins. - Noise Pollution - colour</p>	
<p>13. D.O.E. Library, Thames House South, Millbank, London, SW1P 4QH</p>	<p>25 mins. - Keeping out the Noise -</p>	<p>Free loan</p>
<p>14. T. Mat Engineering Ltd., Loughborough, Leicestershire.</p>	<p>Sound Sense</p>	<p>Free loan</p>
<p>15. Noise Abatement Society, 6 Old Bond Street, London, W1X 3TA Tel. 01 493 5877</p>	<p>25 mins. - Sound Sense - 16 mm.</p>	<p>£7.00 plus p.p. plus V.A.T. for 7 days.</p>
<p>16. Central Film Library, Government Buildings, Bromyard Avenue, Acton, London, W3 7JB, Tel. 01 743 5555</p>	<p>11 mins. - Development of a Noise Reduced Dumper - 16 mm colour film 6 mins. - Traffic Noise and Sound Insulation - 16mm colour film 7 mins. - The Nibbler - a Quiet Concrete Breaker- 16mm colour Keeping out the Noise - 16 mm</p>	<p>Free loan " " " " " "</p>

Information for Teachers

Attenborough, K.	Noise Abatement Units 26 and 27, T100	Open University 1972
Bell, A.	Noise: An Occupational Hazard and a Public Nuisance	W.H.O. 1966 (H.M.S.O.)
Burns, W.	Noise and Man	Murray 1968
BSSRS	pamphlet on Noise (25p + post)	BSSRS. 9 Poland Street, London, W1.
Central Office of Information	The Problem of Noise (3p) (Ref. Paper SN 5868/70, Jan. 1970)	C.O.I. Hercules Road, London, SE1
Committee on the Problem of Noise	Noise: Final Report	H.M.S.O. 1963
E.E.C.	Damage and Annoyance Caused by Noise (100 Belgian Francs)	Official Publications Office of European Communities, Boite Postale 1003, Luxembourg.
Noise Advisory Council	Neighbourhood Noise (50p)	H.M.S.O. 1971
"	Noise in the Next Ten Years (22p)	H.M.S.O. 1974
"	Noise in Public Places (27p)	H.M.S.O. 1974
Taylor, R.	Noise	Penguin 1970
W.E.A.	Noise Pollution. WEA Background Notes on Social Studies, 1973, No. 2.	(25p) W.E.A. 9 Upper Berkeley Street, London W1H 8BY

Magazines and Articles

Which?	Traffic Noise: The 20,000 Worst Culprits	Which? January, 1973.
Which?	Traffic Noise: What it Means to You.	Which? April, 1973
Which?	Noise	Which? August, 1978
Handyman Which	Soundproofing your Home	Which? August, 1978

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