

Design brief

As part of an architectural team, design and build a model frame and shell structure for a sustainable building that will become part of a new green city on behalf of the city council.

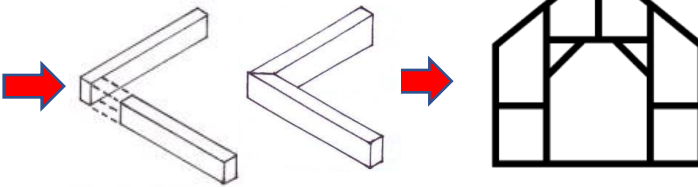
As a team decide:

- What is the **purpose** of your building in a sustainable city ?
- Who will be the **user** of your building?
- What makes your building environmentally friendly?
- How will it be sustainable?
- How will it create and conserve energy?
- How will you make the structure strong but its shell be aesthetically pleasing? What materials will you use?

Structure



The wooden frame that's supports the building.



What makes a building sustainable?

- Living architecture/ biophilic architecture.
- Materials.
- Renewable energy.
- Reduced carbon emissions
- Reduced energy consumption.
- Longevity
- Mixed use
- Composting and waste removal.
- Water collection

Aesthetics

The features of a building, its materials and appearance.



Michael Reynolds

Born 1945, New Mexico
Sustainable Architect



Vocabulary Tier 2

- Design
- Investigate
- Build
- Evaluate
- Criteria
- Function
- Make
- Product
- Process
- Join
- Sustainable
- Environmentally conscious

Vocabulary Tier 3

- Render
- Architecture
- Frame
- Shell structure
- Support
- Joins
- Model
- Exploded diagrams
- Plan view
- Fronted elevated
- Green
- Proportion
- Scale



Your design process

Design criteria: The building must be environmentally friendly as well as create and conserve its own energy. Ideally the shell will be made from recycled material.

Generating ideas: Research sustainable architectural designs, architects and work as a team to develop and refine your best ideas. You will need initial ideas and a final design.

Diagrams: Draw your frame structure, including measurements to the nearest mm. Render your shell structure using colour and annotations to identify features.

Build the model: Saw and join the wooden structure as per your measurements and plan. Build the shell from recycled material.

Evaluation: Does the building meet the design criteria and achieved its purpose.