

We would like to organize an end-of-year trip to Iceland. To do this, we had thought of creating some 3D souvenirs and printing them so that we could sell them and finance ourselves.

First of all, we will use the 3D online design program "Tinkercad".

We will design and 3D print we will design an **ornament for the Christmas tree** inspired by a famous Christmas character in Alcoi, the "Paje".

Your tasks:

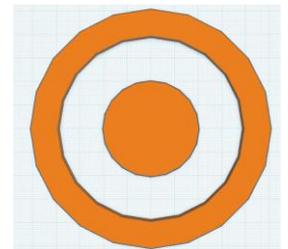
1. OPEN TINKERCAD AND FOLLOW THE INSTRUCTIONS.

This is the object we would like to create: **40 points**



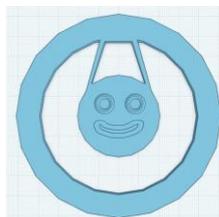
○ **Structure:**

- Add a **tube of 10cm of diameter. (0-1 points)**
- The ornament will be 3mm high (thickness) **(0-1 points)**

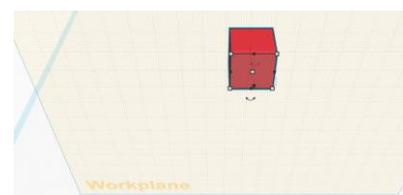
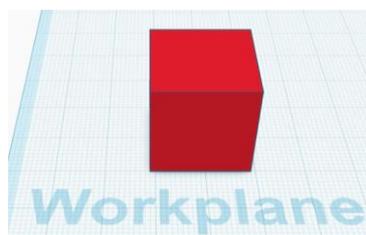


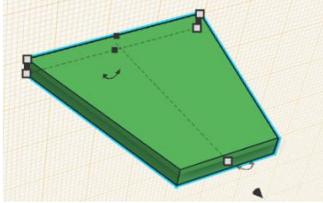
○ **PAJE:**

- Use the different shapes provided on Tinkercad to create this friendly character: trapezoid, cylinder, box, torus....
- The face should be in the middle and 4cm of diameter more or less. **(0-1 points)**
- Use toroid figure of 10mm diameter for the eyes. **(0-1 points)**
- For the mouth, use the **scribble** shape and give to the page your own "touch" **(0-3 points)**

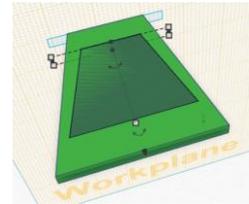
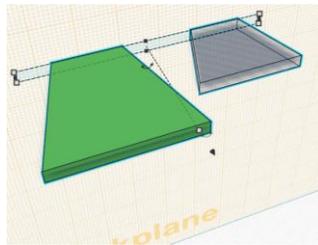
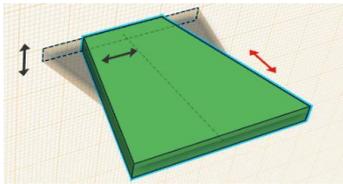


- **Bonnet:** Trapezoid 34x31mm for the exterior and another one for the hole of 26x20mm. Group them **(0-3 points)**
 - First change the work plane tool to 90°. To do that use a cube and select the front face to set the new work plane.

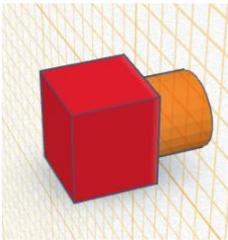




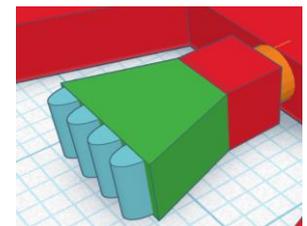
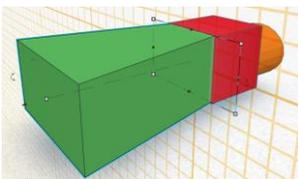
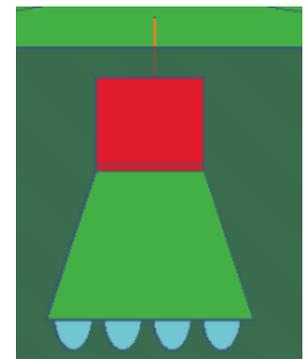
- Delete the cube
- Inset the solid outer trapezoid 34x31x3mm
- Mirror the trapezoid
- Copy that trapezoid, convert into hole and mirror as the inner trapezoid 26x20 centered
- Group both



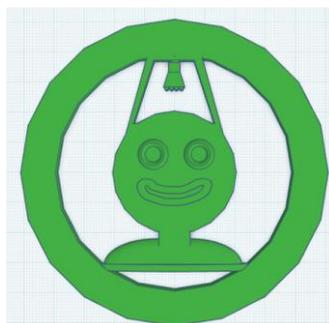
- For the tassel: (free compensated measures)

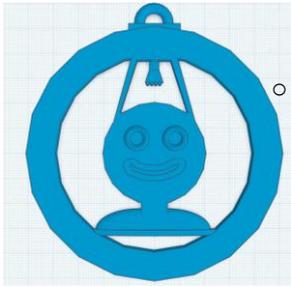


- Use the same work plane as for the bonnet
- Cylinder 2,6x3x2mm
- Change the work plane on the cylinder
- Cube 3,4x3x3mm **(0-1 points)**
- Change the work plane on the cylinder
- Trapezoid 6,6x5x2,95mm **(0-1 points)**
- Change the work plane on the cylinder
- Round roofs 1,2x1,2x2,8 **(0-1 points) x4**
- Group the elements **(0-1 points)**



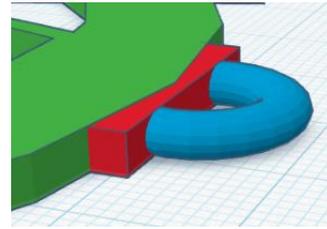
- Group all the elements of the page **(0-1 points)**





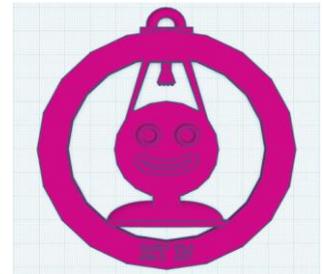
○ **O-ring:**

- Use **box** for the base. (0-1 points)
- And a **torus** for the ring. (0-1 points)



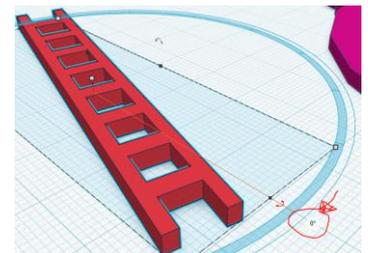
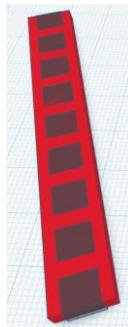
2. **Custom Text:**

- Open a **text editor** and write "ICT IV".
- Font: **Comic Sans MS, Bold**. (2 points each, max. 6 points)
- Take a **screenshot**, crop it in **Paint**, and save it as **PNG**.
- Convert it to **SVG** via [vectorization.eu](https://www.vectorization.eu/).
- Import the **SVG** into Tinkercad. (0-1 points)
- Set dimensions to **20x6x4.5mm** and place the text on the ornament's base. (0-2 points)

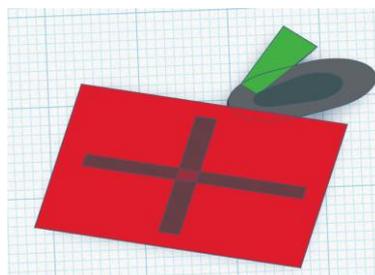


3. **Final Touches:**

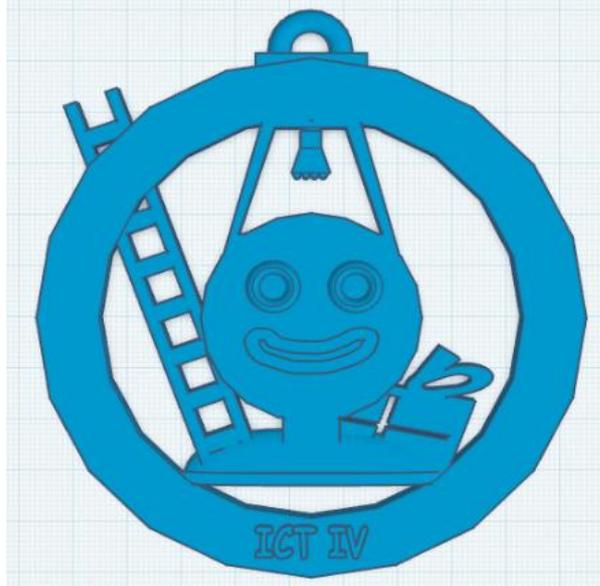
- Ensure all parts are **grouped together**. (0-1 points)
- Add the ladder and the present box: (0-10 points)
 - Tips for the ladder: Use solid box (76x36x3mm) for the exterior and hole boxes for the steps. Then group all of them and turn the angle you consider (around 30°)



- For the present: It's a combination of boxes, trapezoid and metacapsules giving them after being grouped an angle



This could be the final result:



4. **Save & Submit:**

- Save as **ICT4Paje_YourName.stl. (0-1 points)**
- Send the **STL file and Tinkercad link** to your ICT teacher. Use this button:
(0-1 points)
- Attach the stl file too. **(0-1 points)**

