

Name: \_\_\_\_\_



An tSraith Shóisearach do Mhúinteoirí

# Junior **CYCLE** for teachers

Elective CPD 2020/2021

# Onshape Workshop: Cloud-based CAD



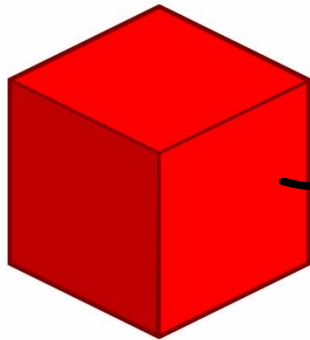
An Roinn Oideachais  
Department of Education

[www.jct.ie](http://www.jct.ie)

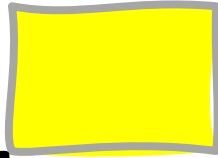


## Modelling Challenges:

Using sketches and annotations, outline what geometric principles will aid the modelling process for the following geometric solids.



Cube



Plane



Equal

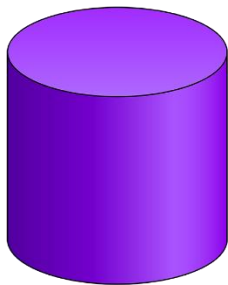
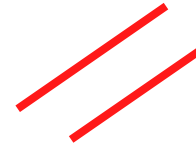


Perpendicular or  $90^\circ$

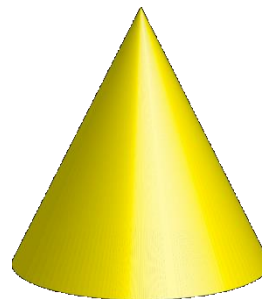
Parallel



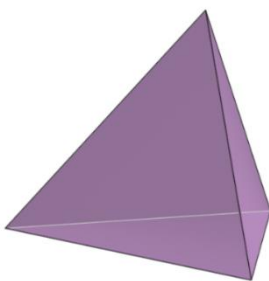
Square, Regular Polygon



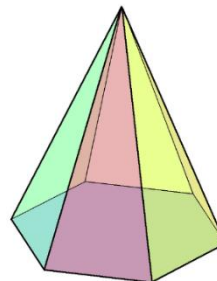
Cylinder



Cone



Triangular based pyramid



Another pyramid

*Model some additional geometric solids of your choice.*

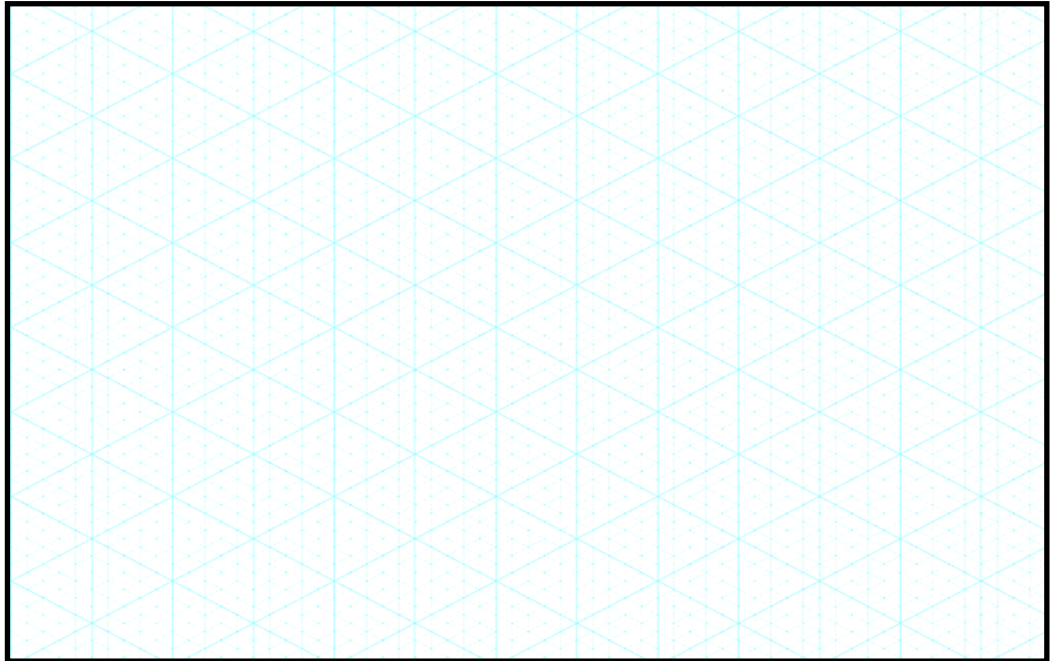
## Design and Modelling Challenge 1

*Design a bauble for a Christmas tree which incorporates some geometric solids. Your design should incorporate at least one plane-based geometric solid and one geometric solid with a curved surface. Finally, share your design with another Onshape user.*

*In the space below, outline what geometric principles will aid the modelling process for your chosen design.*

### Challenge 1

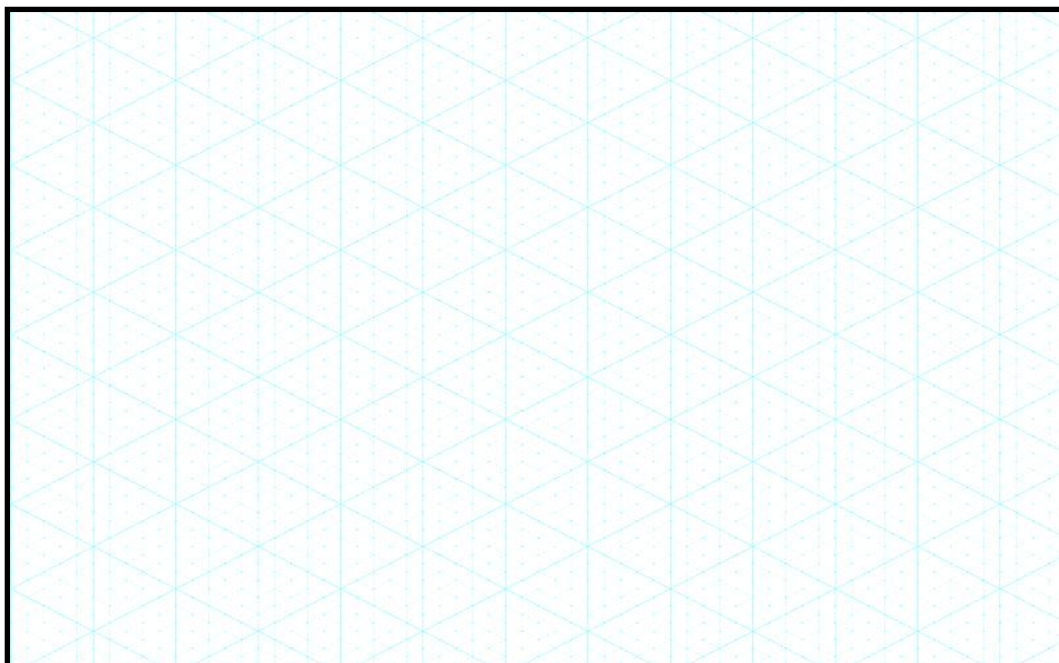
Bauble



## Design and Modelling Challenge 2

*Design a model of a lampshade. Try to experiment with some additional Onshape features you may not have used before and incorporate them into your design model.*

*In the space below, outline what geometric principles will aid the modelling process for your chosen design.*



### Challenge 2

Lampshade

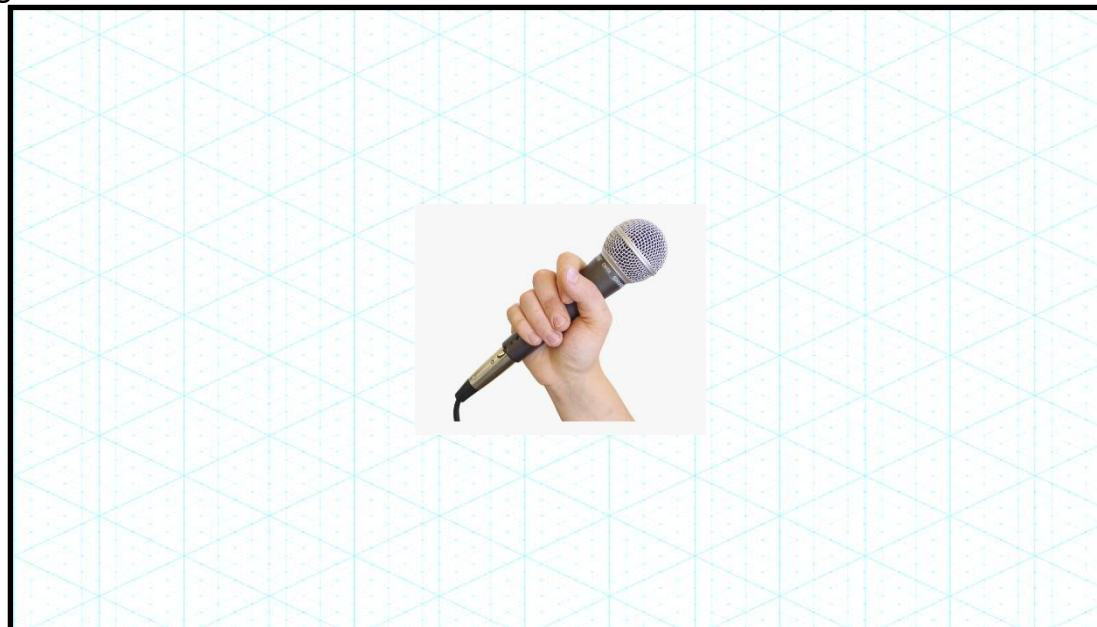


## Design and Modelling Challenge 3

Model a microphone. Estimate suitable proportion and size from the ergonomics of your hand for your design.

In the space below, outline what geometric principles will aid the modelling process for your chosen design.

### Challenge 3 Microphone



#### Contact Details

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Feedback