



# OUTDOOR LESSON PLAN



<i>School</i>	<b>Základná škola Karloveská 61, Bratislava, Slovakia</b>
<i>Subject</i>	Maths
<i>Topic/Theme</i>	Review of Roman Numerals and mathematical symbols (multiplication, division, addition and subtraction).
<i>Timeframe</i>	45 minutes (1 lesson)
<i>Level</i>	Secondary - 5th grade
<i>Activity</i>	<ul style="list-style-type: none"><li>- Collecting natural materials and turning them into Roman Numerals.</li><li>- Throwing and catching.</li><li>- Aiming at a pyramid target.</li></ul>
<i>Objectives</i>	<ul style="list-style-type: none"><li>- to revise and consolidate Roman Numerals (verbal, written and through calculations).</li><li>- to revise and consolidate mental maths skills.</li><li>- to revise and consolidate multiplication, division, addition and subtraction skills.</li><li>- to solve mathematical problems correctly and as quick as possible.</li></ul>
<i>Material Media Resources needed</i>	<ul style="list-style-type: none"><li>- Cans with Roman Numerals on.</li><li>- Small ball (to throw at the cans)</li><li>- Paper, pens and clipboards.</li><li>- Ball with calculations on it (using Roman Numerals).</li></ul>

*Description/  
Step-by-step  
procedure*

**Introduction:**

- As the students walk outside they will collect different natural materials. Once they arrive at the place where the lesson will take place they will be divided into groups of 4.
- The teacher will call out different Roman Numerals. The students have to make them out of the materials they collected.

**Development:**

- The students stay in the same groups. There will be 10 cans with Roman Numerals prepared in a pyramid for each group. The students will stand approximately 3 metres distance from the pyramid and take it in turns to throw a ball to knock the cans down. Each person has two tries. Using the cans that have fallen down, the students will convert the Roman Numerals into arabic numbers on a paper and calculate them using addition. Once everyone has had a turn, the members of each group will add the teams scores together to find out which team has the highest score and has won overall.

**Conclusion:**

- Students will stand in a circle. They will be given a ball with calculations written on it (multiplication, division and subtraction, using Roman Numerals). They will take it in turns to throw and catch the ball (which is a time bomb). The student who catches it will look where their hand has landed on the ball, read out the calculation and work out the answer as fast as possible, otherwise the ball will explode. If the ball explodes in their hand or their answer is incorrect then they get a card. The student/s who have no cards or the least number of cards at the end of the game win.

*Reflection/  
Assessment*

In the last few minutes of the class the students will evaluate the lesson discussing what was easy for them, what was difficult for them and if they feel comfortable with Roman Numerals now. The teacher will give a short evaluation for his/her perspective.

*Students' work  
examples*



ROMAN NUMERALS			
ARABIC NUMERAL	ROMAN NUMERAL	ARABIC NUMERAL	ROMAN NUMERAL
1	I	20	XX
2	II	30	XXX
3	III	40	XL
4	IV	50	L
5	V	60	LX
6	VI	70	LXX
7	VII	80	LXXX
8	VIII	90	XC
9	IX	100	C
10	X	500	D
		1000	M



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