Scenario

Surface Waters of Poland

T – Teacher

S – Student

T: Today's topic is the surface waters of Poland. Does anyone know what surface waters are?

S: Surface waters include lakes, rivers, and ponds.

T: Exactly, as well as canals and artificial reservoirs. The beginnings of life on Earth took place in the ocean. After 3 billion years, the first organisms emerged on land. Water is an essential factor for the life of every organism. Even our bodies consist of about 70% water!

Now, you will conduct an experiment. Prepare a plastic bottle and a pitcher of water.

S: I've already prepared them.

T: To "see" what 70% represents, pour water into the bottle to about ¾ of its volume.

S: Our bodies contain a lot of water indeed.

T: Did you know that your blood contains 90% water, and your skin - 64% water?

S: Is there water in the heart too?

T: The heart contains 79% water.

It's clear that hydrating our bodies is very important for our health! Do you remember the states of water?

S: I do. Water is a liquid state, ice is a solid state, and water vapor is a gaseous state.

T: Very good. You can find these three states of water in your kitchen. Do you know where to look for them?

S: I do! In the freezer, I have ice cubes for drinks, and when my mom washes dishes, she uses water - that's the liquid state. Water vapor comes out of the boiling kettle, which is the gaseous state.

T: Correct. Now, tell me, what happens to water in nature? Imagine it's raining. What happens to the rainwater?

S: When water falls on the Earth's surface, it starts to soak into the soil.

T: Some of the water soaks into the soil and continues to feed groundwater, while some of it feeds surface waters, which are...?

S: They feed rivers, lakes, and ponds.

T: Good. Surface reservoirs receive water from rainfall.

Do you think this is the end of the water's journey?

S: It's not the end - the water starts to evaporate from the surface of rivers, lakes, ponds, and artificial reservoirs.

T: What happens to the evaporated water now?

S: Water vapor moves through the atmosphere, and then precipitation occurs again.

T: Exactly, water continuously circulates in nature. This circulation of water in nature is called the hydrological cycle.

Diagram of the water cycle in nature

T: Where does water accumulate on Earth?

S: I think water accumulates in depressions.

T: In depressions, or in other words, concave forms. Please list concave forms.

S: These are basins, valleys, and troughs.

T: Prepare a mat and some sand. Try to form a valley and a basin out of the sand.

S: Can I start now?

T: What shape does a valley have?

S: A valley is elongated, and a basin?

T: A basin is a depression surrounded by elevations.

S: I'm done.

T: Now I'll remind you of terms related to our topic:

River - a natural surface flow running in an eroded riverbed,

Lake - a natural inland body of water filling a depression in the terrain (lake basin),

Pond - a shallow water body, devoid of a deep zone, smaller than a lake, overgrown with vegetation,

Swamp - an area with high humidity, covered with vegetation,

Canal - an artificial waterway, a section of a waterway, aimed at connecting existing natural waterways,

Artificial reservoir - a retention reservoir formed as a result of damming river waters with a dam.

Now you will get acquainted with the largest lakes in Poland and point them out on the map.

* The student lists and points out on the landscape map of Poland the largest lakes and rivers of our country.

S: I'll prepare the appropriate map of Poland. We can start.

T: The largest lakes are: Lake Śniardwy, Lake Mamry, Lake Łebsko, Lake Dąbie, Lake Miedwie, Lake Jeziorak, Lake Gardno, Lake Jamno, and Lake Wigry.

S: I'd also like to know the longest rivers in our country.

T: The longest rivers in Poland are: the Vistula, the Oder, the Warta, the Bug, the Narew, the San, the Noteć, the Pilica, the Wieprz, and the Dunajec.

S: I've been to the Vistula River before.

T: Was there anything interesting by the river?

S: Yes, I saw a few frogs!

T: Did the water flow fast or slow?

S: The water flowed very slowly, and I also saw fishermen by the riverbank.

T: It was probably the lower course of the river when the river flows slowly. Was the frog small?

S: The frog was big; the men fishing said it was a common toad.

T: Yes, the common toad (also known as the European toad) is a species of amphibian, most commonly found in Poland - it's the largest of the toads living in Poland. Its body is stout and massive, with a wide mouth.

S: I read that there are 19 species of amphibians in Poland, including salamanders, newts, frogs, and toads.

T: As you can see, not only humans need water to live. Similarly, the bodies of animal organisms are composed of water. Animals and plants need water to live.

S: What happens to water in the human body?

T: Water in the human body is responsible for the proper course of metabolic processes (metabolism), removes by-products of metabolism (including toxins that disrupt the proper functioning of the body), helps in transporting, dissolving, and absorbing nutrients. That's why it's so important to drink water every day! It's worth developing such a habit!

S: Water is of great importance for all organisms on Earth.

T: In ancient times, people discovered new lands. They traveled by ship in search of new places to live, wanted to get to know other species of animals and plants, and searched for treasures. During sea voyages, they drew maps of the areas they had already explored. The biggest problem during ship journeys was supplying drinking water.

S: There's plenty of water at sea.

T: There is a lot of water, but it is salty and unsuitable for drinking. It's also important to remember that!

S: So, did they have to take water with them on such a journey?

T: They took water and food, which had to last the entire crew even for several months of the voyage. In the past, there were no refrigerators or cold storage on ships, so both water and other food supplies spoiled quickly.

S: So what did sailors do when the food went bad?

T: Unfortunately, they had to eat what they had. Water spoiled the fastest.

S: They had very difficult conditions.

T: And they often fell ill due to food poisoning.

S: I've been to the seaside before.

T: Tell me - are vacations necessary? What do you think?

S: I think they are necessary. After a whole year of studying, we need to rest a bit.

T: How do you take care of your health on vacation?

S: Holidays are a time for rest. I often went for walks with my parents, we used the pool when the sea water was very cold. My mom made sure our meals were healthy. We ate a lot of vegetables and fruits.

T: Yes, our bodies need a balanced diet, adequate daily exercise, and the right amount of fluids. And now, a word game. Create new words from the letters of the word "streamlet," then calculate how many letters (10 letters), consonants (9 consonants), and syllables (3 syllables) the word "streamlet" has.

* The student completes the task.

New words appear on the board formed from the letters of the word "streamlet,"

such as: RUM, CHECK, MOUSE, WALL, SUM, EMU, ROAR, COURSE, RHYME, SERVE, and others.

T: Do you know how dehydration affects our immune system?

It is estimated that the human body can survive without water for 4 to 7 days. Even a slight loss of water from the body is associated with negative consequences. It leads to fatigue, excessive sleepiness, impairs concentration, causes dryness of mucous membranes and skin. Dehydration is also associated with increased susceptibility to infections. It turns out that ensuring proper hydration of the body is very important in infection prevention.

S: Does that mean that drinking the right amount of water during the day protects us somewhat from illnesses?

T: The right amount of water, along with a healthy diet and daily activity, is extremely important for our health. But since we've already talked about illnesses, here are a few recipes for homemade drinks that I hope you'll remember to use when you catch a cold or get sick.

**Ginger water.**

Put ginger in water and pour hot water over it. Wait until it cools down. This water tingles on the tongue, which some people like and others don't, but it kills germs and provides a lot of energy.

**Golden water, or water with turmeric, pepper, and honey.**

Put half a teaspoon of turmeric and a pinch of pepper in a cup, pour boiling water over it, and wait until it cools down. Add honey to the still warm water.

**Water or tea with raspberry juice.**

Water with raspberry juice is a remedy for colds known even to our great-grandmothers. Of course, it's best not to use sweetened or artificially produced juice. If you don't have homemade juice, it's better to put a few raspberries in warm water, which you'll eat later. You'll still taste them, and your body will get a dose of vitamins. You can also blend raspberries and add them to water or tea. In the season when there are no fresh raspberries, use frozen ones - they'll still be healthier than highly sweetened store-bought juices.

* Ensure you are familiar with the article "How to Boost Immunity? Discover the Secrets of Strengthening Diet."

The human immune system forms a protective barrier against dangerous microorganisms. It is made up of a variety of different cells, with 70% of them found in the intestines.

Every day, a battle against pathogens takes place there. Thus, what we eat affects our immunity.

What to eat for immunity?

* A varied diet provides a variety of vitamins and minerals,
* The more colorful and varied the diet, the stronger the immunity.

Vegetables and fruits, preferably fresh and seasonal, are a good source of vitamin C, which supports the immune system.

Products richest in vitamin C include: peppers, oranges, papaya, Brussels sprouts, kiwi, black currants, strawberries, cabbage, horseradish, parsley.

Beta-carotene is also important, found in: pumpkin, carrots, kale, spinach, sorrel, chives, mango, apricots.

Unsaturated fatty acids from the omega-3 family are also necessary for the proper functioning of the body (they reduce inflammation and help fight infections).

The highest content of omega-3 fatty acids is found in:

* fatty marine fish (salmon, herring, mackerel, halibut, sprat), flaxseed, linseed oil, walnuts, rapeseed oil.

For proper functioning, the body also needs:

vitamin D3, also known as the "sunshine vitamin," and its deficiency leads to weakening of defense mechanisms. Since in our climate, most people suffer from a deficiency of vitamin D3, it's worth taking care to balance its level in the body. Do you know why we suffer from a deficiency of vitamin D3? Most often, insufficient exposure to sunlight is responsible for a lack of vitamin D3. Poland receives relatively little sunlight throughout the year, and for most months, there is very little of it.

Among the minerals supporting the immune system (which is the first line of defense against various infections) are zinc and selenium.

* Zinc - seafood, offal, meat, pumpkin seeds, beans, buckwheat, almonds, garlic, sesame seeds, oyster mushrooms,
* Selenium - fish, eggs, whole grain cereals, cocoa, meat, Brazil nuts.

Beneficial for human immunity are also products containing probiotics, which are live cultures of lactic acid bacteria that support the development of beneficial intestinal flora.

Probiotics can be found in fermented dairy products such as yogurts, kefirs, and sauerkraut, as well as in pickled cucumbers.

Traditional products worth incorporating into an immune-boosting diet are:

* honey, garlic, onion, and raspberry juice.

All these products, when included in the diet, help effectively strengthen the body's immunity.

We must not forget about another equally important thing, which is physical activity outdoors. To embrace physical activity, take a look at our sports lessons and choose something for yourself.