ToxMystery Lesson Plan 2: **Case Book: Catch That Hazard!!!**

Grade Level: 2-6

Description: This lesson plan is a follow-up lesson to the introductory ToxMystery activity lesson. It is a paper-based activity that incorporates the character "Toxie" from the computer game activity into a detectives' "Case Book". Students will work with the packet "Catch That Hazard!!!"

They will follow the clues provided, and work with the ToxMystery computer game activity to fill in the clues. The chemicals to be investigated are introduced on the cover of the Case Book activity packet. After reviewing the clues with the ToxMystery game the students will fill out the final sheet of the Case Book packet.

National Science Educational Standards

Science as Inquiry:

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

Science in Personal and Social Perspective:

- Personal health
- Types of resources
- Natural hazards
- Changes in environments
- Science and technology in society

History and Nature of Science

- Science as human endeavor
- Nature of science

Learning Outcomes

Students will be able to:

- Compare and analyze appropriate uses for chemicals and other household products
- Identify potential environmental health hazards in and around their homes
- Describe what they found in the activity in written and verbal formats

Background

ToxMystery is a computer game activity developed by the National Library of Medicine to increase awareness of possible environmental health hazards around the house. ToxMystery was developed with ages 7 to 11 in mind. The activity presents Toxie the Cat as the narrator. Students navigate through Toxie's house and detect hazards in each of the rooms. When a health hazard is discovered, the student is then presented with a multiple choice question about the health hazard. The activity is complete when the student has successfully answered all of the questions in each of the rooms of the house. The activity is enhanced through the use of animation, audio, and music. Toxie, the narrator, is a friendly guide to the mystery of environmental health hazards.

Time Needed

Two forty-five minute class periods

Materials Needed

- Computer
- ToxMystery Game (online or CD-ROM)
- Copies of the "Case Book" worksheets
- Pencils, pens, markers, etc.

Procedure

Lesson 2: Group Lesson

1. Load ToxMystery onto all computer stations that will be used during the lesson.

2. Introduce the students to the lesson by beginning a discussion of the first ToxMystery lesson. Write down concepts and terms that come up in discussion on the board. Include in the discussion mystery stories and detective work. Ask the students if there are detective stories that they enjoy reading.

2. Divide the students into groups and assign them to available computer stations that have a connection to the ToxMystery game on them (via web or CD-ROM).

3. Hand out the Case Book activity packet to each student or group. Ask students to go through the clues together and write down the location of the hazards in the notebook found on the chemical pages.

4. When the students have finished writing clues in their packet, bring the class together and give each student a copy of the " Arrest Warrant" for the chemical hazards.

5. Students will finish the lesson by filling out the "Arrest Warrant" page either individually or in groups by copying the clues from the notebooks in their Case Book activity packet.

Evaluation

The following questions can serve as an additional evaluation and reinforcement

1. Which culprits were found in many places?

2. Which ones were not found in very many places?

3. Name some ways that you can make your house safer for younger children or animals that live in your home.

4. What can you do to make sure that the hazards we found today don't hurt anyone? (Ideal answers: tell adults when we spot containers with hazards or hazards themselves, make certain our pets/brothers and sisters don't play around with hazards, etc.)

5. Tell me something you learned about these hazards today. What do you know now that you didn't know before? (This is an open-ended discussion question.)

Students will demonstrate their ability to:

- Identify hazards that are found in the home, both chemical and natural.
- Read and follow directions
- Report on findings in a log or journal