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Measuring growing trees

Lessons purpose: build an understanding of how you can study trees in a park using mathematical skills.

Lessons goals:

1. Can determine the circumference, height and age of a tree;
2. Can use different information materials, compare the obtained data, use mathematical and the research activities acquired skills;
3. Can work in randomly created groups.

1. Pick 2 trees with a friend, which you will study.
2. **Without measuring (by eye measurement)** complete the first column of the table.
3. Choose the necessary measuring tools and do the required measurements.

Tree circumference. Remember to measure it 1,30m from the ground!

Tree height. To determine the height, you need a straight piece of wood (pencil, stick).

How to do it? Your partner stands under the tree. Stand so you can see them and the tree in full view. Hold the piece of wood in a stretched out hand. Hold your arm so the feet of your partner are lined up with the tree trunk. Note their height on the piece of wood. Try to see how many times your friend's height fits into the height of the tree. Multiply the result with your partner's actual height.

4. Complete the table!

Chosen tree	Tree circumference		Tree height		Tree age	
	By eye measurement	Accurate measurement	By eye measurement	Accurate measurement	By eye measurement	Accurate measurement
If you recognize the tree, write its name						
1.						

2.						
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5. Evaluate the results!

- a) Were you able to determine the approximate measurement of the tree without measuring it?
- b) Do you know a different method how to determine the circumference, height and age of a tree?
- c) What did you learn new today?