

Printing project bank museum in Luxembourg.



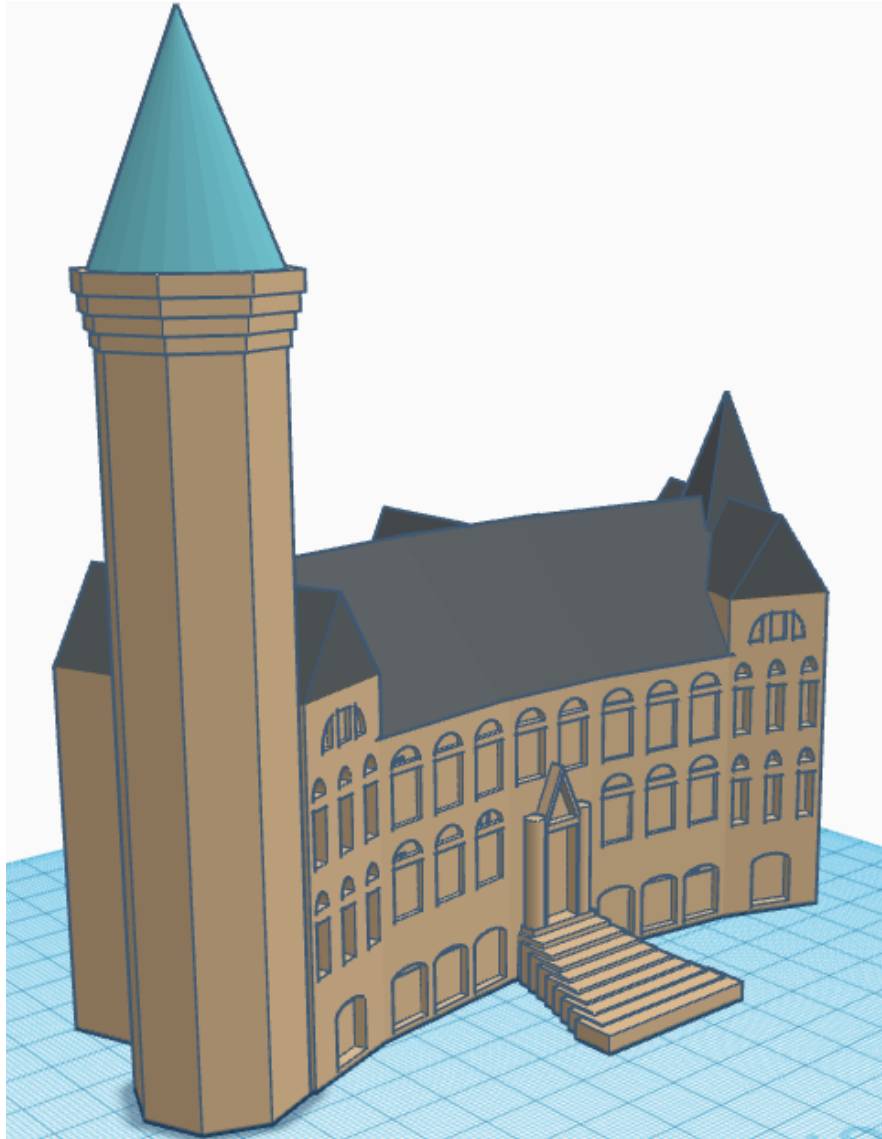
In this activity, we are going to model the Bank Museum because it is one of the most iconic buildings in Luxembourg, besides, we also know that this country is the financial capital of the European Union. This country has an important cultural enrichment bordering with several countries such as France and Germany.

This museum was built in the old teller in 1995 and renovated in 2015, its tower is 46 meter high, and we can enjoy the wonderful city views. Inside the building we can find the bills and coins collection and the country development with its technology for 150 years.

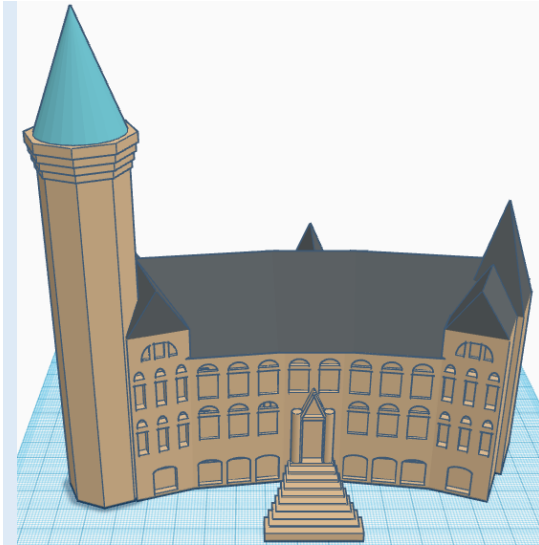
Goals

- 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.

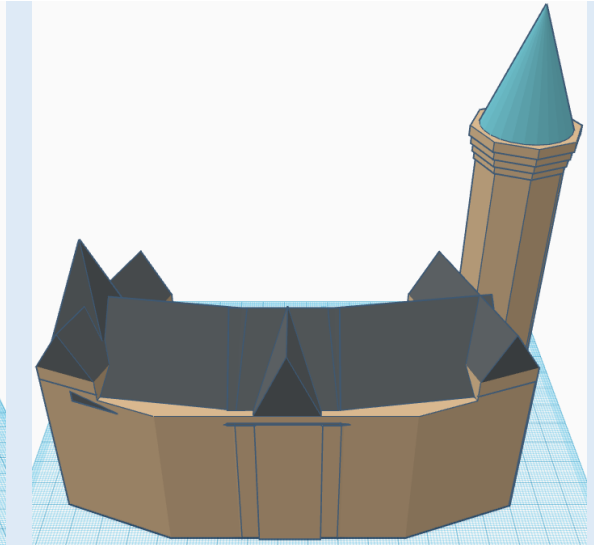
Reference model designed with Tinkercad.



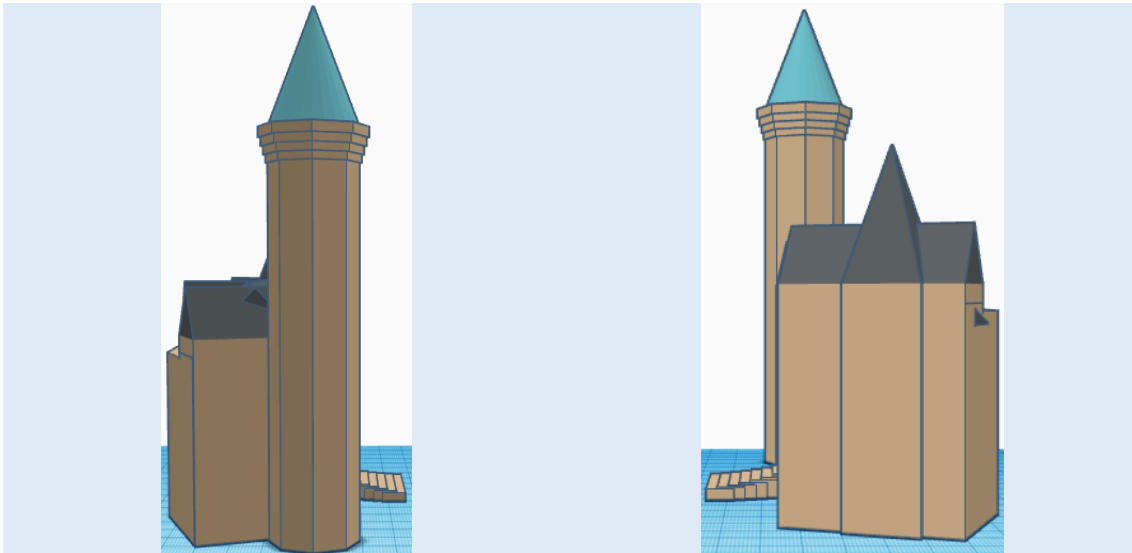
Front view



Rear view



Lateral view

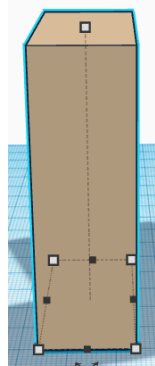
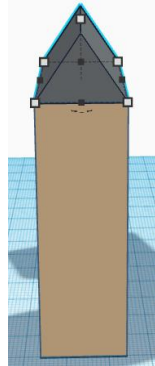


Model features.


To replicate this model, we are going to divide the construction in 3 different parts:

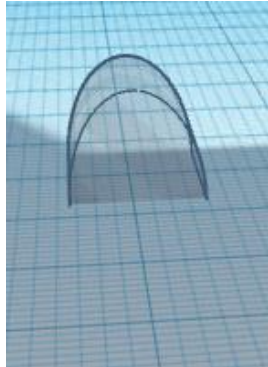
- Lateral buildings and windows.
- Central building and windows.
- Roofs and towers.

Lateral buildings

| 3D object | Size(mm) | Image |
|-----------|--|--|
| Box | 48 mm wide x 20 mm long x 62.20 mm high. |  |
| Roof | 20 mm wide x 48 mm long x 9.30 mm high. |  |

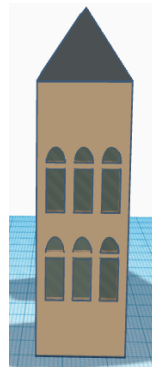
To create the windows, we need the following empty shapes:

| | | |
|-----------|---|---|
| Empty box | 3.70 mm wide x 6.20 mm long x 9.30 mm high. |  |
|-----------|---|---|

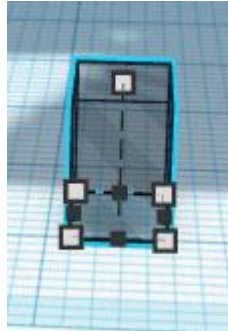
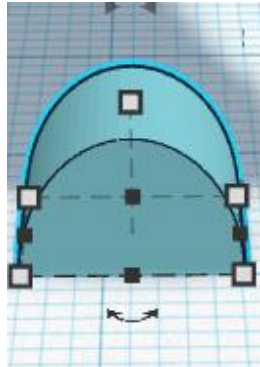
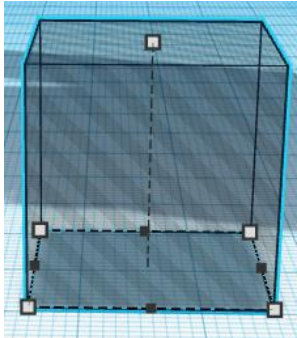
| | | |
|------------|---|---|
| Round roof | 3.70 mm wide x 6.20 mm long x 3.10 mm high. |  |
|------------|---|---|

Now we align them and place the round roof 1.70 mm above the box, then we group the shapes and duplicate twice.

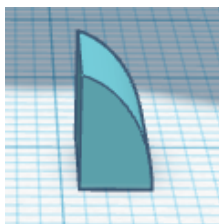


| | | |
|------------------|--|---|
| Round roof + box | 3.70 mm wide x 6.20 mm long x 14.10 mm high. |  |
|------------------|--|---|

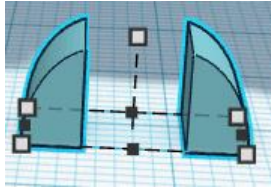


| | | |
|------------|---|---|
| Box | 3.70 mm wide x 6.20 mm long x 5.60 mm high. |  |
| Round roof | 8.10 mm wide x 6.20 mm long x 5.50 mm high. |  |
| Empty box | 20 mm wide x 20 mm long x 20 mm high. |  |

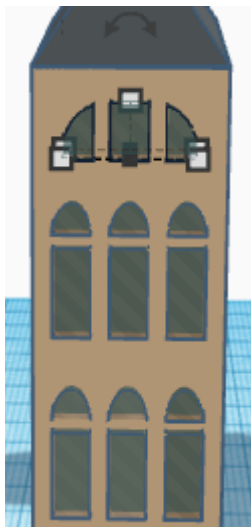
Now we group the 20 x 20 mm box with the round roof, so it divides the roof.

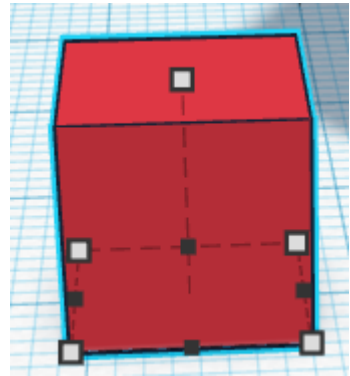
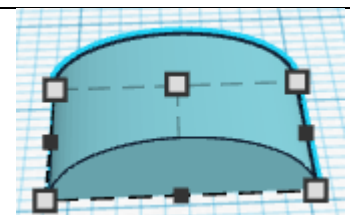



Now we duplicate and reverse it.



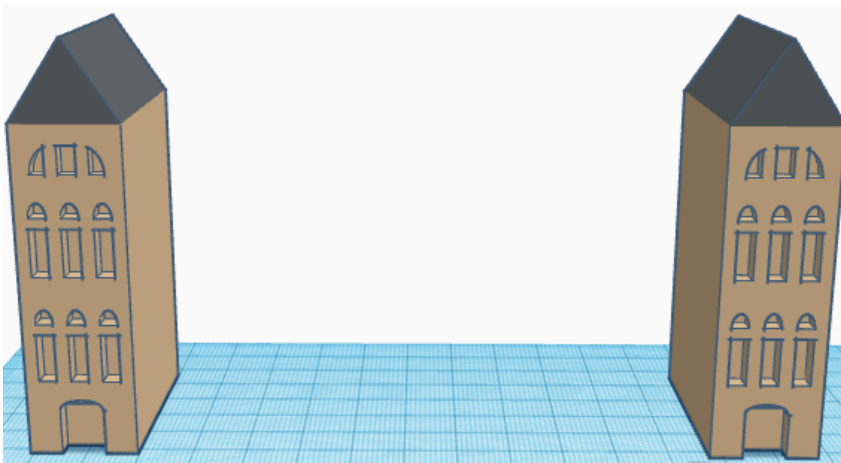
After that, we place the empty box in the middle of the shape we have already created, finally we have the upper windows.



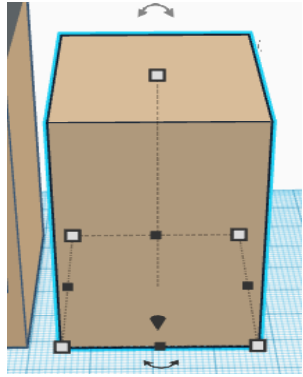
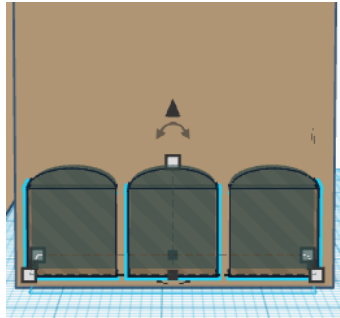
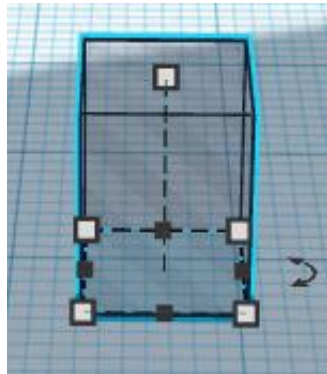
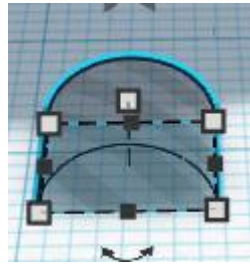
| | | |
|------------|--|--|
| Box | 8.60 mm wide x 8.60 mm long x 8.60 mm high |  |
| Round roof | 8.60 mm wide x 8.60 mm long x 2 mm high |  |

| | | |
|-----------------------------|--|---|
| <p>box + round roof</p> | <p>8.60 mm wide x 8.60 mm long x 10.60 mm high</p> |  |
|-----------------------------|--|---|

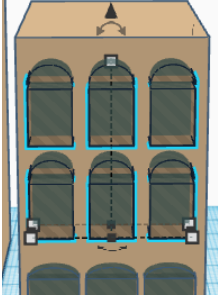
Once we have finished the structure, we duplicate it and place it in the other side of the work plane.



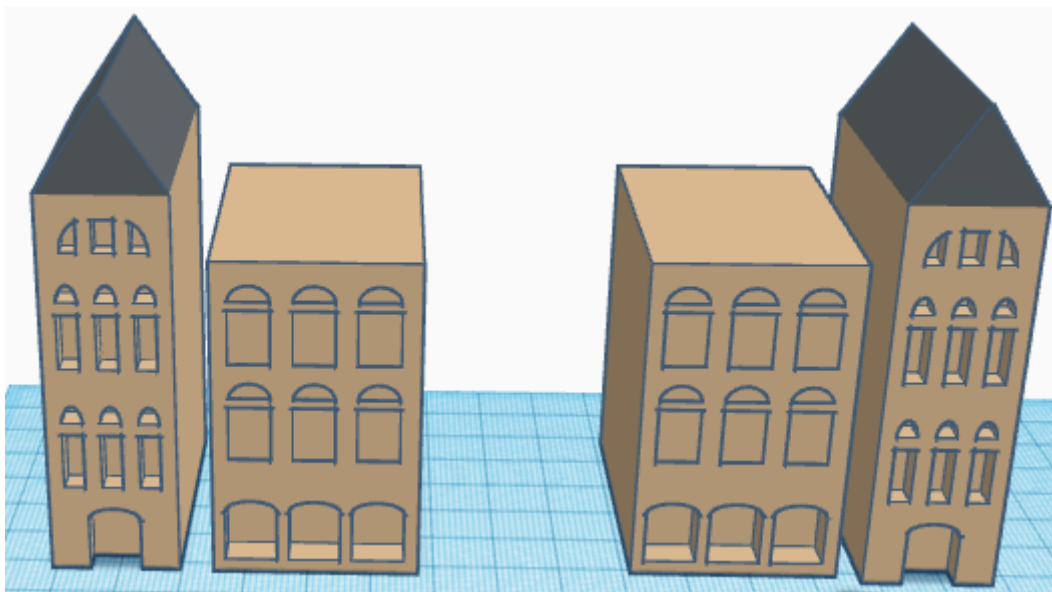


| | | |
|-----------------------|---|---|
| Box | 32 mm wide x 48 mm long x 52 mm high. |  |
| 3 x box + round roof. | 8.60 mm wide x 8.60 mm long x 10.60 mm high |  |
| Empty box | 7mm wide x 7 mm long x 9.30 mm high. |  |
| Empty round roof | 7 mm wide x 7 mm long x 3 mm high. |  |

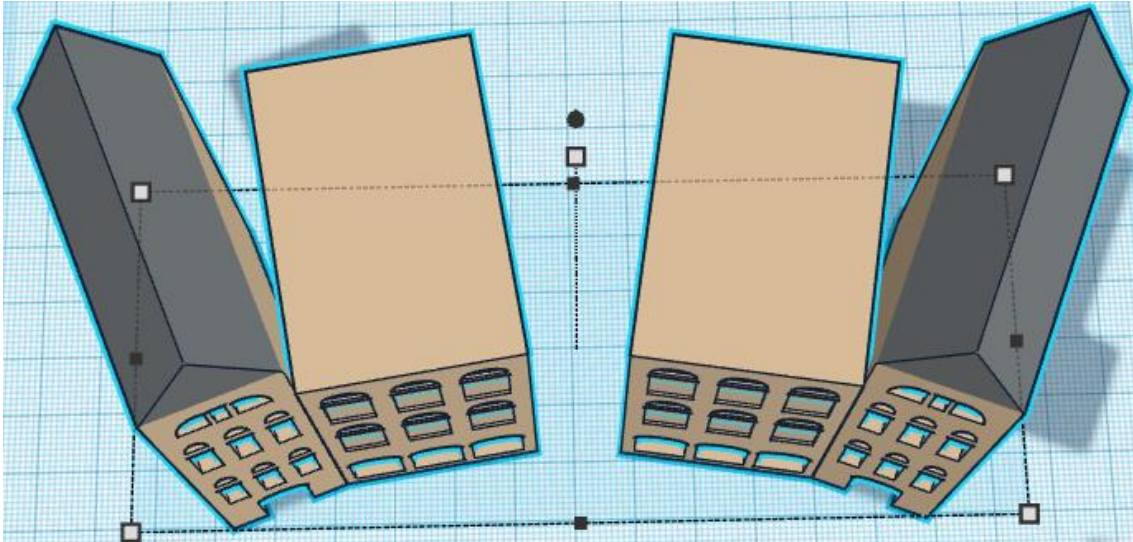


| | | |
|----------------------|--|---|
| 6 x box + round roof | 7 mm wide x 7 mm long x 13.30 mm high. |  |
|----------------------|--|---|

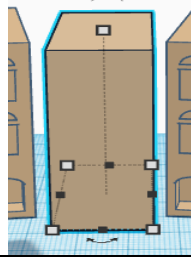
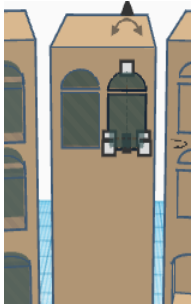
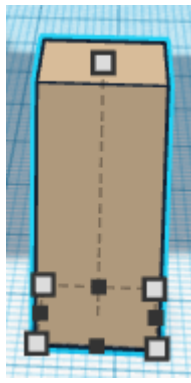
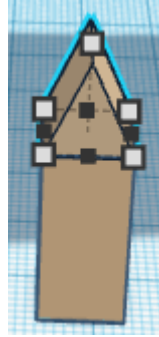
We duplicate the resulting building, and we place it on the other side of the work plane.

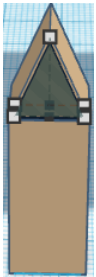

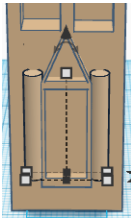
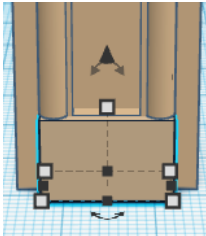
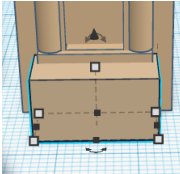


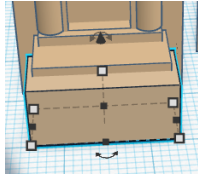
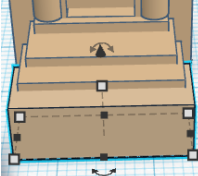
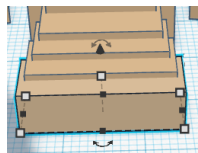



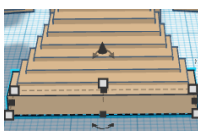
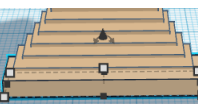
We rotate the left and right buildings 8 degrees and both towers 20 degrees.



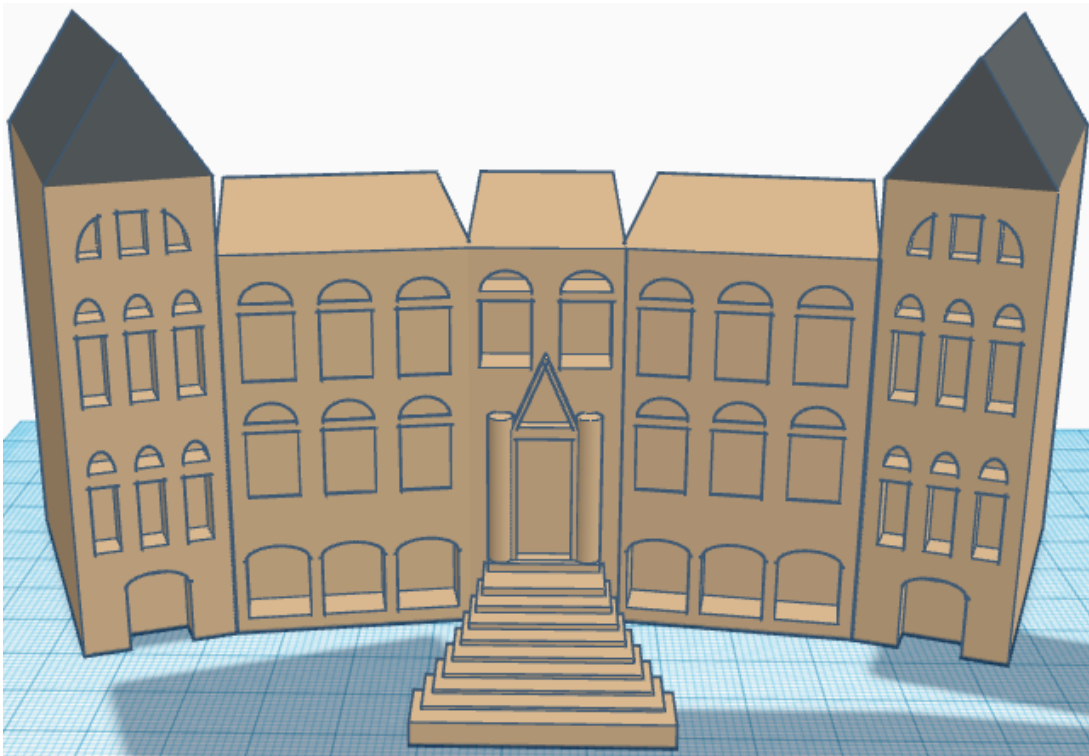
Central building.

| | | |
|---------------------|---|---|
| box | 20 mm wide x 48 mm long x 52 mm high. |  |
| 2x box + round roof | 7mm wide x 7 mm long x 13.30 mm high. |  |
| Box | 8.60 mm wide x 8.60 mm long x 20 mm high. |  |
| Roof | 8.60 mm wide x 8.60 mm long x 10 mm high. |  |

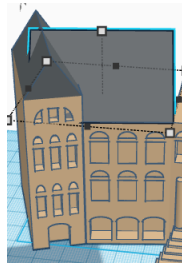
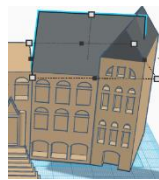
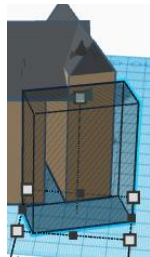


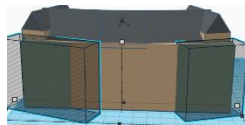
| | | |
|-------------|--|---|
| Empty roof | 7.60 mm wide x 2.90 mm long x 8.83 mm high. |  |
| Empty box | 7.50 mm wide x 4.30 mm long x 17.45 mm high. |  |
| 2x cylinder | 3 mm wide x 3 mm long x 20 mm high. |  |
| Box | 14.50 mm wide x 7.70 mm long x 9.60 mm high. |  |
| Box | 15.80 mm wide x 7.70 mm long x 8.40 mm high. |  |

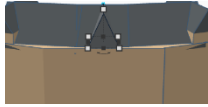
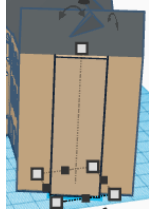
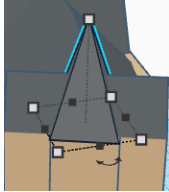
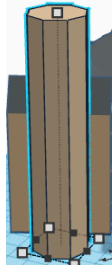
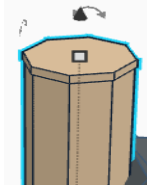
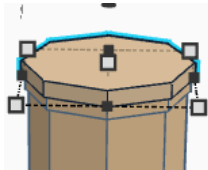
| | | |
|-----|--|---|
| Box | 17.22 mm wide x 7.70 mm long x 7.35 mm high. |  |
| Box | 18.76 mm wide x 7.70 mm long x 6.43 mm high. |  |
| Box | 20.44 mm wide x 7.70 mm long x 5.63 mm high. |  |
| Box | 22.27 mm wide x 7.70 mm long x 4.92 mm high. |  |
| Box | 24.27 mm wide x 7.70 mm long x 4.31 mm high. |  |
| Box | 26.45 mm wide x 7.70 mm long x 3.77 mm high. |  |
| Box | 28.82 mm wide x 7.70 mm long x 3.30 mm high. |  |
| Box | 31.40 mm wide x 7.70 mm long x 2.89 mm high. |  |

Once we have already finished the previous steps, we have to adjust the 3 buildings, so they look like the following picture:

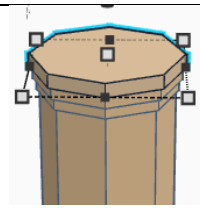
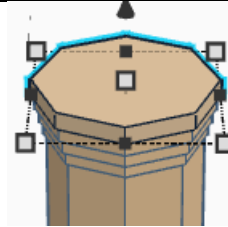
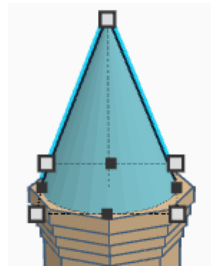


Roofs and towers.

| | | |
|--------------|--|---|
| roof | Wide (until we cover the building) x 48 mm long x 25 mm high. |  |
| roof | Wide (until we cover the building) x 48 mm long x 25 mm high. |  |
| Empty box | 47 mm wide x 30 mm long x 57 mm high. |  |
| Empty box | 47 mm wide x 30 mm long x 57 mm high. |  |
| Box | 152 mm wide x 14 mm long x 57 mm high. |  |
| 2x Empty box | 70 mm wide x 42 mm long x 58 mm high. |  |

| | | |
|-----------------|---|---|
| Roof | 20 mm wide x 23.60 mm long x 22.40 mm high. |  |
| Box | 20 mm wide x 20 mm long x 62.20 mm high |  |
| Roof | 20 mm wide x 20 mm long x 35 mm high. |  |
| 8 sides polygon | 27 mm wide x 27 mm long x 115 mm high. |  |
| 8 sides polygon | 28.20 mm wide x 28.20 mm long x 2.30 mm high. |  |
| 8 sides polygon | 29.60 mm wide x 29.60mm long x 2.52 mm high. |  |
| | | |



| | | |
|-----------------|---|--|
| 8 sides polygon | 31.07 mm wide x 31.07 mm long x 2.65 mm high. |  |
| 8 sides polygon | 32.61 mm wide x 31.07 mm long x 2.65 mm high. |  |
| Cono | 27 mm wide x 27 mm long x 35 mm high. |  |

Final result.

