

## ALEXANDER NEVSKI PRINTING PROJECT (II)



With its characteristic domes, Alexander Nevski cathedral in Sofia is one of the most popular constructions of the city and country.

This construction began at the end of 19th century, and it ended in 1912, it was built by the architect Pomerantsev and it commemorates the fallen Russian allies in the Bulgarian-Ottoman wars. This building has the name of Alexander Nevski, a Novgorod leader and key figure of ancient Russia.

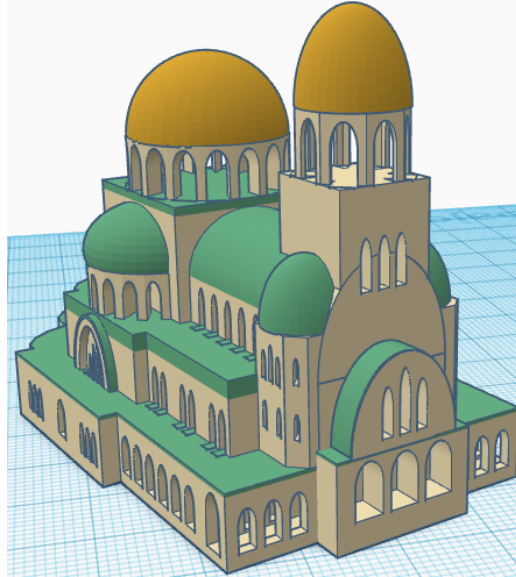
In the bottom of the cathedral there are arts collections from the 4th century to 19th century and it has an iconostasis, although it is not ancient, it has nothing to envy about the rest.

### Goals

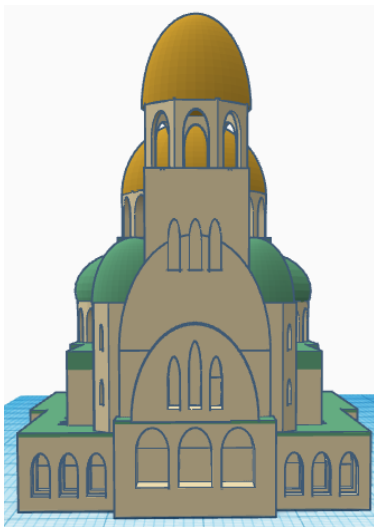
- Strengthen the handling and shaping of basic shapes.
- Replicate a 3D model trying to be as realistic as possible.
- Enhance the pupils' creativity when creating the structure and add the distinctive touch to the design.
- Empty different structures.
- Align the structures using tinkercad tools.



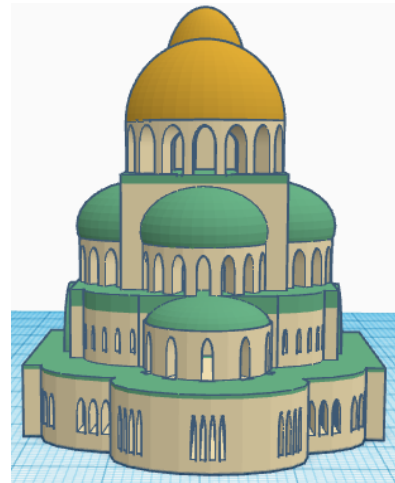
Reference model designed with Tinkercad



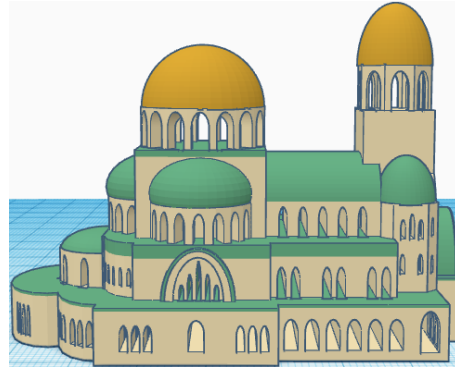
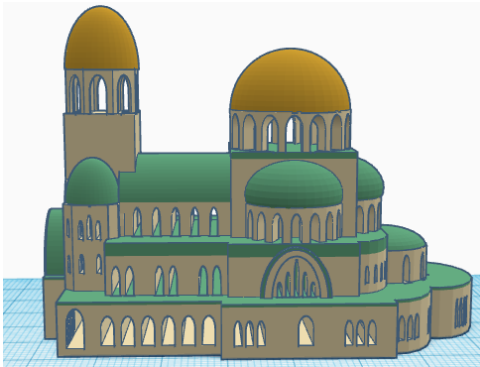
Front view



Rear view



**Lateral view**



**Model features**

When designing this building we can see 4 parts, but we have already created the lower floor and middle floor, now it is time to create the:

- Upper floor.
- Upper domes.
- Details.

**UPPER FLOOR**

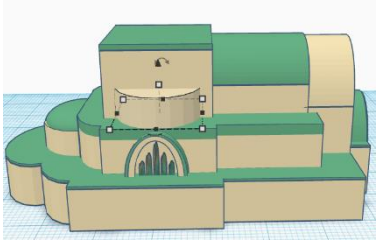
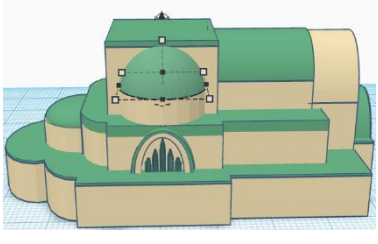
Let's start with the upper floor:

<p>Box</p>	<p>19.5mm wide x 20mm long x 12.80mm high.</p>	
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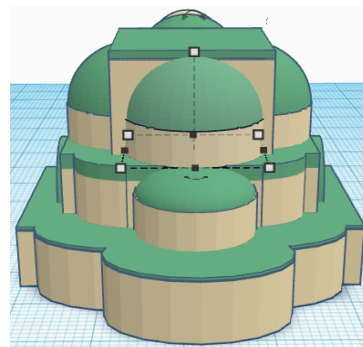
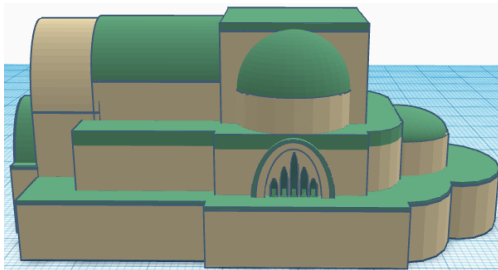


<p>Box</p>	<p>19.5mm wide x 20mm long x 1mm high.</p>	
<p>Box</p>	<p>16mm wide x 19mm long x 5.60mm high.</p>	
<p>Round roof</p>	<p>16mm wide x 19mm long x 8mm high.</p>	



<p>Cylinder</p>	<p>16.25 mm wide x 17.50 mm long x 4.85 mm high.</p>	
<p>Half sphere</p>	<p>16.30mm wide x 17mm long x 8.5mm high.</p>	

We already have one of the three upper floor domes, now we duplicate and place it on the other side and above the lower dome, then we align it.





<p>box</p>	<p>21.70mm wide x 8.60mm long x 13.90mm high.</p>	
<p>box</p>	<p>10.8mm wide x 11.15mm long x 10.50mm high.</p>	
<p>Half sphere</p>	<p>8.60mm wide x 8.60mm long x 7.15mm high.</p>	

We duplicate the half sphere and place it over the other tower.



## DOMES

We are going to start with the domes:

<p>Polygon</p>	<p>10.85mm wide x 11.15mm long x 7.15mm high. 8 sides and 22° rotation</p>	
<p>Half sphere</p>	<p>10.85mm wide x 11.15mm long x 8.00mm high</p>	



<p>Cylinder</p>	<p>19.50mm wide x 20mm long x 6.50mm high.</p>	
<p>Half sphere</p>	<p>19.50mm wide x 20mm long x 10mm high.</p>	



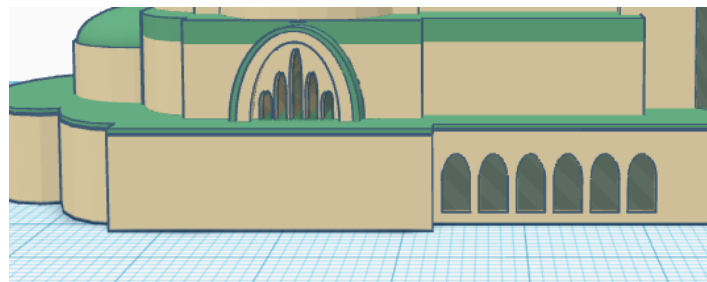
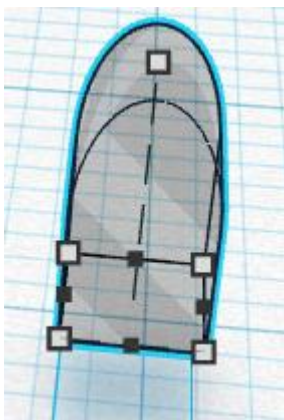
## DETAILS

It is time to detail, add windows, eliminate protrusions.

<p>Empty box</p>	<p>5mm wide x 2.60mm long x 18.50mm high. Rotate 45°</p>	
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We must create that shape to detail the protrusions, we should consider if a rotation is necessary.

Our standard window is a box with a round roof grouped and empty, the dimensions are: 2.50 mm wide x 3 mm long x 4.80 mm high. It is your turn to add the windows all around the cathedral and the domes but be aware that there are different windows.



**FINAL RESULT:**

