

MEASURING THE TREE

DID YOU KNOW

- The tallest tree currently living is a specimen of *Sequoia sempervirens* in Redwood National Park in California, USA. Nicknamed Hyperion, 116.07 m.
- A Mexican cypress in the village of Santa Maria del Tule is the thickest tree in the world with a diameter of 11.62 m and a circumference of 36.2 m.
- The oldest tree still alive is a spruce in the Swedish province of Dalarna. Carbon dating has proven that this tree is at least 9,550 years old. It is only 4.5 m tall, due to the harsh weather conditions in which it grows. In cold periods, some of the part above the ground dies, but the root system remains alive and this is almost 10,000 years old.
- Estonia is one of the greenest countries in Europe – fifty per cent of its area is covered with forests.

TASK

The tallest tree in the world is 49.05 m longer than the tallest tree in Slovenia. The tallest tree in Italy is 4.55 m shorter than the tallest tree in Slovenia and 15.87 m longer than the tallest tree in Estonia. The tallest tree in Poland is 10.02 m shorter than the tallest tree in Slovenia and 10.4 m longer than the tallest tree in Estonia. How tall are the tallest trees in every country.

Country	Height (m)
Slovenia	
Italy	
Estonia	
Poland	



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PRACTICAL TASK

Choose the highest tree what you can see and measure the height using Herdboy's method.

Herdboy's method

1. Walk away from the tree, bow down occasionally and look at the tree from between your legs
2. Mark the point where the tree top starts to show between the legs
3. Measure the distance between the tree and the marked point with your steps. That is the height of the tree.

Tree	Steps	Height (m)

QUESTIONS

Why is the tallest tree in Estonia shorter than the tallest trees in other countries?

What you think, is the herdboy's method the right method to measure the tree height.

Take pictures, short videos of each task you are doing and upload them in the Padlet.

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DETERMINATION OF CARDINAL DIRECTIONS

DID YOU KNOW

- It is not known who invented the compass, but the first ones who used the magnetic needle to point direction were the Chinese. In 1040 they described how magnetic pins were made.
- As mosses do not have roots, they need to get their nutrients from the air. They absorb whatever is in the air – including pollutants, meaning moss is a good bioindicator of air pollution.
- In World War I, Sphagnum mosses were used as first-aid dressings on soldiers' wounds, as these mosses said to absorb liquids three times faster than cotton, retain liquids better, better distribute liquids uniformly throughout themselves, and are cooler, softer, and be less irritating.
- Estonia boasts some of the cleanest air in the world

TASK

Match the words to make up a name of the plants

WOLF

WATCH

FROG

HAY

FOX

MEDICINE

FROG

CABBAGE

HARE

TOOTH

MOUSE

EYE

BEAR

PEA

OX

EAR

PIG

TAIL

Group name

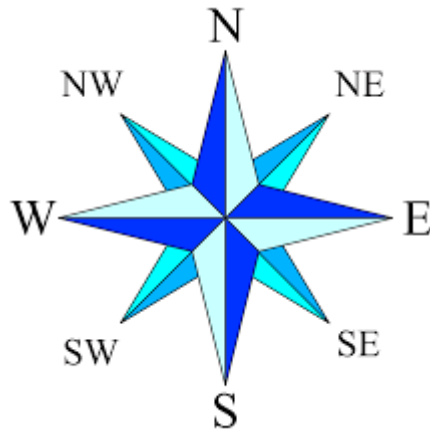
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PRACTICAL TASK

1. Choose 20 trees with moss
2. With the help of a compass determine their cardinal directions.
3. It is important to take each tree with moss growth in order.
4. Fill in the table

Tree	1	2	3	4	5	6	7	8	9	10
Cardinal direction										

Tree	11	12	13	14	15	16	17	18	19	20
Cardinal direction										



QUESTIONS

In which cardinal direction grows the most moss?

Is it possible to determine the direction of north with the help of mosses?

Take pictures, short videos of each task you are doing and upload them in the Padlet.

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SHADOW ART

DID YOU KNOW

- Travelling at the speed of light, you could go around Earth 7.5 times in a second.
- May 16th is the International Day of Light, a worldwide initiative sponsored by UNESCO to celebrate the role light plays in scientific innovation, culture, and art.
- Light travels at 300,000 km/second
- It takes 8 minutes and 20 seconds for light from the Sun to reach Earth
- The shortest day of the year in Estonia has only 6 hours of daylight and the longest day of the year has 18 hours of daylight.

TASK

On the coast there are three lighthouses. The first light shines for 3 seconds, then is off for 3 seconds. The second light shines for 4 seconds, then is off for 4 seconds. The third light shines for 5 seconds, then is off for 5 seconds. All three lights have just come on together.

1. When is the first time all three lights will be off at the same time?

2. When is the next time all three lights will come on together at the same moment?"

PRACTICAL TASK

1. Find the brightest place.
2. Look at the shadow animal examples on the next page.
3. Try to make images of the shadow animals.
4. Take pictures

Upload all pictures in the Padlet

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