



LESSON 1: SUSTAINABLE STRUCTURES

SUBJECT

Sustainable Homes: What Is A Sustainable Structure?

AGE RANGE

15-18

LESSON PLAN

1 of 4

WHAT IS A SUSTAINABLE STRUCTURE?

Sustainable structures are typically a smaller footprint than traditional homes and include the use of construction practices and materials that have minimal to no negative effects on the environment. Their construction and ongoing operation include methods to preserve energy and water, minimize waste and create healthier indoor environments - in an effort to blend in with nature. They are creative, innovative and can include all the needs and comforts of a traditional home - in a smaller footprint.

TYPES AND BENEFITS OF SUSTAINABLE STRUCTURES

Strawbale: yes you guessed it - using bales of straw! This type of home offers excellent insulation to keep the interior space cool in summer and warm in winter.

Hempcrete: a simple recipe easy for anyone to learn and construct. Hempcrete homes promote a healthy interior environment and provide outstanding insulation, energy efficiency, breathability, durability and are extremely fire resistant.

Earth Blocks / Hobbit Homes: Created from a mixture of dirt and sand blocks or built into a natural feature such as a hill, this type of home offers great insulating characteristics as well as a seamless integration with the surrounding natural environment.

Repurposed Shipping Containers: Making a home out of something that no longer has a use. These homes create sustainable and budget-friendly spaces that are durable, adaptable and visually appealing.

Tiny Homes: Smaller footprint homes that come in many shapes and sizes! This type of home promotes a simple and sustainable lifestyle that is affordable, eco-friendly and some are on wheels and mobile!

Yurts: Movable circular homes made of canvas and wood posts - with a distinctive shape which represents a sustainable lifestyle and offers adaptable shelter in a variety of climates.

INTERSTING FACTS AND TIPS

- Sustainable buildings use significantly less energy and water than traditional builds
- They rely heavily on natural lighting and natural ventilation, reducing the overall cost
- Although local building rules have been historically restrictive to support sustainable homes, many are changing to accommodate this affordable eco friendly option
- Sustainable homes offer an innovative use of space and creative architecture options