Reducing Flooding (Part 1)

Lesson aim:

- To understand how we can reduce flooding through the **catchment** using flood schemes

Lesson objectives:

- Learn what flood resilience is and the different types
- Introduce different types of flood defences
- Think of ways we can stop or reduce flooding

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Recap…

What is a catchment?

A catchment is an area of land which leads each drop of rain that falls within it, towards the same river.

Can you remember the three ‘courses’ of a river?

1. **Upper course**
2. **Middle course**
3. **Lower course**

Recap…

Who manages the risk of flooding?

Environment Agency – Main rivers, the sea and reservoirs

Water Companies – Sewer flooding and blockages

Local Council or County Council – Surface water flooding

Now lets take a closer looks at how this is done…

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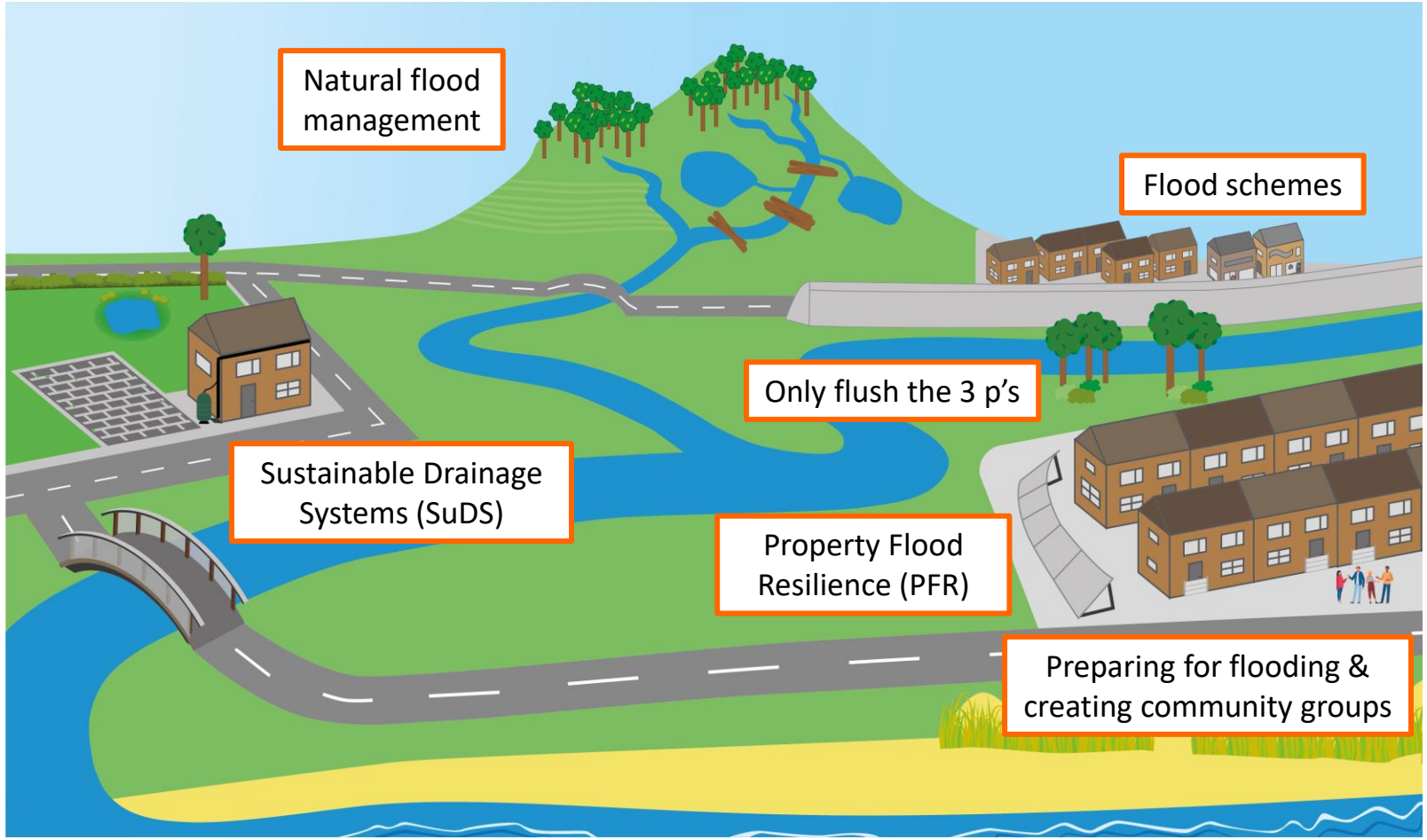
Reducing Flooding

Do you know any ways we can reduce flooding?



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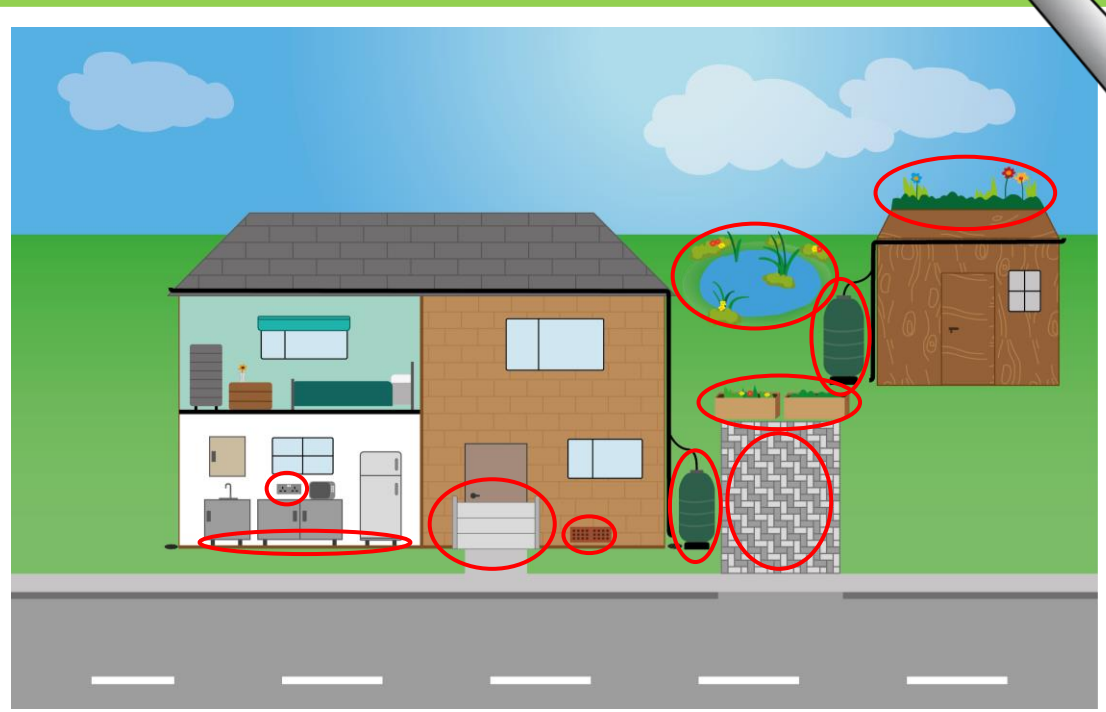
Protecting Your Property

Can you spot the difference between these two houses?

Which one would be more prepared for flooding?



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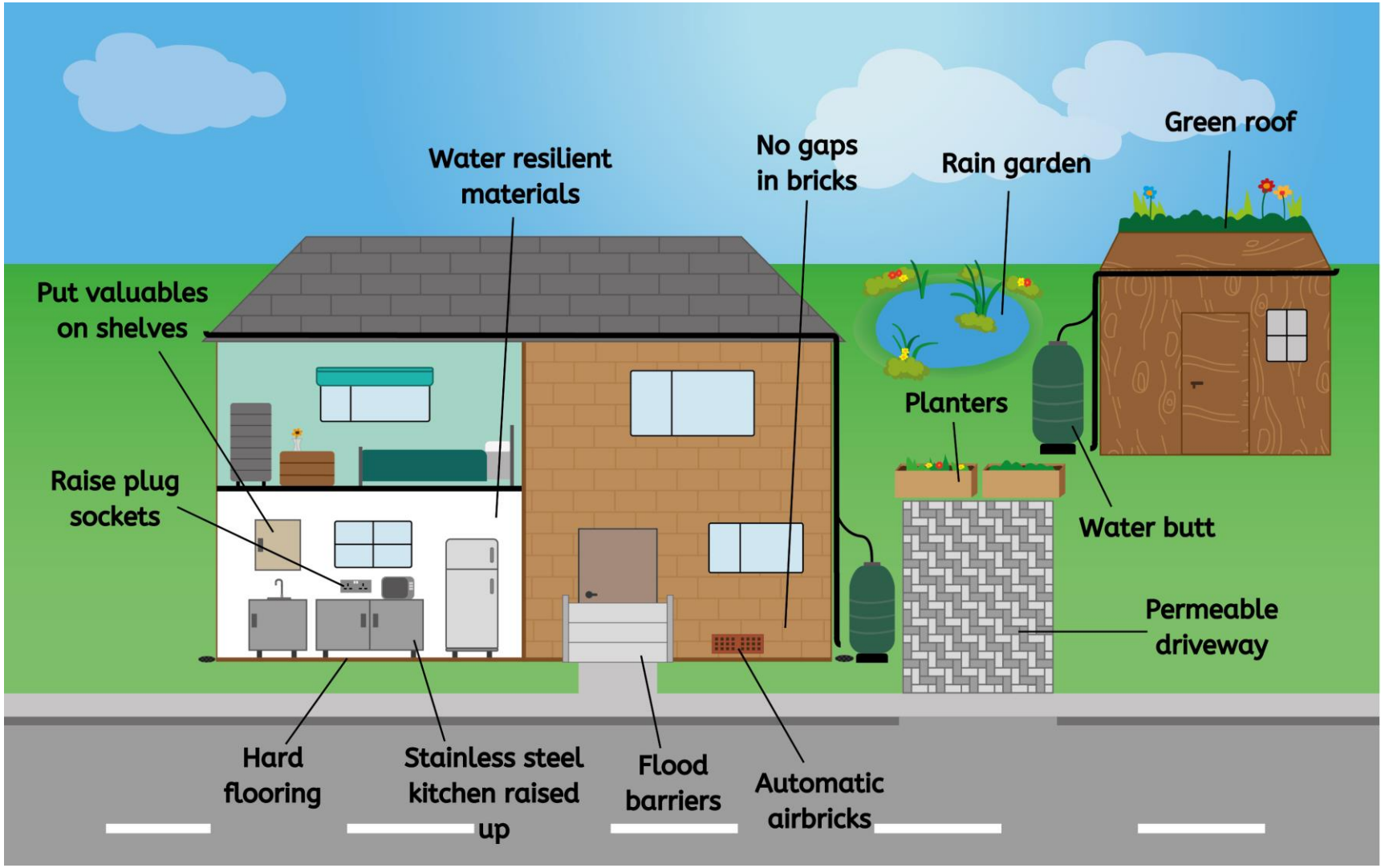

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Protecting Your Property

Property Flood Resilience (PFR) = Changes people can make to their property so that it can cope better when it floods

Resistance and Resilience

- Resistance = stops water coming in
- Resilience = reduces flood damage & makes recovery faster

Protecting Your Property

Sustainable Drainage Systems (SuDS)

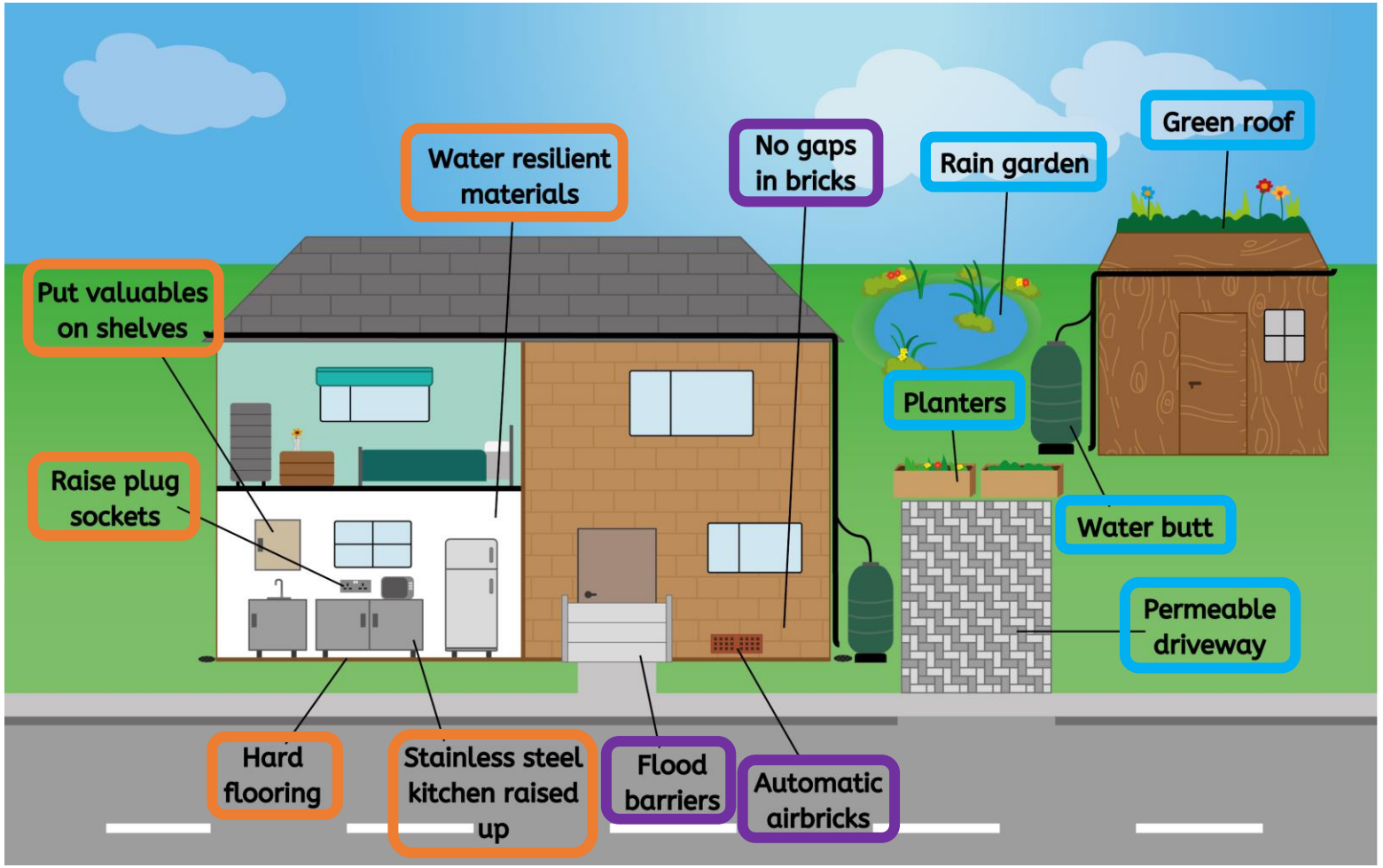
SuDS catch rain to stop it from adding to surface water, entering drains and adding to the risk of flooding!

Image: The Flood Hub

As well as reducing flood risk they have lots of other benefits such as creating habitats for wildlife and soaking up carbon dioxide (CO_2).

Protecting Your Property

Can you guess which defences are resistance, which are resilience, and which are SuDS?



Resistance = stops water coming in

Resilience = reduces flood damage & makes recovery faster

SuDS = catch and store rainwater

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Protecting Your Property

Let's take a closer look at some defences

Flood door

Flood barrier

Automatic airbrick

Hard flooring

Alternative sandbags

Raised electric sockets

Kitchen made from resilient materials

Flood Schemes

What do flood schemes do?

Flood schemes are built to protect big parts of towns and villages from flooding!

They are usually made up of walls, embankments, and flood storage areas.

Types of Flood Defences

Flood walls

Built along the river to stop floodwater from rivers reaching into towns

Embankments

Grassy hills or slopes which stop floodwater from rivers reaching houses

Storage areas

Floodwater is directed out of a river onto empty land to be stored

Pumps

These take water from a place that is flooding to a different location

Temporary flood barriers

Put up in communities before flooding happens to stop floodwater reaching houses

Coastal defences

This can be flood walls or changes to the beach to protect it from waves and high tides

Recap of Lesson

- **What does property flood resilience do?...**

  Stops or reduces the amount of water getting into your home and damaging things

- **What do SuDS do?...**

  Catch rainwater and stop it from flowing over roads and into drains

- **What do flood schemes and defences do?...**

  Protect big parts of towns and villages from flooding

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Homework

Protect your home from flooding

Using what we've learnt in this lesson, have a look around your house and answer the questions on the sheet.

- Where could flood water get in?
- What defences could you use to stop flood water getting in?
- Do you think a flood scheme would help to stop your home from flooding? If so, how?