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AUTHOR Stranix, Edward L.; Fleishman, Michael
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ABSTRACT

Forty-one activities are suggested for middle or junior high school students to perform while visiting a city street. The activities make use of skills in mathematics, language arts, social studies, and environmental studies. A pencil and a copy of this workbook are essential; other materials required by some of the activities are a tape measure, magnet, and tape recorder. The students can work individually or in groups to determine the following types of information about a city block: number of windows in houses, various building materials, length of sidewalk, scientific names of trees and plants, services provided by stores and businesses, noises of different times of the day, and safest or shortest ways from home to school. Creative activities include writing a poem about the smells and sounds of the city block, creating a radio commercial to show certain aspects of the block, interviewing residents, inventing new uses for familiar objects found on the block, and mapping routes from one place to another. The authors recommend that a trip to a city street be arranged like a field trip, and that permission be obtained from school administrators and parents. (AV)

Project KARE Edition

CITY STREET

AN OUTDOOR CLASSROOM

by

Edward L. Stranix, Ph. D.

and

Michael Fleishman

A Student Workbook

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A National Model for Strengthening Environmental Studies in Local Schools

All Photographs By Bill Russell

To The Teacher:

The following pages contain a variety of written activities that students can do while visiting a city street. For the majority of these activities, the students will only need a pencil and this workbook.

For city and suburban students, a city street offers an open and available area for discovery and study. A variety of activities directly involved with Mathematics, Language Arts, Social Studies, Science and Environmental Studies are available by using this workbook and visiting any city street.

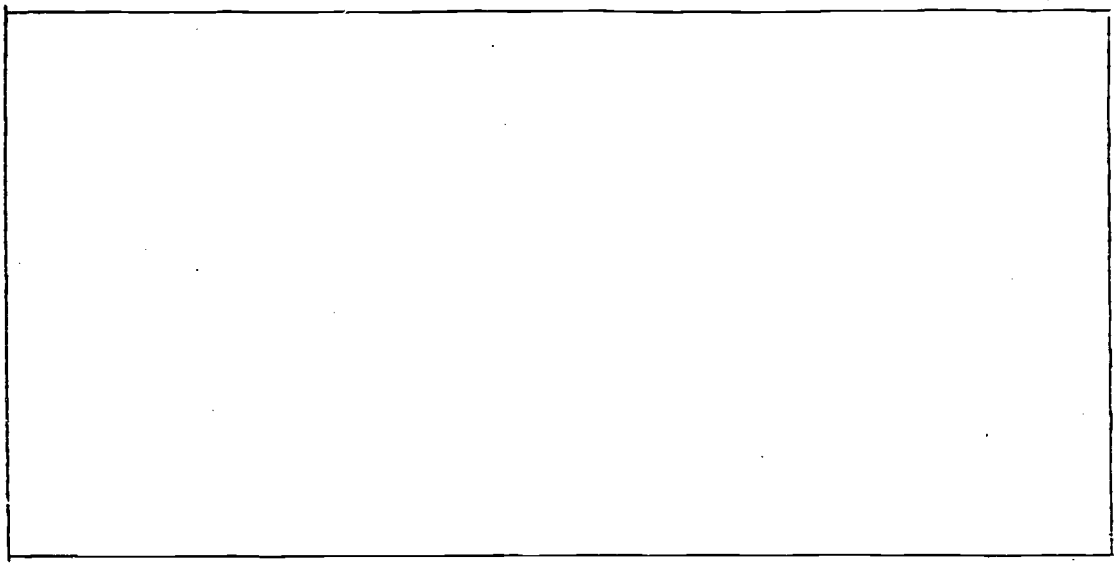
It is recommended that trips to city streets be arranged like all other school trips. First get permission from school administrators then written permission from parents.

We are sure that you and your students will find a trip to a city street, with this workbook, to be a most beneficial learning experience.

Good luck,

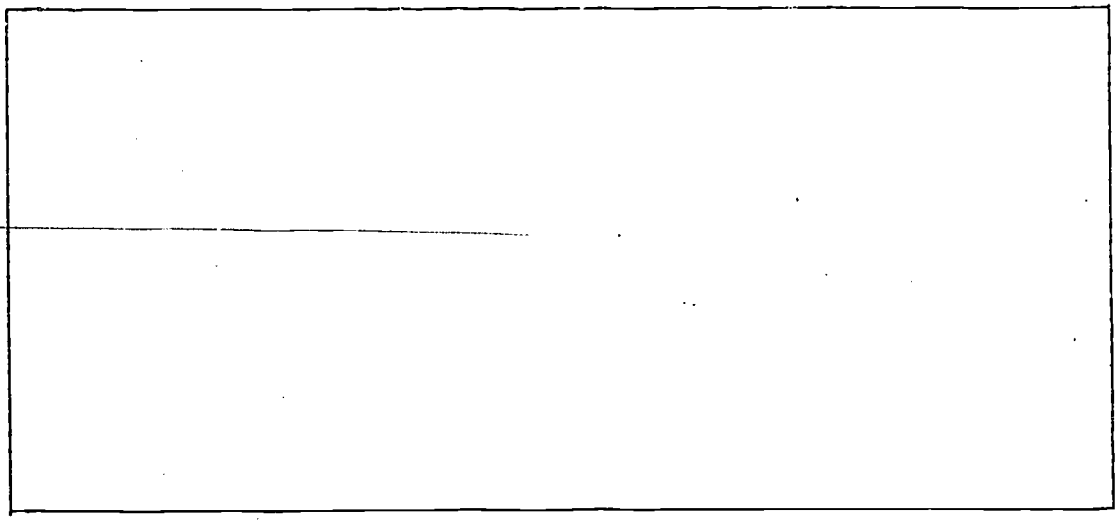
E.L.S.
M.F.

ACTIVITY 1 - Before going outside to your city street, draw a picture of a house. Draw a picture of what you think the houses look like along your city street.



ACTIVITY 2 - Select one house along your block and draw that house.

Is there any difference between this drawing and the drawing from ACTIVITY 1.



ACTIVITY 3 - Examine the homes and businesses along your city block for any "environmental problems". Environmental problems are defined as problems occurring in man's living places and neighborhoods. An example of some environmental problems are broken windows or homes that need paint.

List these and other types of environmental problems.

1.

2.

3.

4.

5.

6.

ACTIVITY 4 - After counting the number of homes and businesses along your city block, look for any abandoned homes or businesses.

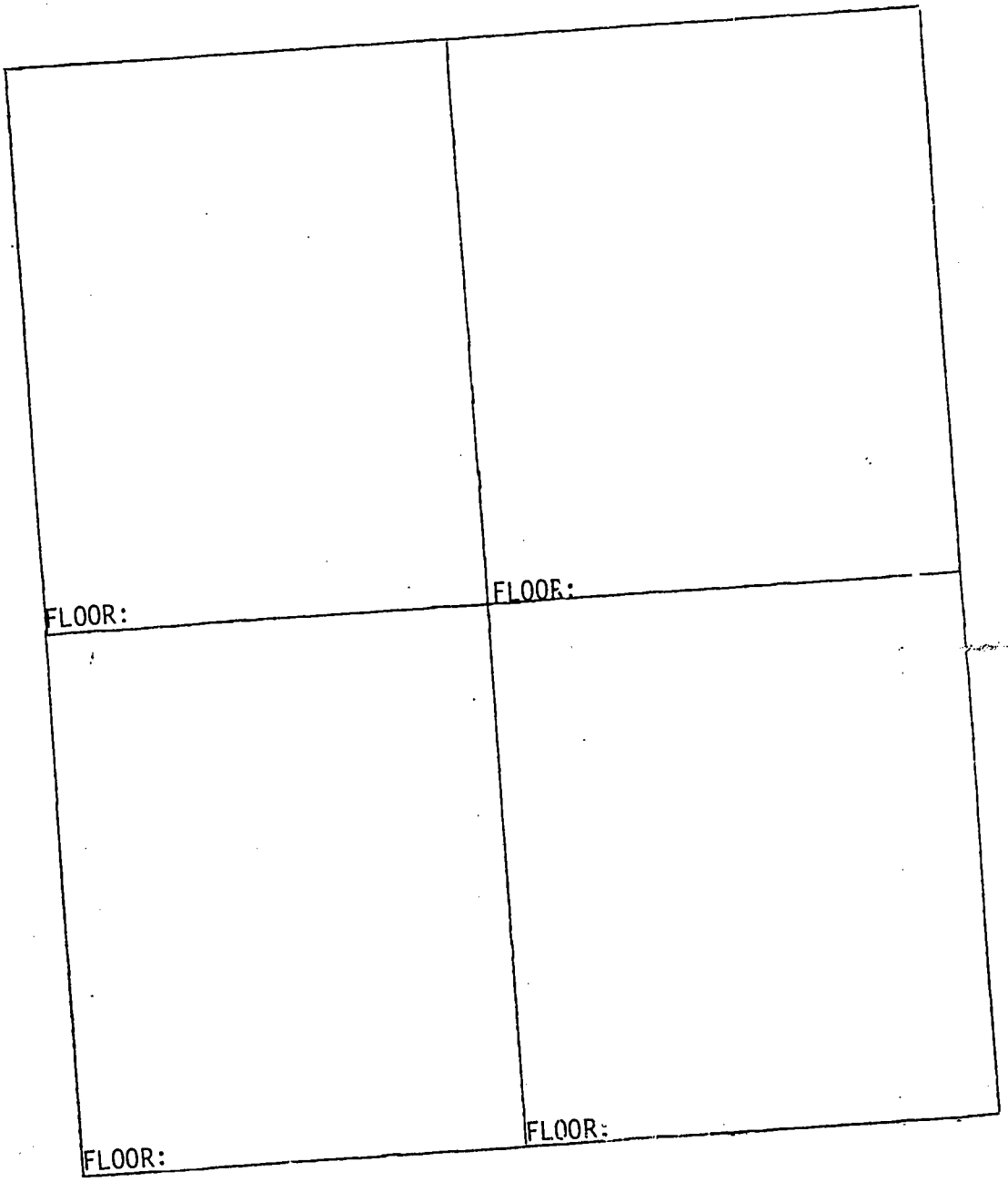
How can you tell that the homes or businesses are abandoned?

What has been done to them?

(answer in sentence form)

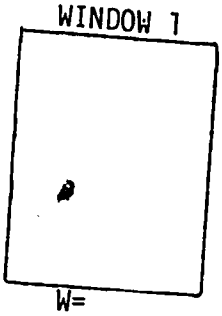
ACTIVITY 5 - Walk along your city block and look at the different types of windows on the houses. The windows can be on the first, second, or third floors or even in the cellar at pavement level.

Draw a picture of the different types (or shapes) of windows and label which floor the window was on.



ACTIVITY 6 - Select 3 windows of different sizes along your city block and measure the length and width of each. Now, determine the area and perimeter of each window.

WINDOW 1



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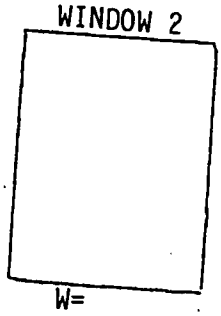
W=

WINDOW 2



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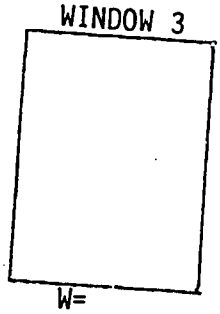
WINDOW 3



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W=

ACTIVITY 7 - Count the number of windows in 10 houses along your city block. Now, determine the average number of windows per house along your city block.

House 1 = ____windows
House 2 = ____windows
House 3 = ____windows
House 4 = ____windows
House 5 = ____windows
House 6 = ____windows
House 7 = ____windows
House 8 = ____windows
House 9 = ____windows
House 10 = ____windows

____total # of windows

10/ Total # of windows

Average number of windows per house = _____windows

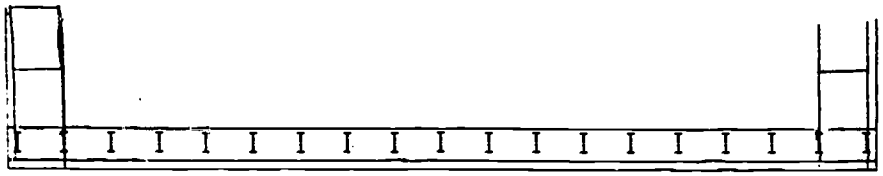
ACTIVITY 8 -

Step 1 - Measure the length of one pavement block using a meter stick or a yard stick.

Step 2 - Count the number of individual pavement blocks along your city block (check to see that the pavement blocks are the same size)

Step 3 - To determine the length of pavement along your city block, multiply the length of one pavement block with the number of individual pavement blocks.

length of one pavement block	X	number of pavement blocks	=	length of pavement along your city block



What is the length and width of one pavement block?

_____ cm/feet

What is the total length of pavement along your city street?

_____ cm/feet

What is the perimeter of the sidewalk?

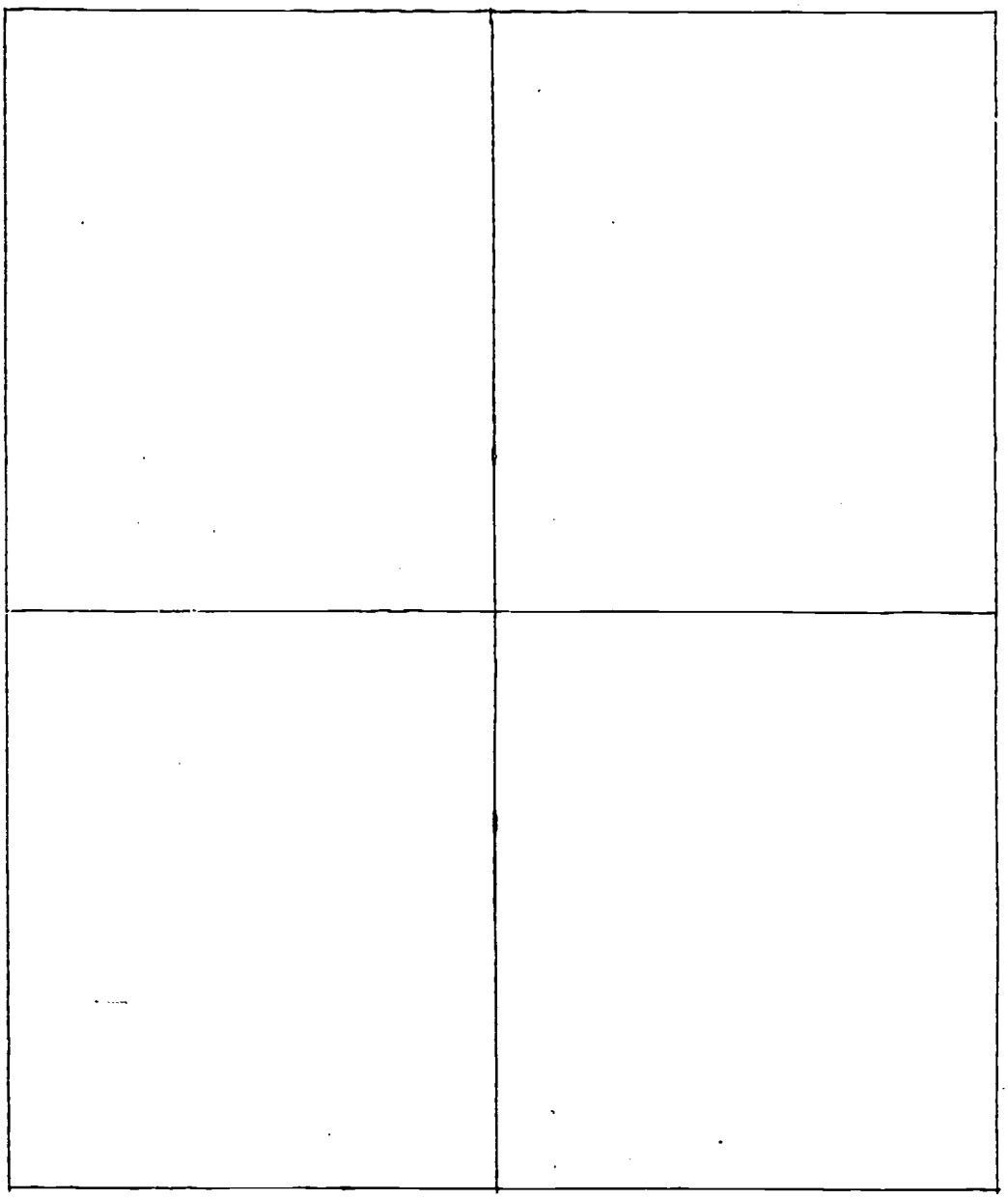
_____

What is the area of the sidewalk?

_____

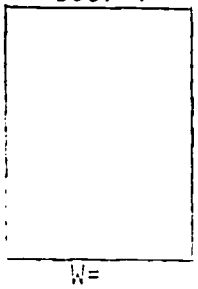
ACTIVITY 9 - Walk along your city block and look at the different types of doors on the houses. The doors may lead to the inside of the house, to the cellar, or even a wire fence door leading to the back alley.

Draw a picture of the different types of doors and label where do the doors lead.



ACTIVITY 10 - Select 3 doors of different sizes along your city block and measure the length and width of each. Now, determine the area and perimeter of each door.

Door 1



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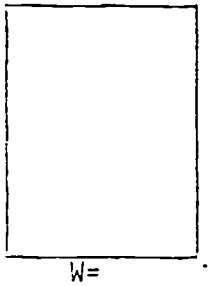
Door 2



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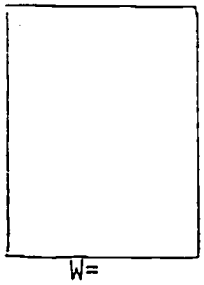
Door 3



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W=

ACTIVITY 11 - In this activity, use a meter stick (or a yard stick) and measure the following:

Width of a Home_____

Distance between Windows _____

Height & Width of Windows _____

Draw a detailed picture below using the scale provided or create your own scale.

Scale

1 inch = 6 feet
1 cm = 2 meters

ACTIVITY 12 - Look at the houses along your city block. What are the materials used to build the houses and stores along your city block.

	Material	Use
1.	glass	Windows
2.		
3.		
4.		
5.		
6.		

ACTIVITY 13 - Look along your city block to see if there are any stores or businesses mixed in with the houses. If you located a storefront or a business, draw what the store or business front looks like. Look for the small details.

We did a lot of math and science work on our city block. It didn't even feel like you were in school. I never liked math much but I kind of like it now.

Brenda Jones Grade 7
Rhodes Middle School

ACTIVITY 14 - Look along your city block and see if there are any man-made objects that are not stores, businesses or houses.

Object	Use
1. Stop sign	Traffic control
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

ACTIVITY 15 - If you found stores or businesses along your city block, list the names of the stores or businesses and what the owner does to make a living and what service does the store give to the neighborhood.

	Name	Business	Service
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

ACTIVITY 16 - This activity must be performed at different times of the day. Select one object along your city block (example: fire hydrants, telephone poles, tree, etc.) and measure the length of the shadow at different times of the day. Record the direction of the shadow at different times of the day.

ACTIVITY 17 - Using a meter stick (or a yard stick) measure the width of the street.

WIDTH OF THE STREET = _____

How many traffic lanes does your street have? _____

How wide is a traffic lane?_____

ACTIVITY 18 - As you look along your city block at buildings, you will notice that "bricks" are used as a building material. What are the dimensions (length, width, height) of a single brick?

Using the telephone book, find a lumber company and call them to find out the cost of 1 brick

1 brick = $_____

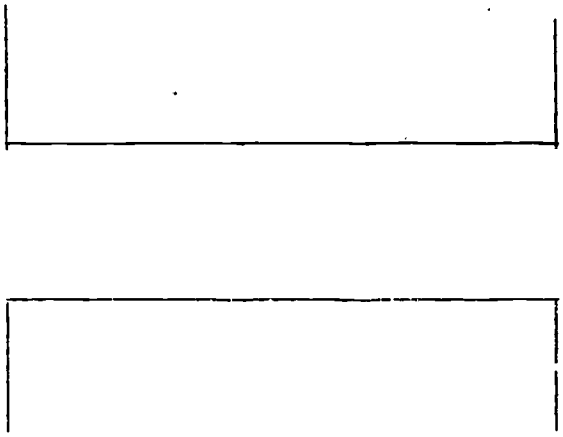
ACTIVITY 19 - Determine the cost of the bricks used to build one house on your city street.

One brick = $_____

Total number of bricks _____

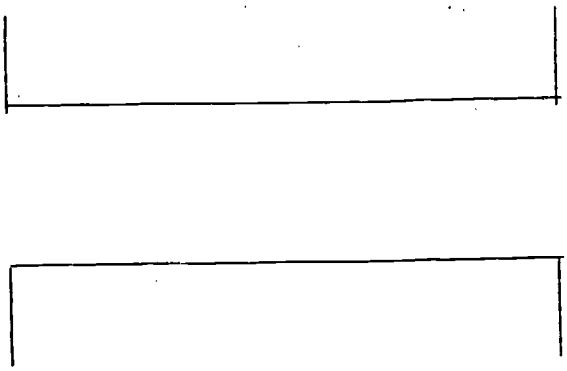
Total cost of bricks = $_____

ACTIVITY 20 - Using the map below, locate where any manholes and sewer openings are found. Place their location on the map.



ACTIVITY 21 - While you were working along your city block, did you see any abandoned cars? Abandoned houses? Abandoned stores?

Give the location of each on the map below



What actions could you or the residents of the city block take to solve this environmental problem? (answer in sentence form)

ACTIVITY 22 - You have now spent some time on your city block looking at the street, pavement, trees, plants and the buildings. Look at the list below and tell what is the use or purpose of each item.

1. Street -

2. Pavement -

3. Trees -

4. Plants (grass) -

5. Buildings -

   a. roof -

   b. windows -

   c. doors -

   d. steps -

ACTIVITY 23 - In this activity, prepare a questionnaire in class that you will be able to use for community interviews.

The following are only a few questions that you could use:

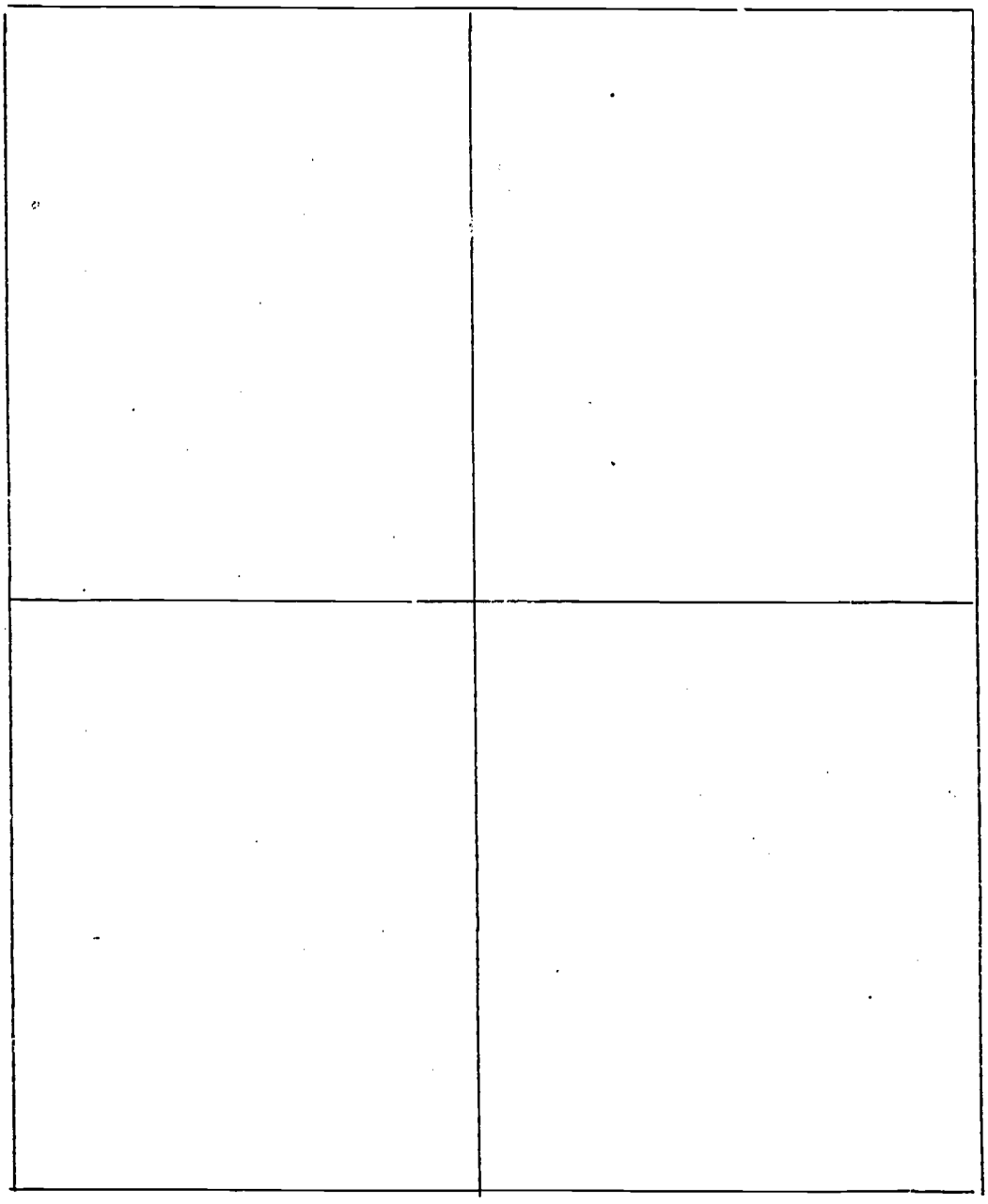
1. How long have you lived on the block?
2. What additions have you made to your home after you moved in?
3. What changes in the neighborhood have you seen?
4. Do you like living on the block?
5. Do you rent or own the place where you live?
6. Would you help to make the street more attractive by contributing time?_____ Money?_____

Fill in your questions:

7.
8.
9.
10.
11.
12.
13.
14.
15.

ACTIVITY 24 - Using any type of camera and film, make a photo essay about your city block showing such things as children playing, old people sitting, people working, street lights and street signs.

MY STREET



ACTIVITY 25 - After exploring your city block, tell where the following places and things could be found:

- the most comfortable
- the least comfortable
- cleanest
- dirtiest
- safest
- scariest
- the largest
- the smallest
- the softest
- the hardest
- the darkest
- the brightest
- the roughest
- the smoothest

We measured windows, doors, stop signs, fire plugs and the sidewalk. Along with our math work, we also painted the sidewalk curbs and planted some flowers in flower boxes. The people on the block liked it and they liked me too.

Clinton Holland Grade 7
Rhodes Middle School

ACTIVITY 26 - Write a poem about your city block. Write about the smells, the sounds, the colors, the people and your feelings about your city block as you walk down it.

ACTIVITY 27 - Go to your city block and find familiar objects and invent or demonstrate a new use for each of them.

Example: Using a beer bottle for a flower vase.

ACTIVITY 28 - Go to your city block with a tape recorder and record the sounds that you like and the sounds that you do not like. Record morning sounds (10:00), afternoon sounds (12:00), and evening sounds (3:00).

ACTIVITY 29 - Create a television or radio commercial or a newspaper ad to show for your classmates some aspects of your city block. Use anything that you need for this activity.

ACTIVITY 30 - Go to your city block and find things that you like and things that you dislike. Make a list to show both types.

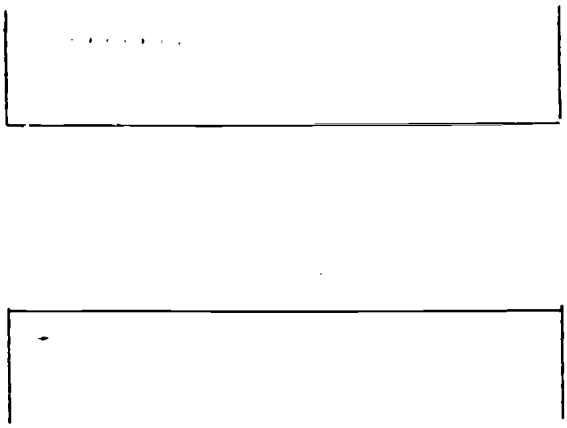
Likes	Dislikes
1.	1.
2.	2.
3.	3.

ACTIVITY 31 - Go to your city block and collect materials you can find and create some form of art with those things. The art form could be free expression or express a theme. Some of the possible themes could be

-how ugly is our city block (environment)
-how beautiful is our city block (environment)
-how much joy is on our city block

ACTIVITY 32 - Draw a detailed map showing the way you come to school. Also show the longest way to school, the shortest way to school, the quickest way to school and the safest way to school.

ACTIVITY 33 - Draw on the map below the location of any trees along your city block. Label the trees A, B, C, D, and so on from left to right.



Remove a leaf from each tree and determine what type of tree it is by using your science book or an encyclopedia and determine the number of different types of trees along your city block.

TREE A

TREE B

TREE C

TREE D

TREE E

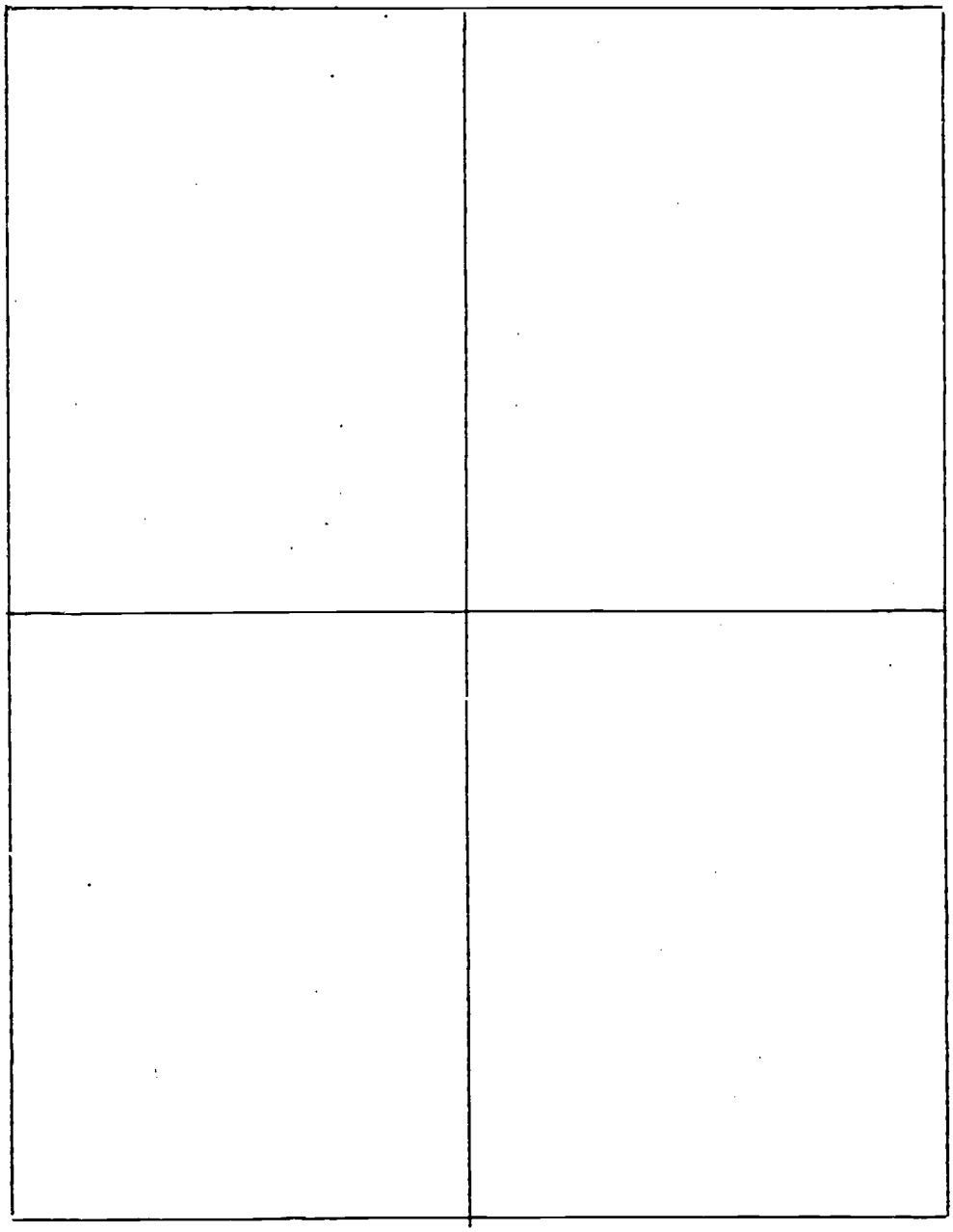
TREE F

TREE G

TREE H

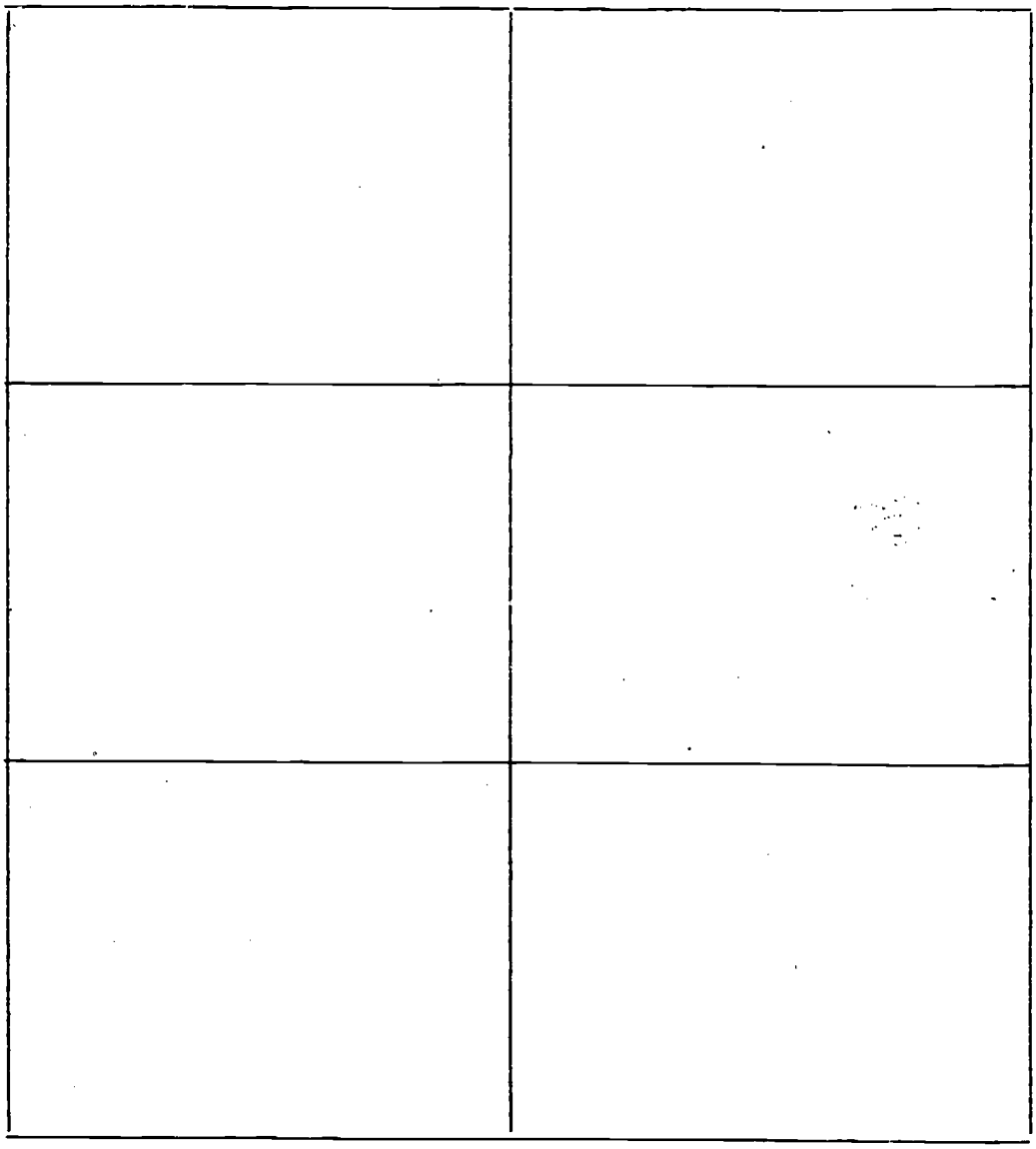
TREE I

ACTIVITY 34 - Draw or trace the leaves of the different types of tree that you found along your city block. If there is only one type of tree along your city block, draw only one leaf from only one of the trees.

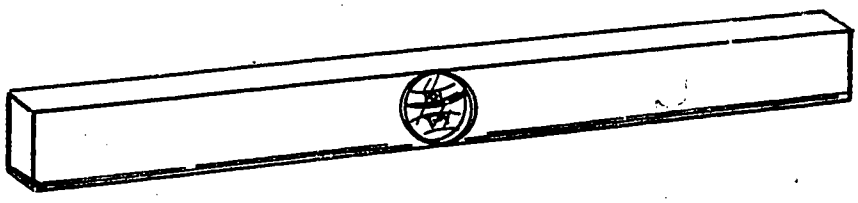


ACTIVITY 35 - Along your city block, the careful observer will find many different types of plant life. Cut off one or two leaves and place the cuttings into a clear plastic sandwich bag.

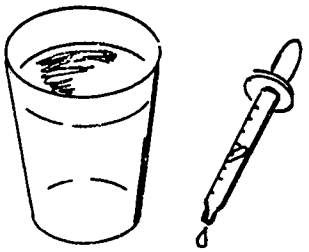
Using the specimens you have collected, draw what each plant's leaf looks like. Determine the name of the plant by using your science book or an encyclopedia.



ACTIVITY 36 - A carpenter uses a "level" to determine whether a surface is level or not.



Since we do not have such a device, we will determine whether a section of pavement along your city block is level by using water flow.



Material:

1 eye dropper
1 glass of water

Step 1 - select a section of pavement
Step 2 - remove all debris and soil from the surface of the block with a broom
Step 3 - Slowly, drop small amounts of water onto the surface of the pavement section. If the water remains in the center and spreads out evenly, the pavement block is "fairly" level. If the water begins to run to one section of the pavement block, that pavement block is not level.
Step 4 - repeat this activity at each end of your city block as well as in the center.

Record your findings:

ACTIVITY 37 - In nature, there are certain substances that are magnetic. These substances are certain forms of iron ore. In this activity, rub or drag a magnet across the pavement and observe the results.

If there are any particles attached to the magnet, place the particles into a jar.

What conclusions can be made?

ACTIVITY 38 - In this activity, rub or drag a magnet through the grassy part of your city block and observe the results.

If there are any particles attached to the magnet, place the particles into a jar.

What conclusions can be made?

Compare the amount of iron ore particles found in the grass with the amount found on the pavement. What conclusions can be made?

ACTIVITY 39 - Answer in paragraph form

1. What is the general appearance of your city block?

2. What is good and bad about your city block?

3. What needs to be done to improve your city street?

4. Is there litter or graffiti on your street?

ACTIVITY 40 - Find evidence of changes taking place on your street right now. Report your findings in sentence form.

Good Changes -

Bad Changes -

Neither Good or Bad -

ACTIVITY 41 - Write a composition describing the physical characteristics of your city street. Use the information that you obtained by performing the activities in this workbook. What physical characteristics do you think will be common to all city streets?