

# SCIENCE 5

Modified In-School Off-School Approach Modules (MISOSA)  
**Distance Education for Elementary Schools**  
**SELF-INSTRUCTIONAL MATERIALS**



## **BAD EFFECTS OF CHANGES IN THE ENVIRONMENT**



Department of Education  
**BUREAU OF ELEMENTARY EDUCATION**  
2nd Floor Bonifacio Building  
DepEd Complex, Meralco Avenue  
Pasig City

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# BAD EFFECTS OF CHANGES IN THE ENVIRONMENT

*At the end of this lesson, you will be able to:*

- ➡ describe how certain changes in materials have bad effect in the environment



Do you still remember the good effects of changes of materials to the environment?  
Answer the exercise that follows:

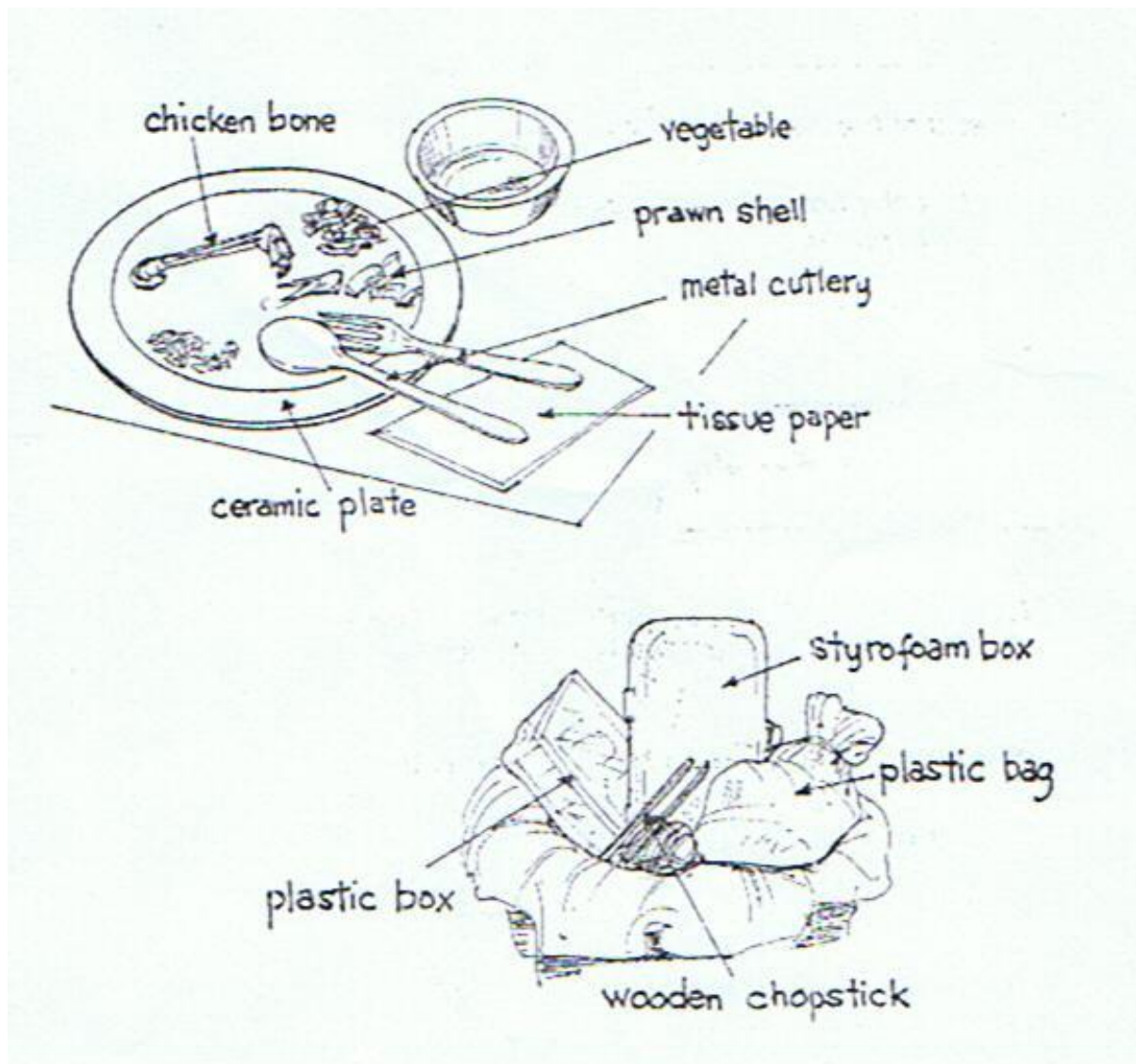
Write **Yes** if the change will have a good effect and **No** if not.

1. making medicine
2. vehicles that produce black smoke
3. making hollow blocks out of sand and cement
4. cooking food
5. burning garbage

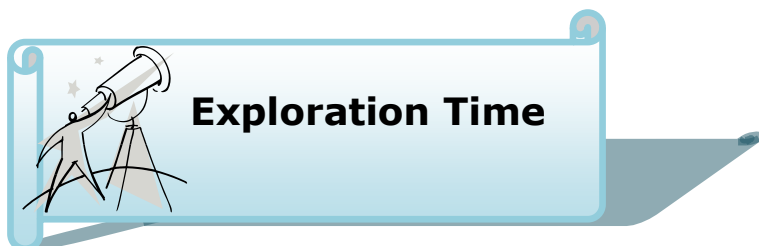


we should segregate our garbage. Below are sample household materials. Separate them into BIODEGRADABLE (easily decomposed) or NON-BIODEGRADABLE (not easily decomposed). Write the answer in your notebook.

### Activity 2 - WHICH IS WHICH?



BIODEGRADABLE	NON-BIODEGRADABLE
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.



identify some changes that you see around you. Are they all good? Do you see some changes that have bad effects? Some changes in materials have bad effects. Would you like to know about them? Do the activities and find out.

### Activity

What you need:

white cloth or handkerchief

What to do:

Leave a white cloth or handkerchief on a windowsill or clothesline for 3 days. Observe.

Answer these questions:

- Where did you put the white cloth or handkerchief?
- What happened to it after a few days?
- Did the color change? Why do you think so?
- Why is there air pollution?

### Activity 2

What you need:

Tablespoon of ash

What to do:

Put a tablespoon of ash in the clean water, Observe.

Answer these questions:

1. What happened to the water after you put the ash?
2. Did the color change?



### Activity 3

Look at the picture below. Then, answer the questions that follow.

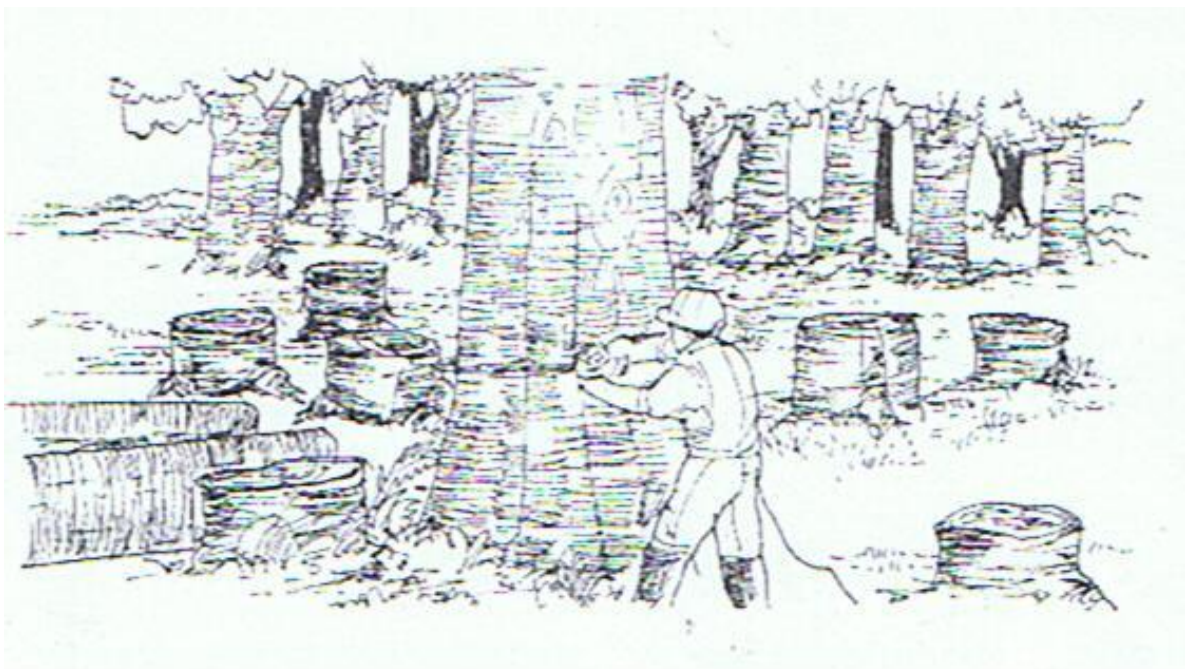


Answer these questions:

1. What is found along the road?
2. What do you see flying over the garbage?
3. Why is the person covering her nose?
4. What will happen to the soil if garbage is dumped on it?

### Activity 4

Look at the picture below.



Answer these questions:

1. What happened to the trees?
2. Aside from trees, what other living things live in a forest?  
What happen to the other animals if the trees are cut?
3. You have learned that the roots of trees help in holding the soil when it rains.  
What do you think will happen when the trees are cut and it rains very hard?

## READ AND LEARN MORE

Good and bad effects result from certain changes of materials in the environment. Composting, recycling, technological development, water cycle and photosynthesis are changes that have good effects.

Some changes have bad effect like pollution and destruction of habitat and lose of lives.

Improper disposal of garbage, harmful chemicals and human waste can cause changes. It can pollute air, land and water. Smoke from the burning of oil and coal and wood can also cause air pollution. Land pollution can also occur when farmers use too much weed killers and insecticides on their farms. Seas and oceans become polluted when oil from ships spills into the water. We also add to air pollution when we burn fuels. When burn they give out smoke. Cigarette smoke also pollutes the air. Motor-cars, buses and other vehicle give out harmful gases which are invisible. The air becomes polluted when are too many vehicles on the road. Smoke from factories and power stations can also cause air pollution.

Forest had been cleared to give way to housing projects. But this could lead to lose of habitat to animals and even lose of lives. It could also lead to soil erosion.

The loss of forests and air pollution have led to another threatening situation for our planet: GLOBAL WARNING. The earth receives heat from the sun and reflects some this heat into space. Carbon dioxide and other gases in the air act as blanket to hold onto some of this reflected heat. As a result the earth is warm. This is called the greenhouse effects. The cutting down of trees and the burning of fuels increases the amount of gases that cause greenhouse effect. When this happens the greenhouse effect increases. Temperature all over the world rises and this is global warming. With this, the ice at North and South Pole may melt. This will cause sea-levels to rise and so widespread flooding and destruction will occur. Plants and animals that are unable to adapt to the higher temperature will become extinct.

Using aerosol hair sprays and insecticides can release CFCs (chorofluorocarbon) into the air. Even the cutting of styrofoams can release CFCs. CFCs has been found to be responsible for destroying the ozone layer. The ozone layer prevents too much ultra violet rays from the sun from reaching the earth. Too much exposure to UV (ultra violet) rays can harm our eyes and skin cancer.



### **I LEARNED THAT:**

- ➡ Some of changes in materials have bad effects to the environment.
- ➡ Improper disposal of garbage, harmful chemicals, human waste, smoke
- ➡ Pollution and deforestation causes loss of habitat lives, erosion and global
- ➡ warming



### **Apply It**

- ➡ Some people prefer using styrofoam for food packing. Would you do the same? What would be the effect of this? What other alternative can you think of?
- ➡ Describe how you dispose your garbage in your house. Do you think this is proper or could it lead to pollution? Draw how you can correct your garbage disposal practices.
- ➡ Make a slogan on a bond paper on how we can prevent pollution.



### **Test Yourself**

**A. Write the Bad effect of these changes in the environment. Choose from the choices and write in your notebook.**

1. cutting of trees
2. smoke from vehicles
3. using aerosols
4. throwing of garbage in rivers
5. using harmful chemicals on land



AIR POLLUTION  
DEFRORESTATION

SOIL POLLUTION  
WATER POLLUTION

**B. Complete the outline in your notebook. Fit in the needed information from the choices in the box.**

**Bad Effects of Changes in the Environment**

- |      |                    |                              |
|------|--------------------|------------------------------|
| I.   | Pollution          |                              |
|      | A. Air Pollution   | Burning of Wood              |
|      | 1.                 | Loss of Habitat              |
|      | 2.                 | Cigarette Smoke              |
|      | 3.                 | Global Warming               |
|      | B. Water Pollution | Garbage Thrown in Canals     |
|      | 1.                 | Harmful Chemical on Soil     |
|      | 2.                 | Human Waste in Drainage      |
|      | C. Land Pollution  | Release of CFCs into the Air |
|      | 1.                 | Soil Erosion                 |
|      |                    | Improper Disposal of Garbage |
| II.  | Deforestation      |                              |
|      | A.                 |                              |
|      | B.                 |                              |
|      | C.                 |                              |
| III. | Ozone Layer        |                              |
|      | A.                 |                              |

Congratulations for a job well done! Keep up the good work. Now you're ready to move on to the next module.

