



# Low Carbon Learning: Next Gen

Construction Skills Programme for 16–24 year olds

## Key Facts

Launched:  
August 2023

Target Audience :  
16-24 year olds

Module Content:  
BE-ST

System Build:  
Glasgow School of Art

## Fabric First Construction Online Module

The Fabric First [online learning module](#) aims to help young people better understand how alterations to existing buildings can save energy and money.

Pitched at 13–24-year-olds but useful to anyone who wants to better understand 'fabric first principles.' It will be of particular interest those Interested in construction careers or reducing our impact on the planet.

Clear and simple diagrams lead learners through the basic adaptations that we can make to our existing houses to meet our net zero 2045 targets and some low-cost ideas for taking fabric first principles into their homes today.

# Impact



The fabric first online module allows the Next Generation programme to have a reach all across Scotland, Britain and potentially further. It provides a legacy to the Next Gen programme that will continue to of use to educators and students for a number of years.

It allows students the convenience to learn at a time and location that suits them. While working at the pace that they feel comfortable with, thus allowing for optimum concentration.

The introductory nature of the content allow it to be used prior to collage and university classroom sessions to allow learning to be reinforced or as a standalone module for anyone interested in fabric first principles to make our buildings use less energy.

### What is a fabric first approach?

Young Person's Guarantee BE-ST

A 'fabric first' approach prioritises the energy efficiency of building fabric. This means that walls, roofs and floors are well insulated and constructed to avoid heat losses.

Green energy provision such as solar panels or heat pumps are secondary to an energy efficient building.

A simple line drawing of a house with a chimney. Four arrows point outwards from the walls, roof, and floor, representing heat loss.

### Insulation

Drag the images of insulation to the correct location

Young Person's Guarantee BE-ST

A line drawing of a house with a yellow highlight on the walls and roof. Four red circles are placed on the roof, walls, and floor, indicating areas where insulation should be applied.

Four small square images showing different types of insulation: a roll of mineral wool, a roll of rigid foam, a roll of reflective insulation, and a roll of loose-fill insulation.

### Potential air leaks

Click on the targets to show the areas that need careful consideration

- Junctions of surfaces
- Windows / doors

Young Person's Guarantee BE-ST

A line drawing of a house showing the internal structure. Red circles are placed at various points: the roofline, window frames, door frames, and wall junctions, indicating potential air leak locations.

### Principles of fabric first construction

Young Person's Guarantee BE-ST

A diagram showing five icons representing different principles of fabric first construction: 1. A house with a thick yellow border representing a 'Highly insulated envelope'. 2. A house with a red border representing 'Airtightness'. 3. A house with a sun icon and arrows representing 'Triple Glazed Windows' which 'maximise solar gains & shading'. 4. A house with a red box representing 'Ventilation with heat recovery'. 5. A house with a red box representing 'Minimal Thermal bridging'.