**Script:**

**Subject: Nature/Biology**

**Target group: 5th-grade students**

**Topic: INDUSTRIAL LANDSCAPE OF THE UPPER SILESIAN HIGHLAND**

General aim:

• Indicating the interdependence between natural components of the environment and human industrial activity

Operational objectives:

• Presenting the characteristics of the industrial landscape

• Highlighting the significance of coal for the economy

• Reading the names of the main cities forming the Upper Silesian Industrial District

• Providing examples of improper landscape management by humans

Lesson description:

Introduction:

1. Voivodeship coats of arms - arranging (from a jumbled set of letters) the names of voivodeships and marking them on a contour map of Poland, worksheets,

2. Riddle - based on an illustrated map (worksheet), guess the types of industries in Poland,

3. Mineral deposits - article: How is coal formed?

 - showing a piece of coal,

 - does coal soil our hands? (yes)

 - what can be done to prevent it? (wash with cold water)

Development:

1. Urban-industrial landscape, i.e., landscape transformed by humans - anthropogenic

 - a fragment of a film about the Upper Silesian Industrial District,

2. Collaborative preparation of notes on the characteristics of the industrial landscape:

 - generally flat terrain,

 - dense, compact, and tall buildings,

 - dense street network,

 - high traffic density (people and vehicles),

 - reduced air transparency (due to pollution),

 - numerous industrial facilities: quarries, spoil heaps, mines, factory halls, smoking chimneys, pipelines, power lines, etc.

 - destroyed vegetation,

 - polluted water, soil, air,

 - the most densely populated area in Poland,

 - a large cluster of cities,

3. Debate - class divided into 2 groups.

 Group 1: represents workers from mines, smelters, and industrial plants in Silesia,

 Group 2: represents inhabitants of Silesia, environmentalists,

 Using available sources, students prepare for a debate on the topic: "Should mines and smelters be closed to save the natural environment of the Upper Silesian Highlands?"

 Starting the debate.

4. Summing up the debate - answering the question:

 "What should be done to save the nature of the Upper Silesian Highlands?" - students in groups fill in answers to the following scheme:

 Water - pollution sources:

 - consequences of pollution:

 - protection methods:

 Air - sources:

 - consequences:

 - methods:

 Rocks and soil - sources:

 - consequences:

 - methods:

 Plants and animals - sources:

 - consequences:

 - methods:

5. Fossils - album, curiosities

Conclusion:

1. Experiment - sand filter - water purification

2. Environmental diversity - animal curiosities

Individual work:

1. Look up synonyms for the word "pollution" in the dictionary and write down 10 examples in a notebook.

2. Does environmental pollution affect our health?

 - Read the article about water in the attachment.

 - Design a symbol for healthy and clean water that can be placed on a bottle of mineral water J

Worksheet:

Review of knowledge about the Upper Silesian Highlands.

Based on the text in the attachment, answer the following questions:

1. What does the industry deal with?

2. List the industrial facilities and plants of the Upper Silesian Highlands.

3. What is the difference between agglomeration and conurbation?

4. How many cities make up the Silesian conurbation? List and mark these cities on the map of Poland.

5. What is the Upper Silesian Industrial District?

6. Explain the concepts: Silesians, tenements, Silesian dialect, Barbórka, fedrować.

7. List the adverse effects of industrial development in Silesia.

8. Complete the exercise - attachment.