How to build sustainable buildings?

READING

LEVEL	NUMBER	LANGUAGE
Intermediate	EN_BE_2543R	English

Goals

- Can understand a simple text about building sustainable buildings.
- Can identify and use simple vocabulary relating to construction sites and sustainability.

The world of construction is changing. More and more buildings are being built with **sustainable** designs.

But what do they look like?

Vocabulary review slide

construction

wood

concrete

to lay the roof

transparent

durable

risk of

insulation

Sentence examples

Let's look at the construction plan.

I gathered some wood for the fire.

The motorway was made of concrete.

There is a risk of injury on construction sites!

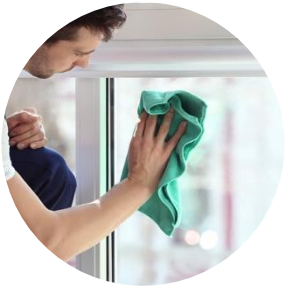
Sentences slide

We have put in **insulation** to keep the house warm.

It took us three days **to lay the roof**.

The **durable** walls will make sure it lasts a long time.

I could see them through the **transparent** glass.



Reading slide

Sustainable buildings are designed to be better for the environment during their lives. We live in a time of increasing environmental awareness.

The **construction** industry is changing. Designing buildings so they are less harmful to the environment is now very important. This can be achieved in a variety of ways.

Reading slide

We can build sustainable buildings using recycled or renewable resources. Materials such as **wood** can be used from sustainable forests. **Concrete** can also be manufactured in ways that reduce the amount of CO2 released into the atmosphere.

Another strategy is to use more **durable** materials to lengthen the time until they need to be replaced or repaired. Sustainable building can also focus on using natural materials that are available locally.

Locate these words in the text

environmental

sustainable

industry

natural

renewable

manufactured

atmosphere

durable

designed

Choose the correct option

1. Sustainable buildings are built with _____ resources.

a. recycle **b. relatable** **c. renewable** **d. materials**

2. It is possible to _____ concrete in a way that releases less CO2 into the atmosphere.

a. manufacture **b. mistake** **c. materialise** **d. manufacturing**

3. _____ materials last for a longer time before they need to be replaced.

a. Debatable **b. Durable** **c. Flexible** **d. Degradable**

4. We live in a time of increasing environmental _____.

a. attitudes **b. awareness** **c. atmosphere** **d. ability**

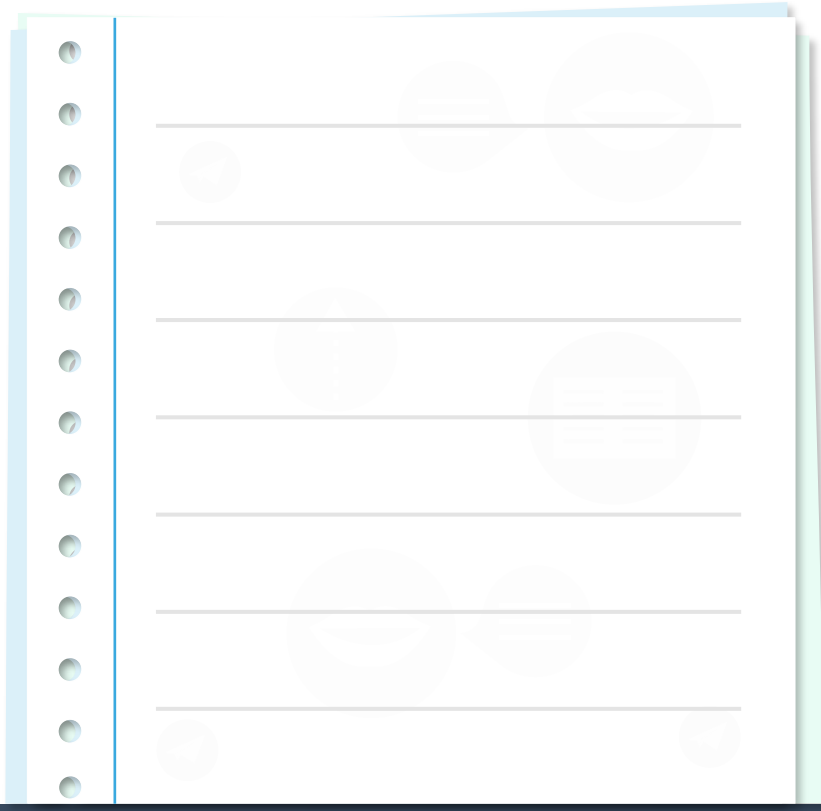
Answer the questions

Respond to the following questions.

What are some ways buildings can be designed in a sustainable way?

How sustainably built is your home in your opinion?

Is building sustainable buildings an important topic for you? Why?



Reading slide

Energy saving elements can also be added to sustainable buildings. Solar panels can be installed after **laying the roof,** allowing much of the building's energy needs to come from the sun.

This way less non-renewable energy is needed and it reduces carbon emissions. **Transparent** surfaces can also allow more natural light in. This reduces the need for electric lights.

Reading slide

A building can be designed with good **insulation**. This can save energy (and money!) on heating. Buildings can also be built to use water efficiently.

The Crystal in East London is a great example of a sustainable water system. The roof of the building collects rainwater, and the wastewater and sewage is recycled on site.

Complete the sentences in your own words

Complete the sentences below using information from the text.

1. Insulation is used to ...
2. One way to reduce energy costs in a building is to ...
3. The Crystal has a sustainable water system that ...
4. Wood can be used sustainably by ...
5. Solar panels are usually installed ...

Discuss

What are some ways that you live sustainably?
How could you live more sustainably?

Big question

Why is it important to build and design sustainable buildings?

Reading slide

As sustainable construction becomes more common, there are more and more examples of what environmentally friendly buildings can look like.

The Pixel Building in Melbourne, Australia was the first building ever to receive a perfect ‘Green Star’ score. It is notable for being 100% carbon-free. All of the carbon required to run the building was offset, or cancelled, by renewable energy!

Reading slide

The progress in sustainable design and building practices is inspiring. It is still not enough!

Architects, builders and the people who live in those buildings all have a responsibility to follow sustainable habits each day.

The **risks of** environmental catastrophe are still real! It's time to make sustainability our number one priority.

Brainstorm

Write down a list of all the ways buildings can be made sustainably mentioned in the text. Talk to your teacher and see if you can think of more to add to your list.

Talk about the sustainable building methods in the pictures

Designing a sustainable home

You're an architect who specialises in eco-friendly homes. It's time to design a home for one of your clients. Write a blueprint for their dream sustainable home using the text you read to help you.

Now imagine you are...

... presenting your blueprint to your client. Explain the design and features of the home. Your teacher will be play the client and ask you to clarify your blueprint.

- Be sure to describe your plan in detail.
- Don't forget to explain what makes it a sustainable home!

Reflect on the goals

Go back to the second slide of the lesson and check if you have achieved all the goals of the lesson.

yes

no

Reflect on this lesson

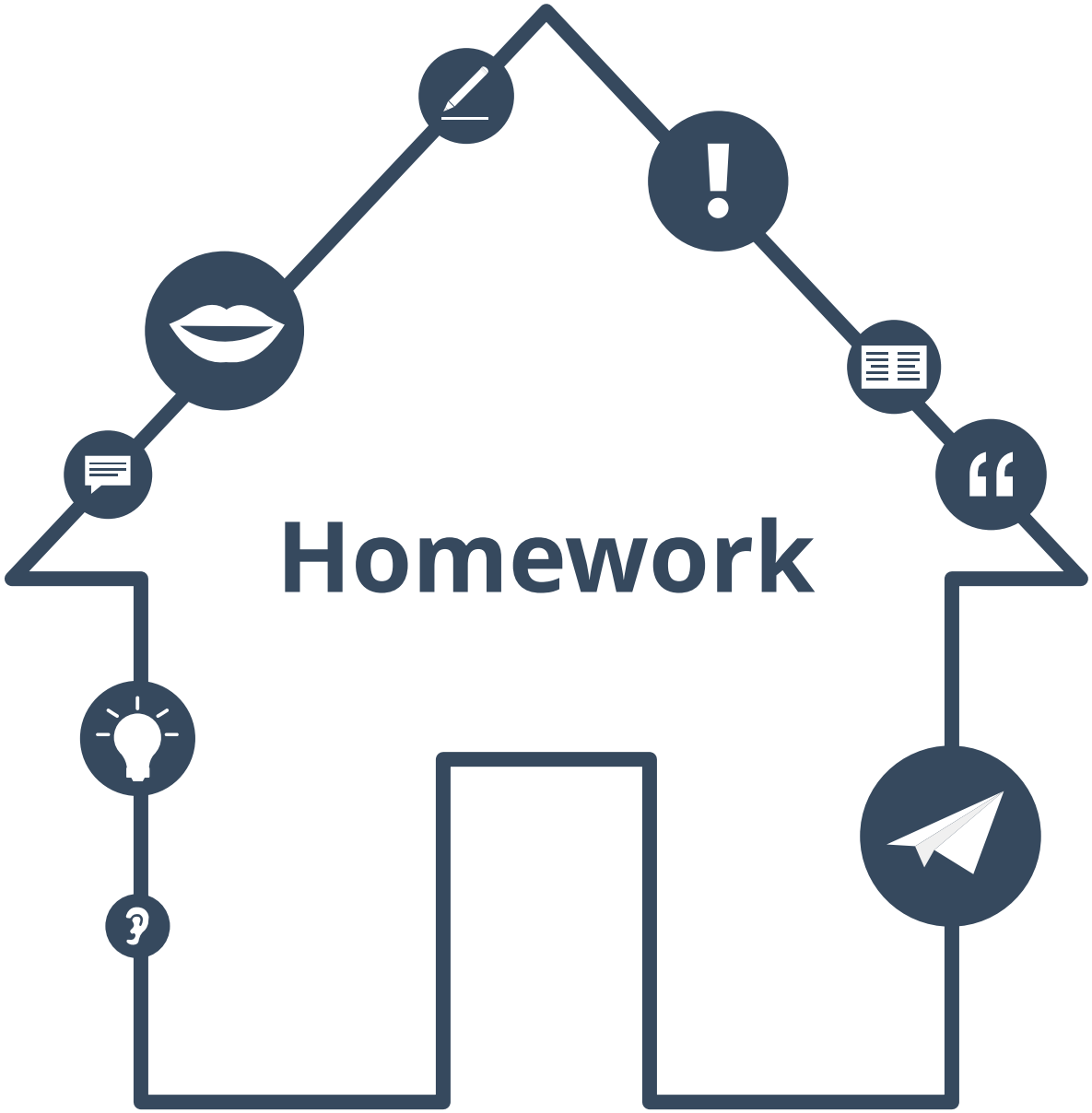
Think about everything you have seen in this lesson.
What were the most difficult activities or words? The easiest?

If you have time, go over
the most difficult slides again

Answer key

Exercise 1, p.10

1. C
2. A
3. B
4. B


Homework

Homework definitions activity

Write definitions for the following words from the text.

concrete

durable

wood

transparent

risks of

insulation

Write an e-mail

Write a follow up e-mail to your customer explaining the work you have done on their home.

customer@builders.com

Subject: Follow up on building project

Dear customer,

About this material

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