



# DT – Digital Modelling.

## This term I am learning

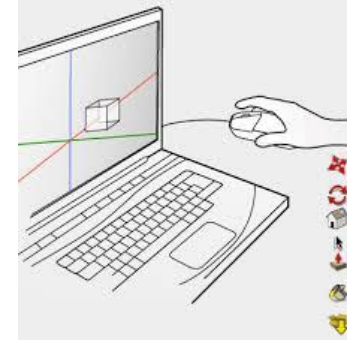
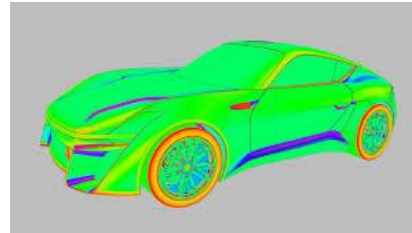
- Digital Design Tools** How to use Tinkercad to create 3D designs by combining and adjusting shapes
- Design Constraints** How to design within specific limitations (e.g. limited space, restricted movement)
- User Needs** How to design a cell that balances security, functionality, and basic human needs
- Virtual Prototyping** How to iterate and refine designs using digital tools before physical making
- Communicating Ideas** How to annotate digital designs or explain them using design vocabulary

## I should already know:

- 3D Modelling Concepts** Understand basic 3D shapes and spatial awareness from maths and previous DT work
- Design for a User** Have experience designing for a purpose (e.g. packaging, a playground)
- Computing Skills** Basic digital navigation, familiarity with drag-and-drop or block-based interfaces
- Structures** Know how everyday structures (e.g. rooms, shelters) are designed for stability, safety, and function
- Evaluation** Understand how to test and improve a design against criteria

## Other information:

Digital modelling is the process of creating a design using computer software to represent objects or spaces in 3D. It allows designers to test ideas, change shapes and layouts, and visualise their work before making anything in real life.



- Tinkercad** A free online tool used to create 3D digital models using shapes
- Model** A visual or digital representation of a design idea
- Prototype** The first version of a design used to test ideas
- Functionality** How well something works for its intended use
- Constraint** A limitation or restriction in a design (e.g. size, budget, rules)
- Scale** The size of a model in relation to the real object
- Space Planning** Arranging different areas within a design for specific uses
- Iteration** Making changes and improvements over several design versions
- Structure** How something is built or arranged to hold shape and support use
- Perspective View** A 3D angle that shows depth and spatial relationships in a model