



2018-1 ELO1-KA229-047666\_3

## MATH LESSONS

### LESSON 1

LITHUANIA

VILNIUS, GRIGISKES “SVIESOS” GYMNASIUM

SUBJECT; MATH

CLASS; 5 TH GRADE.

TIME: 45 MIN

#### Lesson 1 plan

**Theme:** Area. Square units. The area of the rectangle and square.

#### Aims:

- \* learn to calculate the area of a square and a rectangle
- \* be able to apply area formulas

**Expected results:** revise the calculation of the perimeter of a square and a rectangle, will learn to calculate the areas of a square and a rectangle according to a formula,

	<b>Review:</b> <a href="http://youtu.be/-4mrUmi20c4?hd=1">http://youtu.be/-4mrUmi20c4?hd=1</a>																												
<b>7 min</b>	<p><b>Organizing time. Lesson warm- up</b> Pupils try to answer the questions: Think and answer the question yourselves? What is a “square”? The teacher tells an ancient Egyptian legend about geometry, shows video about Egypt <a href="https://www.youtube.com/watch?v=7Rfec60KbiI">https://www.youtube.com/watch?v=7Rfec60KbiI</a></p> <p><b>Actualization of supporting knowledge.</b> Can you calculate the areas of these figures?</p>																												
<b>3 min</b>	<p><b>New theme adaptation rule. Students work individually.</b> What does the area show? (How much space does the figure on the plane) Pupils have different figures on the desks, compare them, choose the largest, the smallest. How to measure the area of the figure? Working in pairs, find the area of the figure. Write <math>S = \dots \text{ cm}^2</math></p>																												
<b>22 min</b>	<p><b>Tasks for group</b> 1. Find the area of each rectangle (drawings provided), when the side of the small square is 1 cm. Is it convenient to lay individual squares in our figures every time? What formula is used to calculate the area of a rectangle? And what is the name of the rectangle in which 2 adjacent sides have equal length? (Square) How to find its area? 2. Why learn to count areas? <a href="https://www.youtube.com/watch?v=iNSpESVy4wU">https://www.youtube.com/watch?v=iNSpESVy4wU</a> 3. Fill in the blanks</p> <p>a) Square</p> <table border="1" style="margin-left: 20px;"> <tr> <td>a</td> <td>7</td> <td></td> <td></td> </tr> <tr> <td>S</td> <td></td> <td>25</td> <td></td> </tr> <tr> <td>P</td> <td></td> <td></td> <td>12</td> </tr> </table> <p>b) Rectangle</p> <table border="1" style="margin-left: 20px;"> <tr> <td>a</td> <td>3</td> <td>4</td> <td></td> </tr> <tr> <td>b</td> <td>5</td> <td></td> <td>3</td> </tr> <tr> <td>S</td> <td></td> <td>24</td> <td></td> </tr> <tr> <td>P</td> <td></td> <td></td> <td>20</td> </tr> </table>	a	7			S		25		P			12	a	3	4		b	5		3	S		24		P			20
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<b>5 min</b>	<b>Tasks verification. Short discussion</b>																												
<b>3 min</b>	<b>Reflection</b>																												

## LESSON 2

LITHUANIA

Vilnius, Grigiskes "Sviesos" gymnasium

Subject; Math

class; 5 th grade

Time: 45 min

### Lesson 2 plan

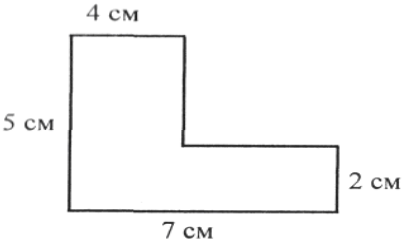
**Theme:** Area. units

#### Aims:

\* Repeat the units of length

\* Learn area measurement

**Expected results:** Learn to calculate the area and she marked

3 min	<b>Organizing time. Warm- up</b> <a href="https://www.youtube.com/watch?v=EdgyFeOqXvM">https://www.youtube.com/watch?v=EdgyFeOqXvM</a>
15 min	<b>Actualization of supporting knowledge. SQUARE AND RECTANGLE</b> <b>Working in groups</b> Find the side of the square, if its area is $225\text{cm}^2$ ? What is the side of the square? ( Find the side of the square if its perimeter is 28 cm Find the width of the rectangle if its area is $48\text{ cm}^2$ , length - 6 cm? The length of the rectangle is 9 cm, the width is 20cm. What is the perimeter and area of the rectangle?
7 min	<b>Consolidation of a new theme</b> 1. What is a square millimeter, square centimeter? 2. What is a hectare? 3. What is the unit of measurement for an area of 1 a? 4. Repeat units of area. $1\text{ ha} = 10\,000\text{m}^2 = 100 * 100$ $1\text{ a} = 100\text{m}^2 = 10 * 10$ $1\text{dm}^2 = 100\text{cm}^2$ , $1\text{dm} = 10\text{cm}$ $1\text{m}^2 = 100\text{dm}^2$ , $1\text{m} = 10\text{dm}$ $1\text{m}^2 = 10\,000\text{cm}^2$ , $1\text{m} = 100\text{cm}$ $1\text{km}^2 = 1\,000\,000\text{m}^2$ , $1\text{km} = 1\,000\text{m}$ <a href="https://www.kontroliniai.lt/video-instrukcija1.php">https://www.kontroliniai.lt/video-instrukcija1.php</a>
15 min	<b>Independent work.</b> 1. Find the area of a square if its side is 11 cm. 2. Find the area of a rectangle if its sides are 6 cm and 4 cm. 3. Find the perimeter of the rectangle if one side of a rectangle is 9 cm, and its area is $36\text{ cm}^2$ . 4. Find the area of this figure. 
5 min	<b>Reflection</b>

## LESSON 3

LITHUANIA

Vilnius, Grigiskes "Sviesos" gymnasium

Subject; Math

class; 5 th grade

Time: 45 min

### Lesson 3 plan

**Theme:** Rectangular prism and cube

**Aims:**

\* to introduce students to space figures

**Expected results:** students will learn space figures

	Review: <a href="http://youtu.be/PXRIYmItjbg?hd=1">http://youtu.be/PXRIYmItjbg?hd=1</a>
5 min	<b>Organizing time. Lesson motivation.</b> <a href="https://www.youtube.com/watch?v=qcTOcJIub9w">https://www.youtube.com/watch?v=qcTOcJIub9w</a>
15 min	<b>Actualization of supporting knowledge.</b> Working in pairs Questionnaire from a previous topic: The rectangle is ... a and b -... a is..... b is ... The area of the rectangle is ... The expression $P = 2x(a + c)$ is called ... The rectangle, whose length and width are equal, is called ... Equal figures have squares and perimeters ... If the figure is divided into parts, then the area of the figure is ... (The teacher shows plane geometric figures in turns, which the children can easily recognize and tell their features) Who will guess how these figures differ?
20 min	<b>Explanation of new theme.</b> <a href="https://www.youtube.com/watch?v=5DCo_bZ0PEo">https://www.youtube.com/watch?v=5DCo_bZ0PEo</a> Meet the cube☺ Introduction with the rectangular prism☺ By doing the tasks, in the form of the game, the students will learn what elements have these figures
	<b>Comprehension of new material.</b> Fixing the challenge from the taskbar
5 min	<b>Tasks verification. Short discussion .Reflection</b>

## LESSON 4

LITHUANIA

Vilnius, Grigiskes "Sviesos" gymnasium

Subject; Math

class; 6<sup>th</sup> grade

Time: 45 min

**Lesson 4 plan**

**Theme:** Circle

**Aims:**

\* to find out what form we call a circle

\* indicated what is the radius, string, diameter, length of the circle

**Expected results:** Will know what shape a circle is and what its elements are, how to calculate the length.

	<b>Review</b> <a href="http://youtu.be/GdktrfUULS8?hd=1">http://youtu.be/GdktrfUULS8?hd=1</a>
<b>7 min</b>	<b>Organizing time. Warm- up.</b> <a href="https://www.youtube.com/watch?v=P8xdn4vN4Fc">https://www.youtube.com/watch?v=P8xdn4vN4Fc</a> <b>1. Round number 3,1415926</b> a) to the nearest ones b) to the nearest tens c) to the nearest hundreds d) to the nearest thousands e) to the nearest whole number and guess the topic of this lesson.
<b>10 min</b>	<b>Actualization of supporting knowledge</b> <b>1. What is the definition of the circle?</b> <b>2. Write formula how to calculate circumference (the distance around the circle)</b> <b>4. Remind measurement units of length</b>
<b>10 min</b>	<b>Work in pairs/</b> <b>The pictures and an empty table are provided.</b> <b>Task 1</b> <b>1. In the pictures measure the distance around the circles and its diameters and fill in the answers in the tables.</b> <b>2. Find the relation between circumference and diameter, fill in the table</b> <b>3. Make a conclusion (how many times the circumference of a circle is bigger then its diameter)</b>
<b>10 min</b>	<b>Task 3 Group work</b> <b>1. Calculate the Earth's circumference when <math>r=6370</math> km. <math>\pi \sim 3,14</math></b> <b>2. Find C, when <math>d=1,5</math>cm</b> <b>3. Find D d, when <math>C=7,85</math> m</b> <b>4. Find r, when <math>C=21,98</math> dm</b>
<b>5 min</b>	<b>Verification of tasks</b>
<b>3 min</b>	<b>Reflection</b>