

An aerial, isometric-style illustration of a vibrant city. The buildings are rendered in various colors like orange, green, blue, and yellow. A prominent yellow bridge with a curved arch spans across a blue river in the lower right. The overall scene is bright and colorful, representing a sustainable urban environment.

Young People Planning for Climate Change and Sustainable Neighbourhoods

Introducing ourselves



 School of Architecture
Planning & Landscape



Source: Author

PART 1

What is climate change/ What does sustainability mean?



- Write your answers on a piece of paper
- Hands up to share your thoughts

Terms

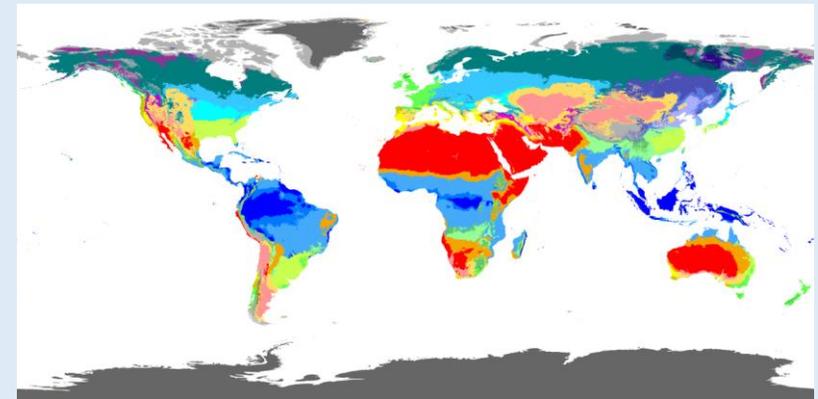
Weather =

describes the conditions of the air close to the Earth's surface e.g. rain, snow, temperature.

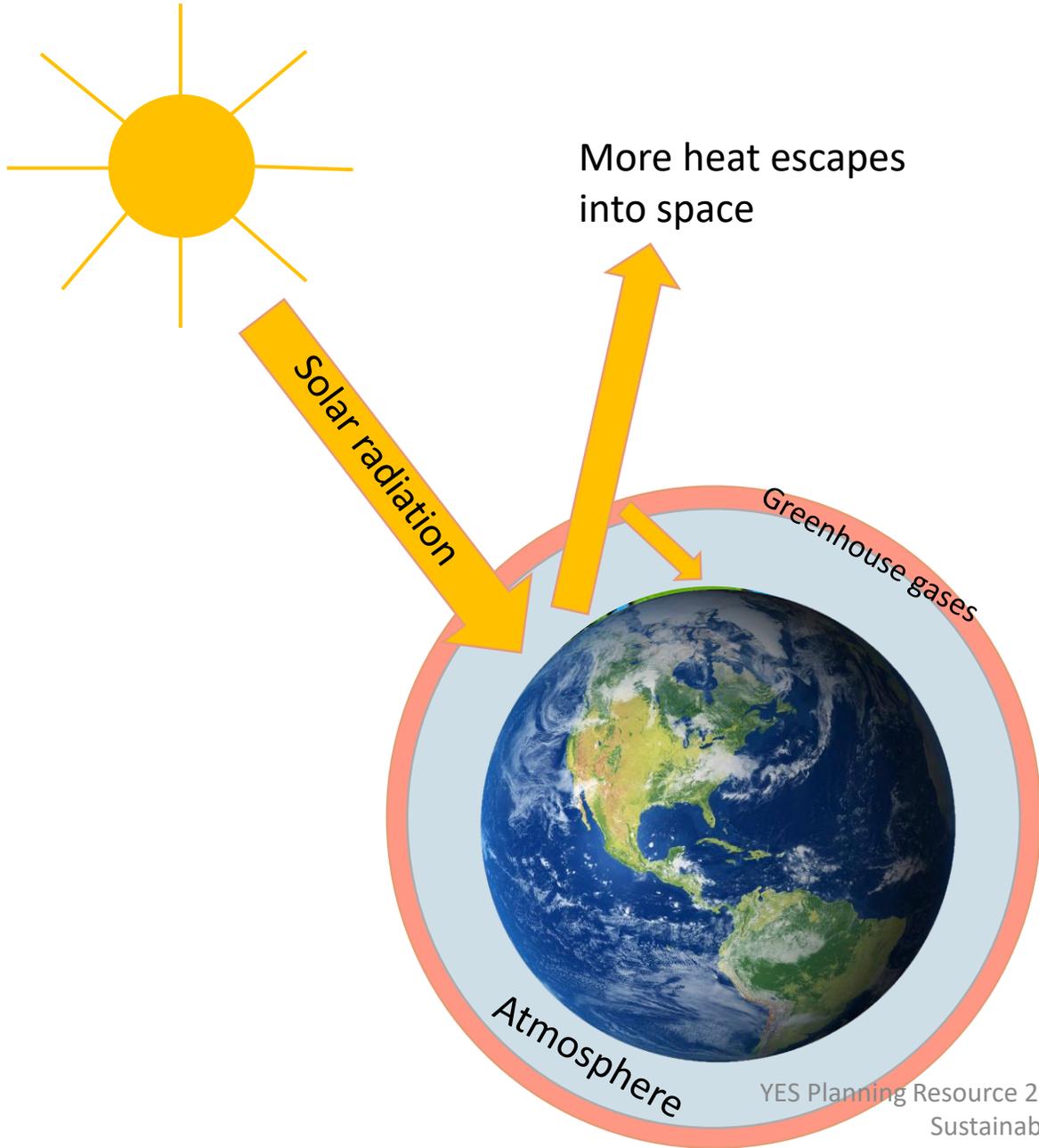


Climate =

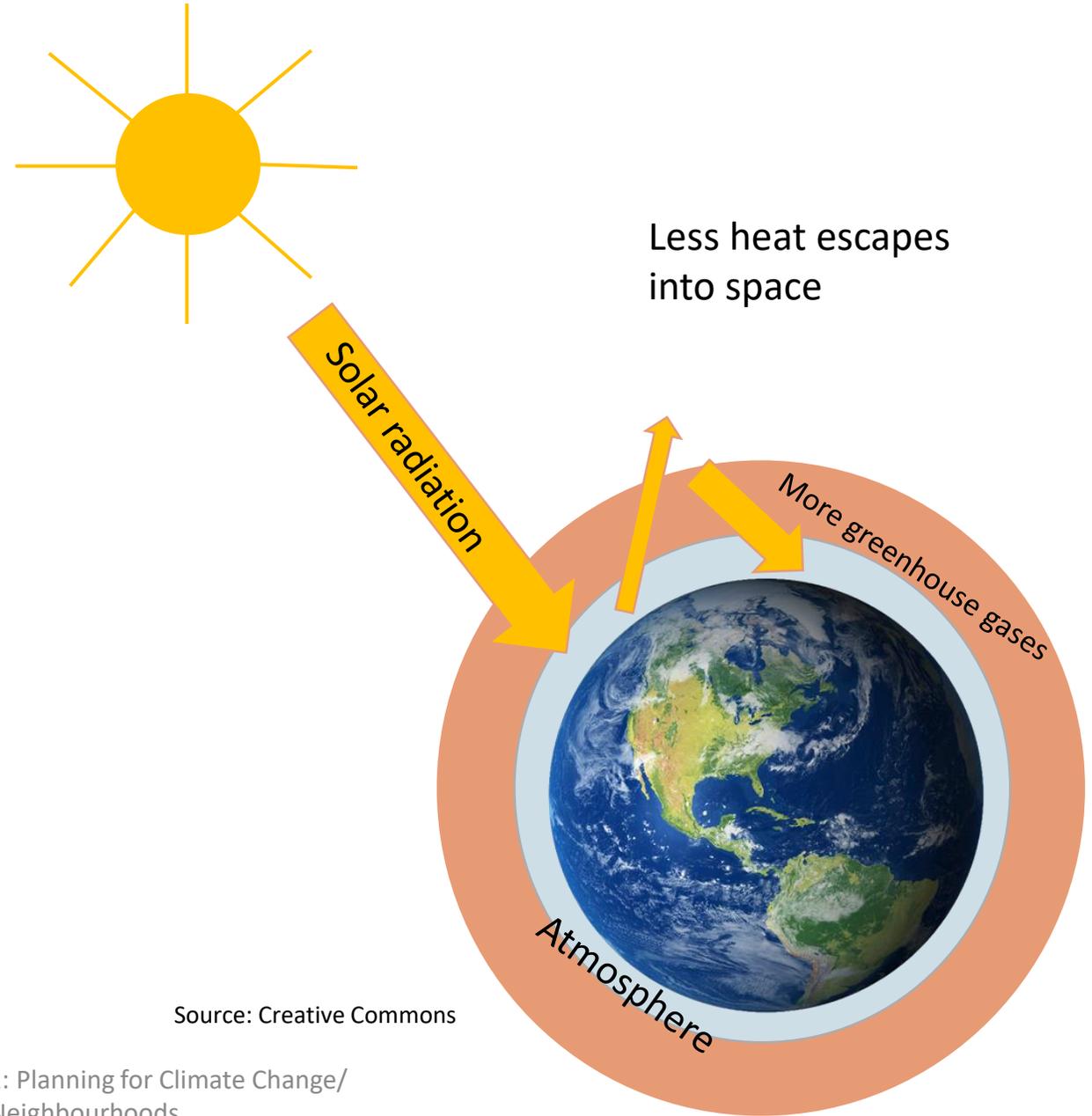
describes the conditions in the atmosphere over a long time, usually 30 years or more



Natural Greenhouse Effect



Human Enhanced Greenhouse Effect



Source: Creative Commons

The Enhanced Greenhouse Effect

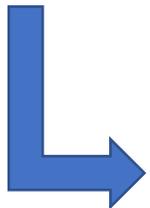
Burning fossil fuels



More greenhouse gases
in atmosphere



Acts like a blanket
around the planet



More heat is trapped in
atmosphere



Average global
temperatures increase

Fossil fuels are burnt
in power stations, in
industry, in vehicles
and airplanes

Greenhouse gases
include carbon
dioxide, methane and
nitrous oxide



Source: Creative Commons

This is how
human activity
is influencing
the changing
climate

Sustainability

Meeting the needs of the present without harming the ability of future generations to meet their own needs



Image source: Creative Commons

Sustainable solutions to climate change



Reduce deforestation and increase afforestation



Switch from fossil fuels to alternative sources – solar, wind, tidal, hydroelectric power etc.



Walking, cycling or using public transport



Switching off lights, power sockets, phone chargers and TVs when not in use



Using energy-efficient light bulbs and rechargeable batteries



Insulating house roofs and walls, blocking draughts and using double-glazing and energy-efficient heating systems

All Images: Creative Commons

What do you think town planning is?



- Write your ideas on a piece of paper
- Hands up to share your thoughts

What is town planning?

- “Planning is about helping to physically shape the places we live, work and play”
- “Balancing different social, environmental and economic issues to decide how land should be used”



What planners do:



Making sure people have access to homes, jobs and facilities such as schools, hospitals and open spaces



Managing and leading different projects at the same time

Protecting buildings and areas that are of environmental, historical or architectural importance



Marking up suitable land for development and making sure it becomes available



Setting out and using development rules and guidelines across the country

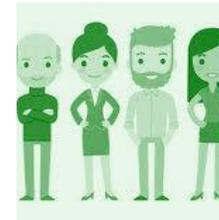


Presenting to committees and meetings on planning proposals

Designing new towns, garden cities or villages



Meeting architects and local people, explaining your ideas and proposals, and listening to other people's views



Balancing the needs of communities, businesses and the environment



Preparing and assessing applications for new buildings, masterplans or land uses

How can town planning help climate change?



Encouraging zero-carbon transport methods

Creating green and walkable streets

Planning neighbourhoods where it takes 15-20 minutes to walk to a destination

Adding segregated cycle lanes

Protecting carbon sinks

Protecting key green space and trees from development

Keeping existing trees within new developments

Planning for afforestation



Cycling and walking also tackles other challenges...

Improves air quality

Health and wellbeing

Congestion

Noise pollution

How can town planning help climate change?



Development management

Making developments resilient to climate change impacts through density, landscaping etc.

Awareness of flood risk and coastal change

Energy production

Supporting high levels of efficiency in new development

Assessing planning applications for alternative/ low carbon energy production schemes



What is planning for climate change/ neighbourhood sustainability?

- City level, towns and villages distinctions



Source: Creative Commons

Examples of innovative sustainable planning



Examples of innovative sustainable planning around the world

London, UK: Parking sensor around the city to lower congestion

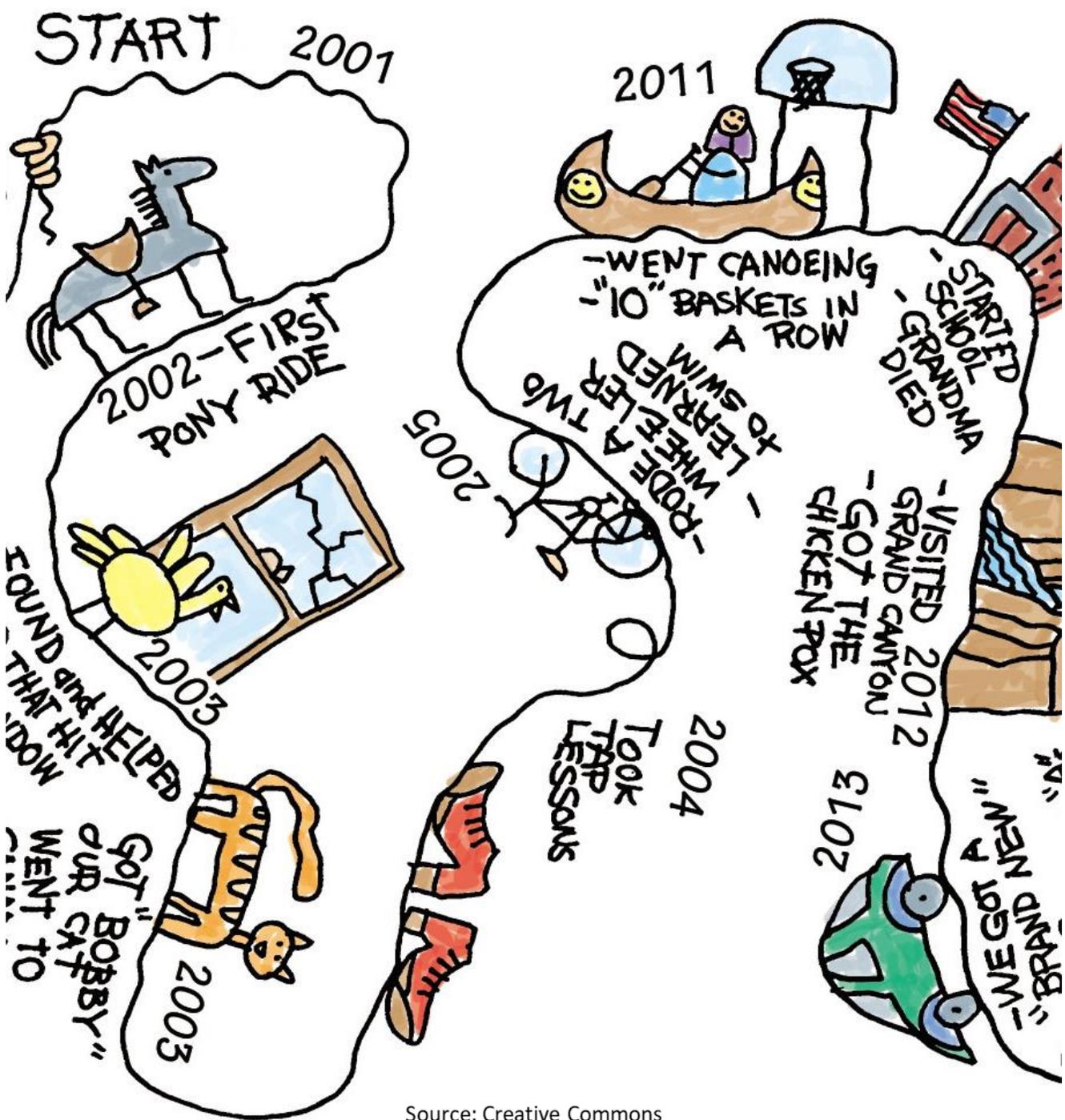
- sensors around the city help motorists to directly access parking spaces; reducing congestion, air pollution and fuel consumption

Seoul, South Korea: Cheonggyecheon,

- a river being modernised to provide green and recreation space for the city.



PART 2 : COGNITIVE MAPPING EXERCISE



Source: Creative Commons

TASK

In a small group, draw and design your own sustainable neighbourhood.

You have 30 mins to come up with a drawing.



Elements you need to think of :

1. Buildings (houses or offices)
2. Greenery (trees and small parks)
3. Pathways (pedestrian walkway and/or roads)
4. Proportion of spaces (providing enough balance between housing and green public spaces)



Now let's come back together
and share some ideas



Examples of sustainable neighbourhood



What makes a sustainable neighbourhood?

A sustainable neighbourhood prominently provides safety and convenience, especially in supporting sustainable development.

In regards to this, these are some of the aspects of what we could identify as a sustainable neighbourhood :

- **Sustainable transport**, providing pedestrianised and cycling routes (roads could be developed but having pathways for buses would be more sustainable rather than cars)
- **Green infrastructure**, providing green public spaces like parks as well as trees and benches for people to meet and interact with other people in the neighbourhood
- Appropriate buildings which would promote **less carbon emission** and initiating **energy efficient homes**

As a whole, a neighbourhood balanced with buildings and green environment would provide a sustainable future, especially in battling climate change and global warming.

PART 3

Housing

In the UK, housing developments produce a lot of carbon dioxide:

- During construction it takes between **50 and 80 tonnes of CO2** to build to build your average UK house¹.
- During use the average household in the UK emits **2.7 tonnes of CO2** every year from heating their home¹.

Therefore we need **creative** solutions to reduce the carbon released by future housing.

1. Citu (2020). What is the carbon footprint of a house? Available at: <https://citu.co.uk/citu-live/what-is-the-carbon-footprint-of-a-house> [Accessed 01/12/2021]

Design a sustainable, low carbon house

Task

Within your groups take on the role of a planner/architect

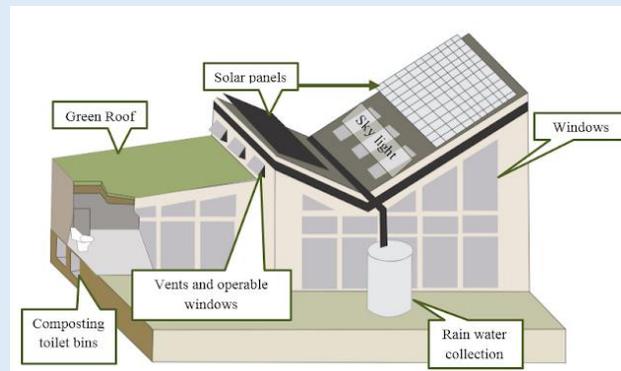
You have 30mins to design a sustainable low carbon house.

A Sustainable building should be:

- connected to nature
- create community
- be energy efficient

You should think about these key points:

- Location – accessible, near public transport
- Materials – Walls, insulation, roof, window
- Outdoor spaces – Garden or shared garden? Play spaces? Allotments? Nature?
- Energy and water – Renewables? water catchment?
- Parking – Do you want any? Do you want bike storage? Do you want electric car points?



YES Planning Resource 2022: Planning for Climate Change/
Sustainable Neighbourhoods



All images source: Creative Commons

Now let's come back together and
share some ideas

Some things
you could have
included



All images source: Creative Commons

Homework task - Only when requested

Individually, write a report about your design.

This piece of writing should:

1. Summarise why sustainability in the built environment is important
2. describe your design and explain why you chose certain materials, location etc.

Reflections

During the past two sessions we have looked at neighbourhood sustainability and how we can design low carbon housing.

Long term

- Possibly think about working within the built environment – e.g. planner, architect, urban designer, builder, engineer etc
- Think about the type of house or flat you might want to live in when you move out
- Get involved in your local community and planning applications.

Short term

- Recycle
- Turn off lights and plug sockets
- Reduce your plastic use
- Plant greenery or grow food either in a plant pot or your garden