

Science Fair Ideas- Change and Adapt

WHAT WILL HOUSES LOOK LIKE IN THE FUTURE?

Engineers help improve the world around us. They make sure that with a growing population, everyone has somewhere to live.





Floating cities in the ocean



Ice houses on Mars



Recyclable homes



Living buildings

Engineers are creative. They solve problems using science, maths, computing, design and technology.

Engineer your future.

How will we make living environments safe and healthy?



CHANGE

the way we

TACKLE AIR POLLUTION

using engineering and technology

Collect the set:








Engineers are helping to make our air fresh again by:

- Developing electric aircraft
- Supplying clean electricity
- Producing low-emission fuels
- Designing AI-powered sensors to detect pollution levels
- Creating anti-smog devices
- Planning and building urban forests



How will we tackle **climate change**?



CHANGE

the way we **TRAVEL**
using engineering and technology

Collect the set:



Engineers are helping us to travel sustainably by:

- Improving cycle routes
- Designing trains powered by hydrogen, solar and biomethane
- Developing electric vehicles
- Reducing carbon emissions through improved traffic management
- Creating shark-inspired 'skins' for planes to reduce fuel use

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Brilliant Inspiration

How will we ensure we **produce and consume things sustainably**?



CHANGE

the way we **USE THINGS**
using engineering and technology

Collect the set:



Engineers are helping us to look and feel good and reduce waste by:

- Creating fabrics made from fruit
- Designing apps to encourage people to re-use and upcycle clothes
- Using AI to improve automated waste sorting
- Developing biodegradable microbeads (found in cosmetics and cleaning products)
- Making recyclable wind turbine blades

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Brilliant Inspiration

How will we tackle **climate change**?



CHANGE

the places we **LIVE IN**
using engineering and technology

Collect the set:



Engineers are helping us to adapt buildings and communities by:

- Using materials like timber and cement-free concrete to reduce carbon emissions
- Designing 'smart' buildings with power-saving lighting, heating and security systems
- Planning and building sustainable, flood-proof, future cities
- Developing low-carbon heat pumps
- Exploring floating communities

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How will we get **affordable, reliable, sustainable power**?



CHANGE

the way we **POWER OUR WORLD**
using engineering and technology

Collect the set:



Engineers are helping us to access clean, green electricity by:

- Creating solar paint for buildings and road markings that converts sunlight to electricity
- Designing floating wind technology
- Developing fuel cell technology
- Expanding hydropower
- Researching space based solar power
- Optimising power distribution through smart grids

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Brilliant Inspiration

How will we ensure we produce and consume things sustainably?



CHANGE

the way we create **FOOD**
and enjoy
using engineering and technology

Collect the set:



Engineers are helping us to eat our way to a healthier planet by:

- Reducing packaging and making it sustainable
- Designing 3D and 4D printed plant-based food
- Researching food preservation methods to reduce waste
- Planning vertical and floating (space-saving) farms
- Creating harvesting robots

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