

Lesson plan

“Going for a walk”


Short description of the activity	Maths is everywhere! This exhibit tells the story of Sasha and Max as they go for a walk in Montmartre, Paris, and solve various mathematical exercises on the way. Together, they study the shapes, volumes and lengths of the urban environment around them amongst other things.
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Level of difficulty	Level 2
Duration of the activity	15 min
Number of participants	Classroom activity. (1 professor with 5 to 30 students)
Inventory of the hands-on exhibit	<ul style="list-style-type: none">- 1 laptop- 1 projector- 1 white board or screen

Digital skills required of children	click
Skills worked on	<ul style="list-style-type: none">- quantities and measurements:<ul style="list-style-type: none">> lengths- space and geometry:<ul style="list-style-type: none">> finding your way in space,> plane figures,> volumes


Instruction and description of the activity, step by step

Instruction	In this virtual workshop, several exercises are proposed. Each exercise must be solved in order to access the following ones.
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Step by step	Description	Illustration
Step 1	Exercise: Identify the shape Answer: Rectangle	 <p>Sasha and Max go for a walk in Montmartre. Sasha stops in front of a house and asks Max: "What shapes are the windows?"</p> <p>Circle Oval Rectangle</p>
Step 2	Exercise: Identify the shape Answer: Circle	 <p>Great! Now, Sacha and Max walk past the pink house in Montmartre. What is the shape of the traffic sign?</p> <p>Circle Oval Rectangle</p>

Step 3

Exercise:
Calculate the length of the walk
Answer: 500m



Good! They continue on their way and they make two round trips plus one single way in this alley which is 100 metres long. How many meters did they travel?




300 metres 400 metres 500 metres

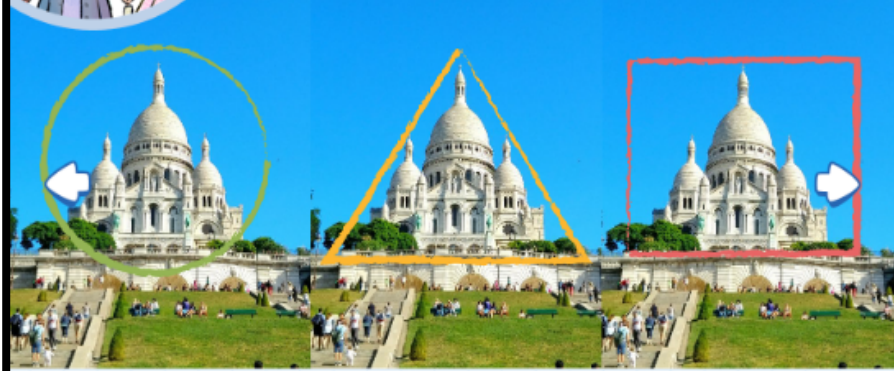
Photo by alexandrafoto (Paris) - <https://cutty.ly/2u80k>

Step 4

Exercise:
Identify the shape
Answer: triangle



Well done! Finally, Sasha and Max arrive in front of the Sacré-Cœur. What shape does it look like?




Circle Triangle Square

Photo by MrOwl2 (Paris) - <https://cutty.ly/2u80k>

Step 5

Exercise:
Identify the
volume
Answer: cylinder



Very good! Sasha and Max arrive at a street with poles. They start to play leapfrog with them. What shape are the poles?





Photo by velichuk (Adobe Stock): <https://cutt.ly/2ZuqL57>

Cylinder Cuboid Sphere

Step 5

Exercise:
Identify the
shape
Answer:
hexagon



Perfect! At the end of the street, they are intrigued by the shape of the street lamp. Each face of the street lamp has six sides and six vertices. What shape is it?




Photo by Thom_Najem_SLD (Pisoboo): <https://cutt.ly/2ZuqL57>

Square Pentagon Hexagon

Step 6

Exercise: Find the shorter distance
Answer: 600m

Congratulations! Now, Sasha and Max decide to go home. Last question: They want to take the shortest road. Should they take right or left?

600m 1,2km

Left Right

Step 7

Exercise: Calculate the length of the façade
Answer: 4m

The windows both measure 50cm and the space on the wall before, after and in-between them measure 1m. Therefore, the whole wall measures...

1m 50cm

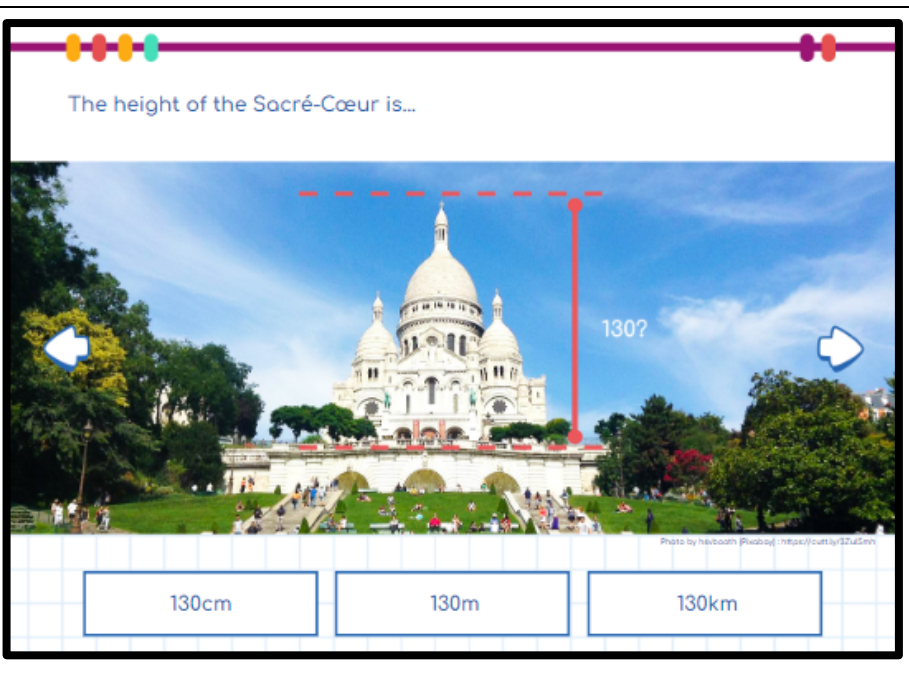
2 metres 4 metres 10 metres

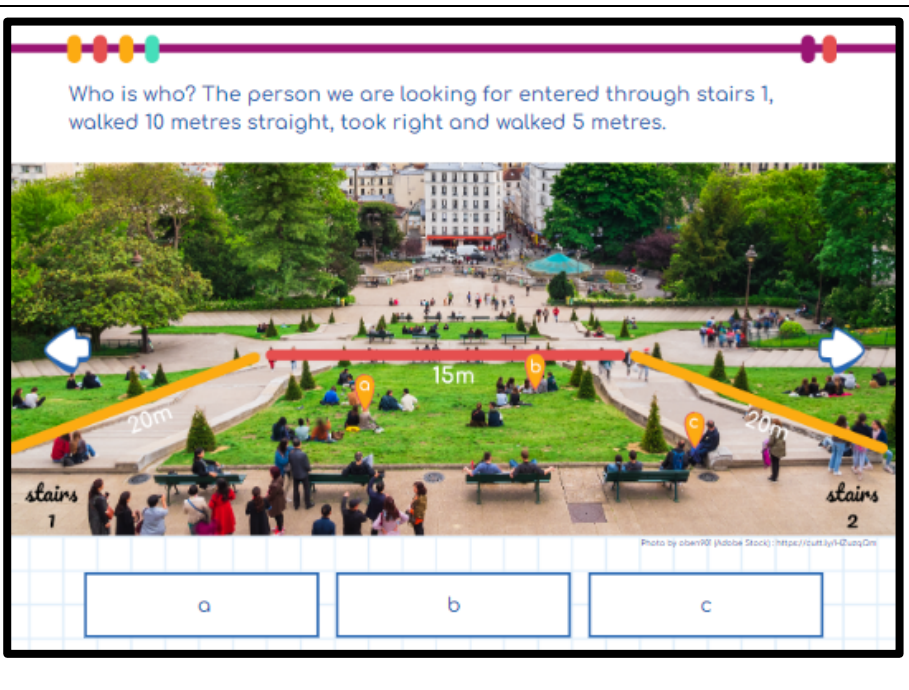
Step 8

Exercise: Find what shape it is
Answer: rectangle

I am flat, I have 4 right angles and I have two sides that are bigger than the remaining two. Who am I?

Rectangle Square Cuboid

<p>Step 9</p>	<p>Exercise: Find what measure unit it is Answer: 130m</p>	<p>The height of the Sacré-Cœur is...</p>  <p>130cm 130m 130km</p>
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<p>Step 10</p>	<p>Exercise: Find who it is Answer: a</p>	<p>Who is who? The person we are looking for entered through stairs 1, walked 10 metres straight, took right and walked 5 metres.</p>  <p>a b c</p>
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To go further Learn maths by going on even more walks here: <https://mathcitymap.eu/>

<p>Resources</p>	<p>Tutorial (to be created) for professors to contribute exercises on https://mathcitymap.eu/</p>
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