Two lesson units

Subject: The state of air pollution in our area - lichens as bioburifiers for sulfur oxide (IV) pollution.

Part one - in the classroom

Part two - outdoors

Lesson goals:

Pupil:

• - knows what are the sources of sulfur oxide in the air,

• - knows where air pollution in the vicinity of the school comes from,

• - knows what lichen is,

• - defines the places where lichens occur,

• - explains the role of lichens in determining air pollutants.

• - can distinguish lichens from other organisms (eg mosses) on the ground,

• - recognizes lichens with various thallus,

• - justifies the relationship between air pollution and the occurrence of lichens,

• - can use the lichen scale,

• - can explain what the consequences for nature are excessive air pollution,

methods:

• verbal - a talk, a discussion,

• observation - observation of lichens in the field, work with a lichen scale,

• research.

Forms of work: individual, group, collective.

Teaching aids: work cards, lichen scale, guides for identifying lichens and trees, magnifying glasses, writing utensils.

Part 1.

Organizational activities:

1. Checking attendance, giving the topic and goals of the lesson.

2. A reminder from chemistry lessons about the sources and types of air pollution.

 Implementation phase:

3. Presentation of basic information on lichens - previously developed information presents selected pupils (structure, types of lichen lichen, occurrence, sensitivity to air pollution with sulfur oxide (IV), lichen scale).

4. Presentation of lichen scales prepared earlier by students.

5. Discussion on the consequences for nature of excessive air pollution and methods of preventing these pollutants.

Part 2.

1. Organizational activities: checking attendance, reminding the topic and goals of the lesson.

2. Class division into 3 groups, selection of leaders.

3. A reminder of the rules and how to behave during departure and observation.

4. Distribution of work sheets and materials needed.

THE IMPLEMENTATION PHASE

1. Exit to the nearest area around the school + terrain along the roadway to observe the lichens.

2. Working in groups according to the instructions contained in the job cards.

3. Return to the class.

SUMMARY PHASE

1. Group leaders present the results of their observations, compare and discuss their results and conclusions.

2. Saving the application on air cleanliness in our area.

3. Assessment of the work of individual groups.



