

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



UNDERSTANDING FIRE



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CHANGES IN AN OBJECT BEFORE AND AFTER HEATING

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

- Practice safety precautions in using fuels / fire.



Try to Recall

A. Form a word from the scrambled letters. Write your answer in your notebook.

n o c d u c n o t i

- the transfer of heat from molecule to molecule

c n c v o e t n i o

- the transfer of heat by currents'

i g n t r d a i o

- the transfer of heat through space

B. Draw a fire.

**When do we say fire man's friend and when do we say it is his enemy?
Explain your answer.**



Exploration Time

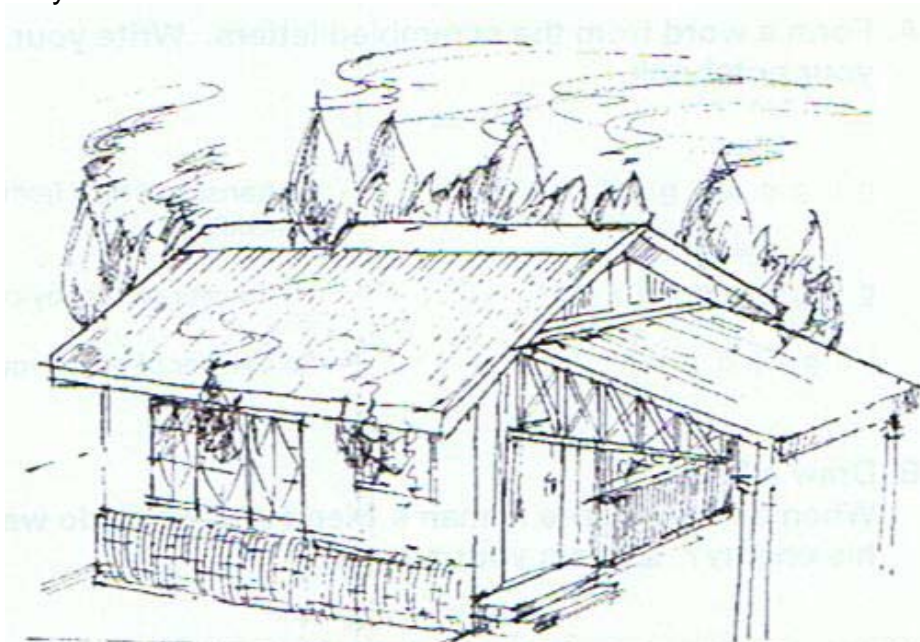
ACTIVITY 1

- Think about fire
- List down how you and your family members use it.



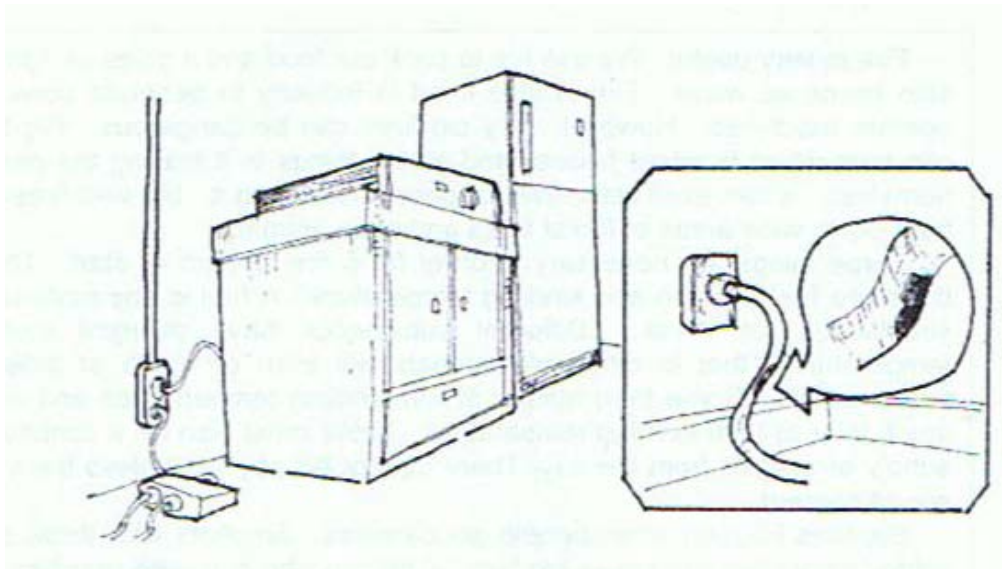
ACTIVITY 2

- Study the illustration below.



- What would be the effect of this to the people in that area?
- What do you think do the people there feel?
- How can you help to prevent this from happening ?

ACTIVITY 3



- Describe the picture and answer the following questions:
 1. What do you think will happen to the appliances?
 2. Why do you think defective electric devices and appliances also cause fire?
 3. What other things can cause fire?

ACTIVITY 4

- Remove the cap of the Bunsen burner and light it up.
- Now put back the cap on the Bunsen burner. Describe what happens to the flame? Why do you think was taken out or removed?
- What are other ways of putting out the flame?
- What things are to be removed to put out fire?

Read and Learn More:

Fire is very useful. We use to cook our food and it gives us light. It also keeps us warm. Fire is also used in industry to generate power to operate machines. However, very big fires can be dangerous. Big fires can burn hundred houses and all the things in it leaving the people homeless. It can even claim lives of people caught in it. Big wild fires can burn down wide areas of forest trees and even animals.

Three things are necessary in order for a fire to burn or start. These three are fuel, oxygen and kindling temperature. A fuel is any material or substance that burns. Different substances have different kindling temperatures, that is different materials will burn or ignite at different temperatures. Some burn quickly at low kindling temperatures and some much later at high kindling temperature. There must also be a continuous supply of oxygen from the air. There cannot be any fire unless the three are all present.

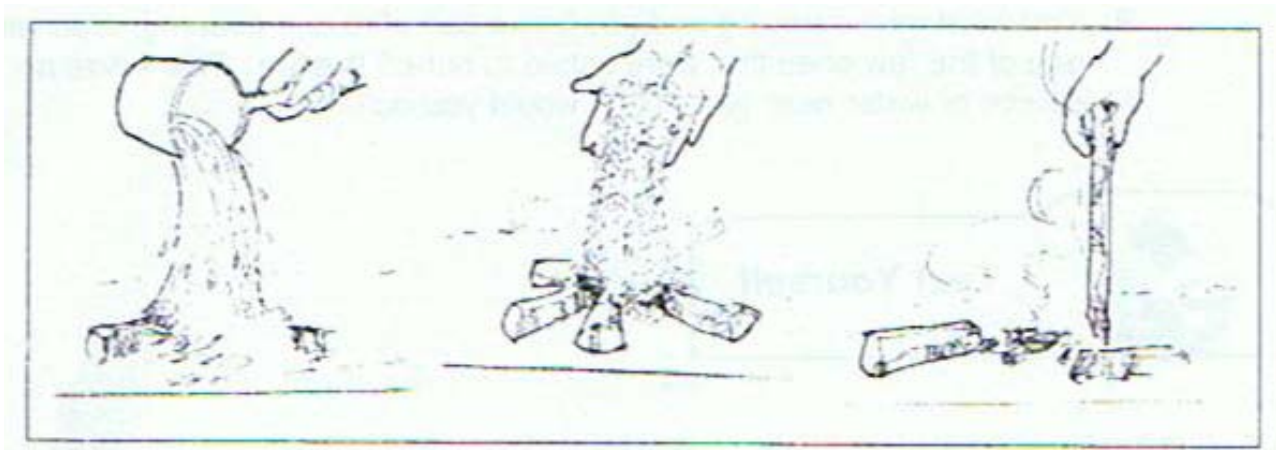

Big fires happen when people get careless. Smokers who throw their lighted cigarettes can cause big fire. Children who play with matches can also cause fire. Storing paper and gasoline can also cause fire. Forest fires can also happen when people throw their cigarettes and lighted matches into dry woods and leaves in the forest. Fires can also happen when people forget to properly put off the fire they started.

Faulty wiring and defective appliances can cause short circuit that can also cause fire. Worn-out electric wires and outlets also do the same. Too many electrical appliances plugged into one outlet can cause over loading that may lead to fire.

Fires can be prevented if we follow these simple safety rules.

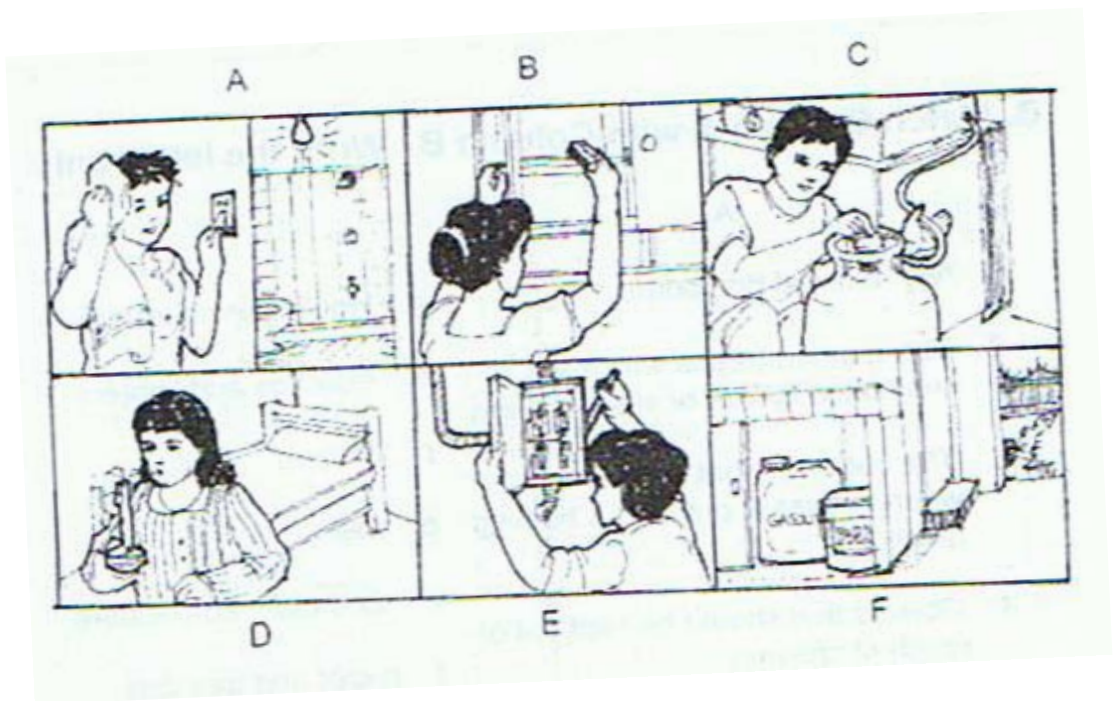
- Keep matches and lighters away from children's reach.
- Inspect gas tanks for leaks.
- Put off candles before going to bed.
- Check electrical wires and have them repaired if worn-out.
- Do not stack paper, gasoline and other materials that easily burn inside the house.
- Turn off electrical appliances after use and unplug them.

A fire can be extinguished or put out if any of the conditions that are needed to start a fire is removed. You can cut off the supply of oxygen by covering the flame with ashes, sand, soil or wet rag. You can also put out the flame by scattering the fuel. You can also lower the kindling temperature by pouring water over it as the fireman do.

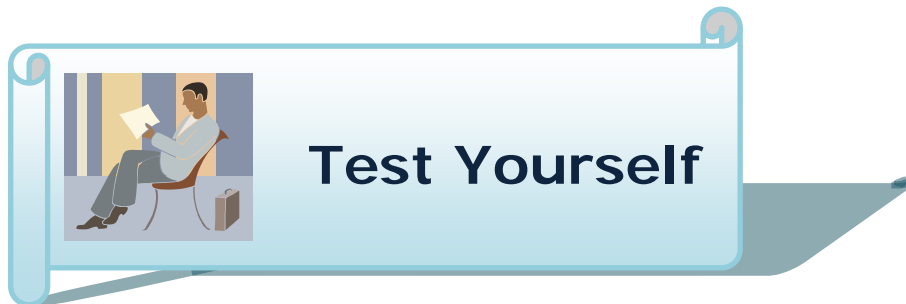
Apply It

A. Study the pictures.



- Identify which picture shows a good practice in preventing fire.
- Explain how each practice prevents the occurrence of fire.

B. You went on a camping and you had a campfire one evening. You were one of the few ones that were asked to put-off the fire. There was no source of water near you. What would you do?



A. List down 3 reasons why fire can be considered a “friend or a foe”.

FIRE	
List a friend because	Is a foe because
1.	1.
2.	2.
3.	3.

B. Match Column A with Column B. Write the letter only.

- | A | B |
|---------------------------------------------------------------------------|--------------------------|
| 1. Any material that burns | a. kindling temperature |
| 2. The temperature at which a substance ignites or starts to burn | b. matches and lighters |
| 3. The condition that is removed when a glass is put over a burning flame | c. oxygen |
| 4. Objects that should be taken out of reach of children | d. fuel |
| 5. Examples of combustible Materials | e. oxidation temperature |

