The Homes We Build and Cool Architecture Lesson Plan
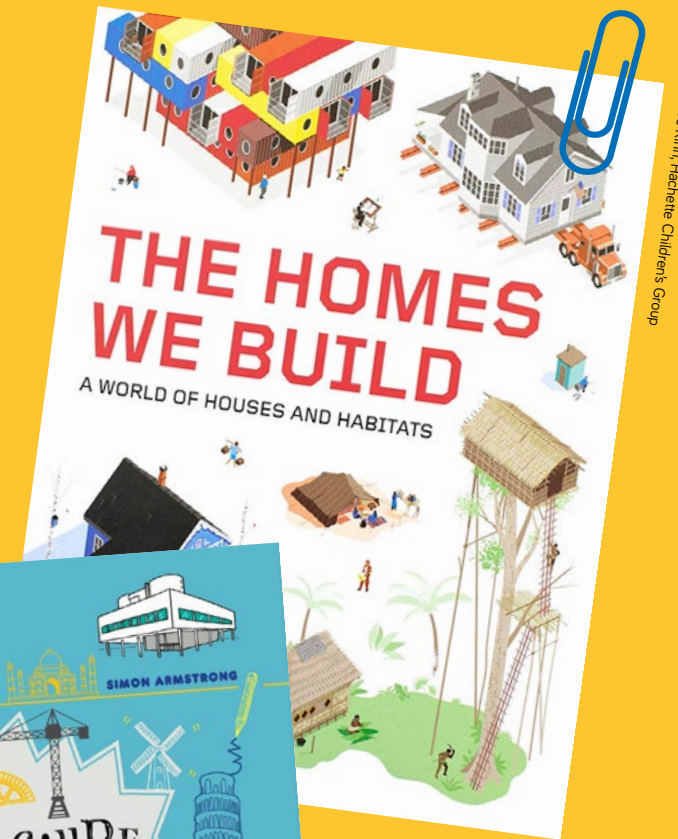
Learning objectives:

- Develop and enhance understanding of architecture and what architects do

- Develop basic skills such as time management, teamwork, leadership, critical thinking

- Learn how to critique an architecture focused text

KEY STAGE 2 (ages 7-11)

THE HOMES WE BUILD
A WORLD OF HOUSES AND HABITATS

© Lou Rihn, Hachette Children's Group

COOL Architecture
SIMON ARMSTRONG
Filled with fantastic Facts for Kids of all Ages!

© Simon Armstrong, Rizzoli

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These activities have been designed to be student led, where they learn to manage themselves through independent research and creative challenges. Each activity is summarised below, stating what students will be doing, what skills/curriculum it will link to, and what materials students will need to complete it.

Before completing the creative challenges we suggest that your pupils read 'The Homes We Build' and 'Cool Architecture' and write a review card for each book.

View RIBA's winning Reading Architecture books here

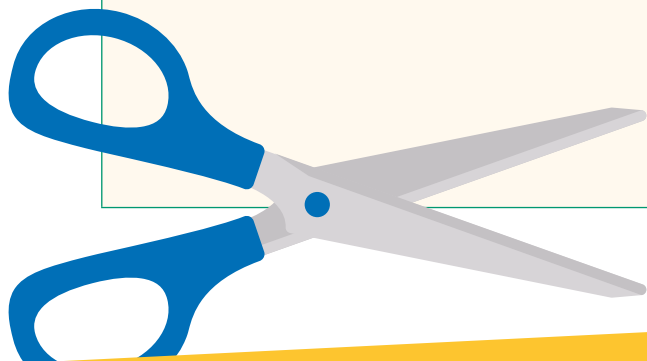# Being an architect project

| Tasks	Materials needed	Curriculum links	Notes
• Watch either **Sid's** or **Cath's** Architect videos and ask pupils what they learnt from watching the videos • Complete an architecture quiz • Identify and learn about the differences between plan, elevation and section drawings using the Types of Architectural Drawings sheet • Complete a Creative Challenge by drawing an iconic building using common architecture techniques.	• The Homes We Build Book • Cool Architecture Book • How to be an Architect Worksheet • Pencils • A4 Paper for each student • Beautiful Buildings Printed off • Types of Architectural Drawing Sheet • Architecture quiz • Types of architectural drawings sheet.	**English** • Comprehension - retrieve, record and present information from non-fiction. **Art** • Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials • Great artists, architects and designers in history.	Some answers are easy to find, some might require a more methodical approach.

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DT projects

Tasks	Materials needed	Curriculum links	Notes
Cereal Box City • Read about architecture and landscapes • Design a Cereal Box City • Make a Cereal Box City. **Green Roofs** • Look at examples of green roofs in architecture • Design your own green roof • Make a green roof building from recyclable materials.	**Cereal Box City** • The Homes We Build book • Cool Architecture book • Cereal Box City resource printed – 1 for each child • Cereal Box – one for each child • Paper (coloured, plain) • Scissors • Glue • Pencils/felt tips • Any other craft materials you have. **Green Roofs** • Green Roofs Resource – one for each child • Recyclable materials such as boxes, plastic bottles, yoghurt pots etc • Scissors • Masking tape and PVA glue • Cress seeds • Cotton Wool/pads • Any other craft materials you have.	**DT - Design** • design purposeful, functional, appealing products for themselves and other users based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. **DT - Make** • select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Students should collect materials before hand. Timings can be adjusted. Students should spend about: • 10 mins reading the information • 10 mins doing their designs • 35 mins making • 5 mins cleaning up.

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Designing for different spaces

Tasks	Materials needed	Curriculum links
• Matching towns and cities to different environments • Identifying different design techniques used for designing in different climates • Designing a house to meet the needs of a particular place or climate.	• The Homes We Build Book • Designing for Different Places Worksheet pack printed for group • A4 plain paper for each student • Pencils/pens • Colouring pencils • Each student to have their review pack.	**Geography** • Explore world countries, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities • Describe and understand key aspects of Physical and Human Geography. **DT** • DESIGN: Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • Generate, develop, model and communicate their ideas through discussion, annotated sketches. **Art** • improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials.

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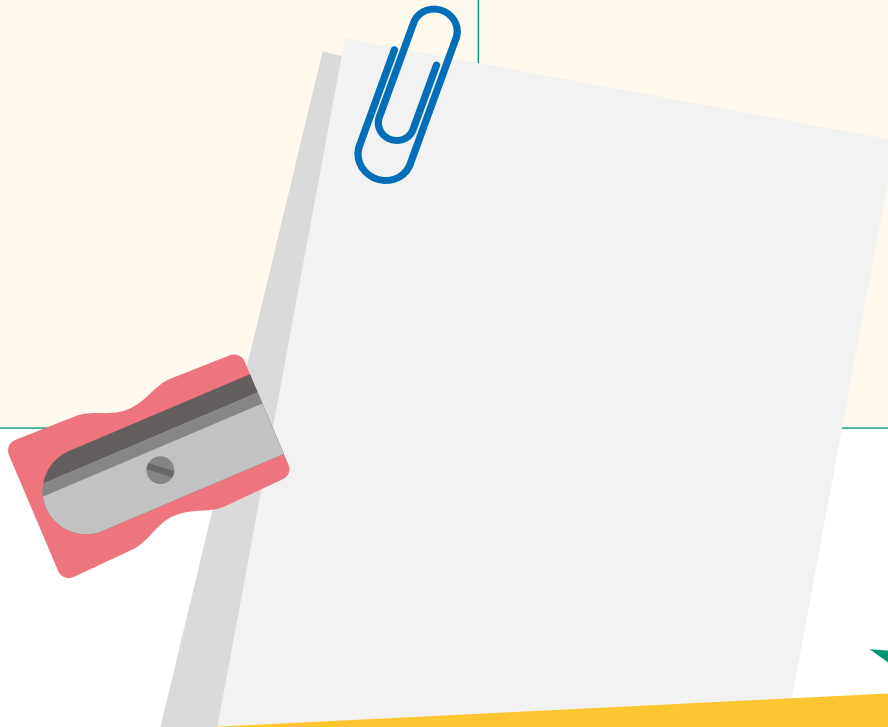
Review card – before you read the book

FIRST IMPRESSIONS
Please rate the following things:

How much do you like the front and back covers?

☆ ☆ ☆ ☆ ☆

How interesting do you think the book looks?

☆ ☆ ☆ ☆ ☆

How likely you would be to choose to read this book in your own time?

☆ ☆ ☆ ☆ ☆

How useful will this book be in helping you learn about architecture?

☆ ☆ ☆ ☆ ☆

What do you think the book is about?

What do you like?

What don't you like?

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Review card – after you have read the book

1 How much did you like the pictures? Were they useful or entertaining?

2 How interesting was the content? Was it what you expected?

3 How easy was it to find information?

4 Was the content easy to understand – are technical words explained, are there pictures to support ideas, are things simply put and explained?

5 How much did you like the design and layout of the book?

6 Who do you think this book would be good for?

7 What was the best thing about this book?

8 What was the worst thing about the book?

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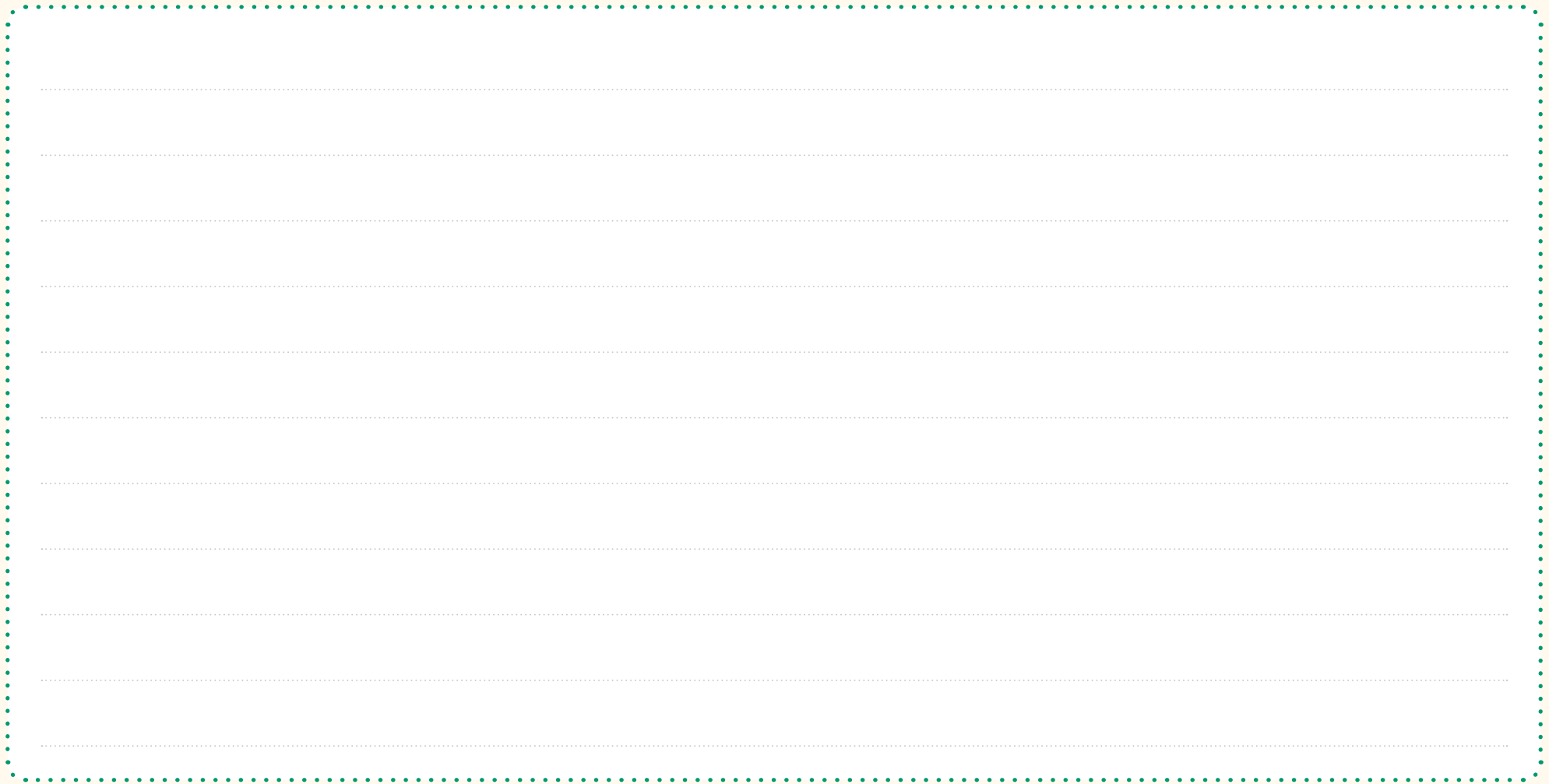## Please write your review below

Remember to use your notes from before and cover what the book is about, what your first impressions were, and the things you liked or didn't like about the book (try and make five points about the book). To conclude, say whether or not you would recommend it to someone your own age, or if you think it would be better for someone else (state who).

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Architecture quiz

Can you find the answers to the following questions?

1 Why is a blueprint called a blueprint?

....

2 Architecture comes from a Greek word.
a) What is this word?

....

b) What is its meaning?

....

3 a) What is the name of the only text about architecture that has survived from Ancient Rome times?

....

b) Who wrote it?

....

4 What do the following words mean?
FIRMITAS

....

UTILITAS

....

VENUSTAS

....

5 What nine tools should all good architects have before drawing a sketch?

....

6 What did the architect Filippo Brunellschi install in the rood of a cathedral to help his workers?

....

7 Name the four digital revolutions in the 21st century which have aided architects in design.

....

8 What is a façade?

....

9 What is the difference between softwood and hardwood?

....

10 What building has been described as 'the worst building in the history of mankind' and 'Hotel of Doom'?

....

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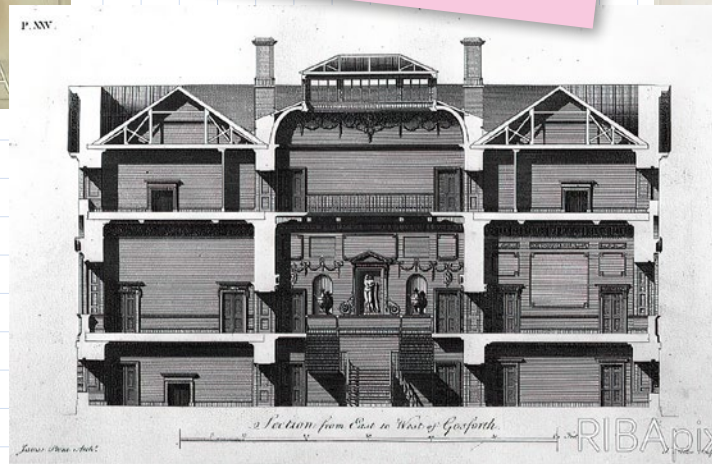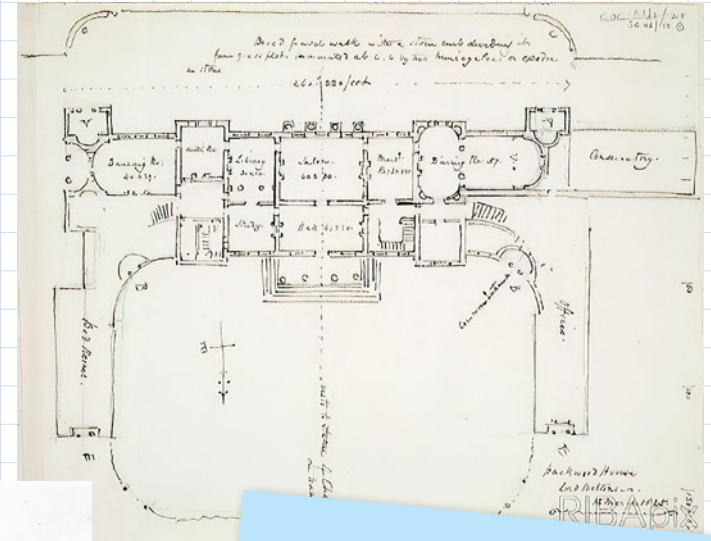# Types of architectural drawings

Label each of the drawings below with the correct type of drawing it is (Plan, Section or Elevation).

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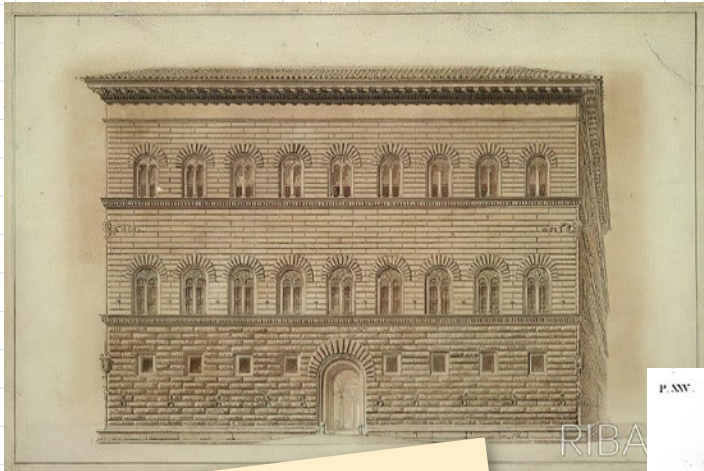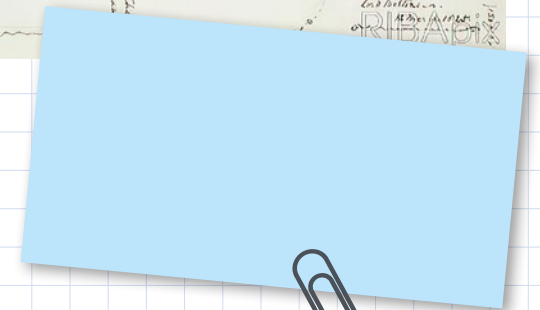
Creative task

Look at the pictures provided below and select one to draw using the sketching techniques on pages 10-11 in **'Cool Architecture'**. Try and focus on your method. Remember to focus on the whole – you build up the picture by drawing more lines and adding more details as you go, don't draw one part of the building in detail then move onto another – that's not the way architects work!

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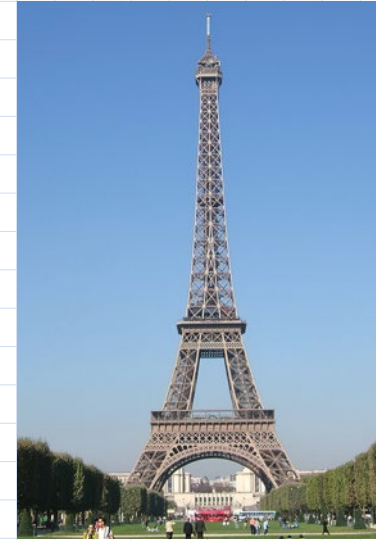
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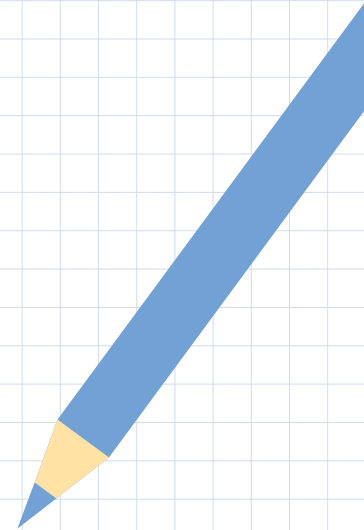
Cereal Box City DT project

In this fun model making activity you'll explore architecture, landscapes and cities to learn how to design and make a 3D model of a city that fits inside a cereal box!

What you'll need:

- A cereal box, show box or a piece of cardboard you can fold into a 'L' shape
- Paper or card
- Coloured pencils or felt tips
- Scissors
- Tape or glue stick

You could also use:

- Magazines or newspapers to cut up and collage
- Toy cars or people
- Plasticine

This activity was written & designed by Katie Kennedy

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Explore

This is an architecture model-making activity. We're going to explore how we look at landscapes and cities and use what we find out to make a model of a city that fits inside a cereal box!
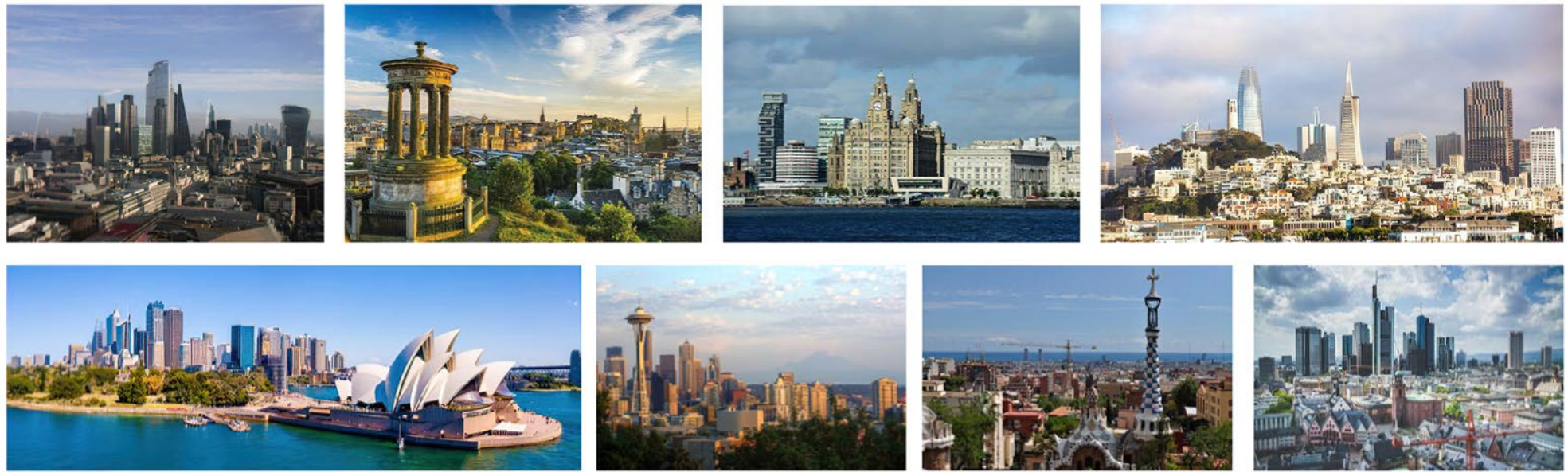
Ideas

Before we start making our models we need to think about what your city's skyline is going to look like. Here are some questions to think about:

Where will your city be? What kind of buildings will there be? Is it real or imaginary? Will it have open spaces as well as building or perhaps a river or lake nearby? Will it be modern, futuristic or traditional in style? Will there be skyscrapers, bridges or monuments?

You could create your own city design from your imagination or you could search online for an image of a city that you are interested in or like the look of. Or why not take look at some of the city skylines above?

When you have some ideas use the space on the next page to draw your designs.

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Design

Use the space below to draw ideas for your city's skyline.

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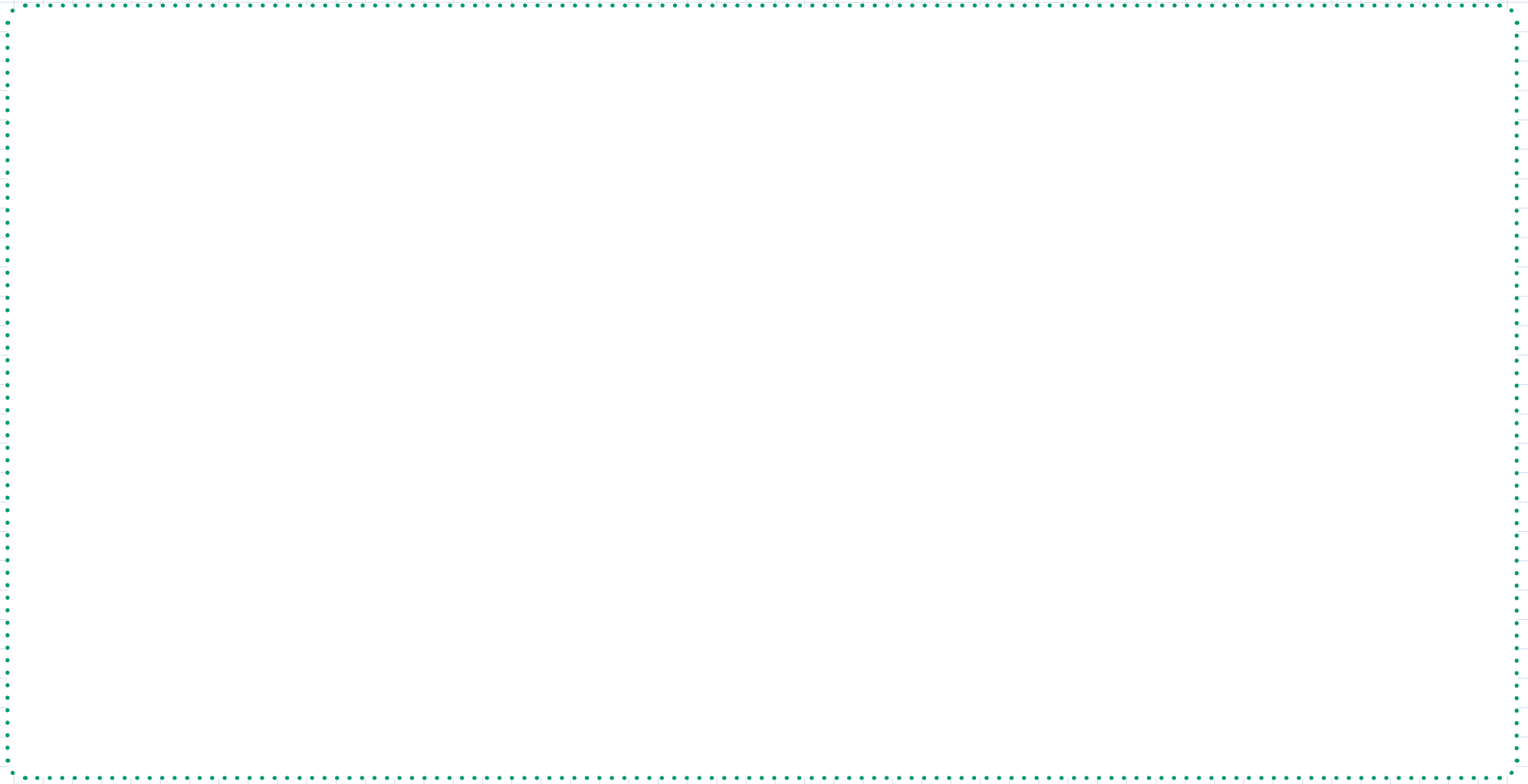
Design

Foreground, middleground and background.

When you have designed some ideas for your city you will need to divide it up into three sections: foreground, middleground and background. What do these words mean? Here are some definitions to help:

Foreground - The front of an image, landscape or view. "The part of a view that is nearest to the observer, especially in a picture or photograph."

Middleground - The middle section of an image, landscape or view. "The middle distance of a painting or photograph."

Background - The furthest away part or framework of an image, landscape or view. "The part of a picture, scene, or design that forms a setting for the main figured or objects, or appears furthest from the viewer."

Examples

Try and cut out the foreground, middleground and background of these images - where does each section start and finish?

Use the following page to design your city sections.

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Design

Use the spaces below to divide up your city design into foreground, middleground and background. Which different parts of your design will go where? Start with the background and work your way forwards. Use the last box to add any extras or detail to your design.

BACKGROUND

MIDDLEGROUND

FOREGROUND

EXTRA LAYERS OR DETAIL

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Make

Now you're ready to turn your ideas into an amazing 3D city model!

1 Remove the front panel from your cereal box and tape or glue the edges so it's nice and secure.
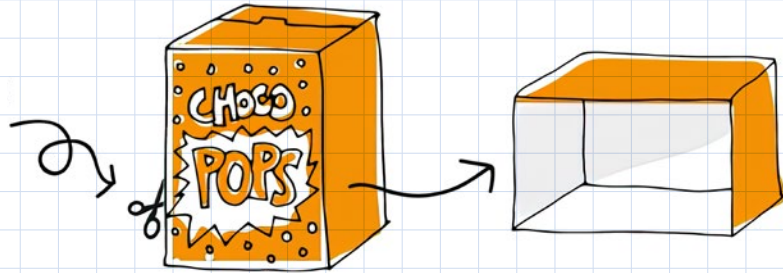
2 Use the three templates on the following pages to draw your cereal box city's foreground, middleground and background.

Add colour, depth and textures using coloured pencils, felt tips, collaged paper and cut out pictures from magazines and newspapers. You could add extra sheets or foreground or middleground if you want to overlap layers or add more buildings or detail to your model.

Remember large buildings will probably be in the background and small buildings will be in the foreground and everything in between will go in the middleground. Why is this?

3 Cut out your skyline designs (including the orange flap) and glue them onto a piece of card so they are strong.
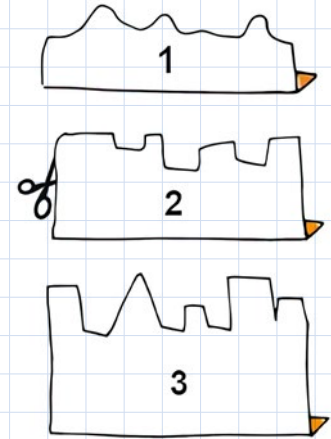
4 Next, fold the orange flap over, this flap can then be attached to the bottom of your cereal box. Leave a gap between each layer.
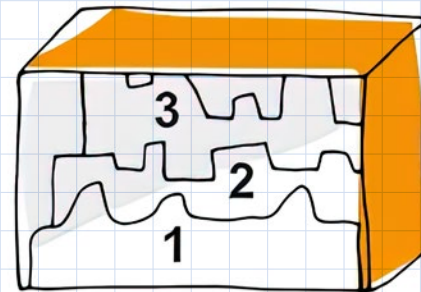
Why not add people, trees, animals, sky, clouds, hills or anything else you would like to add to the model? You could also decorate the inside and outside of the box to make it extra special.

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BACKGROUND

MIDDLEGROUND

FOREGROUND

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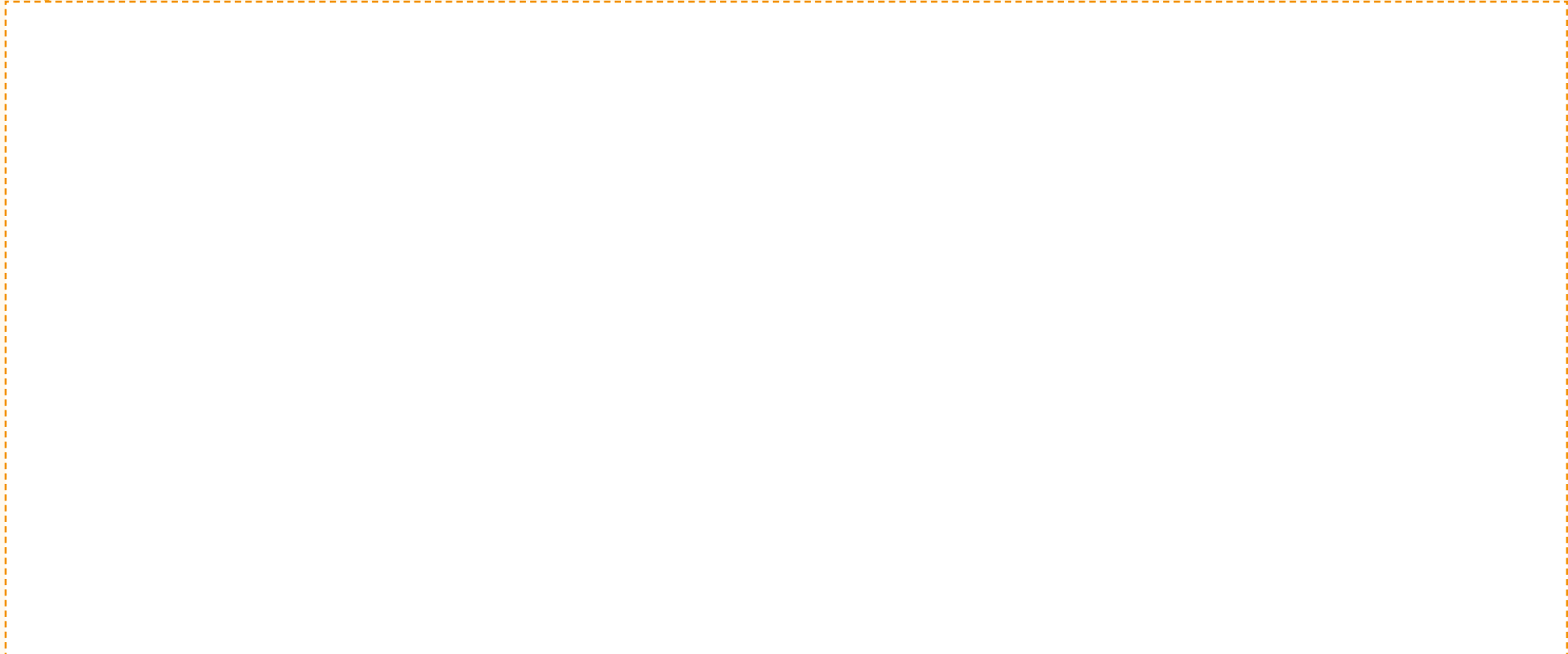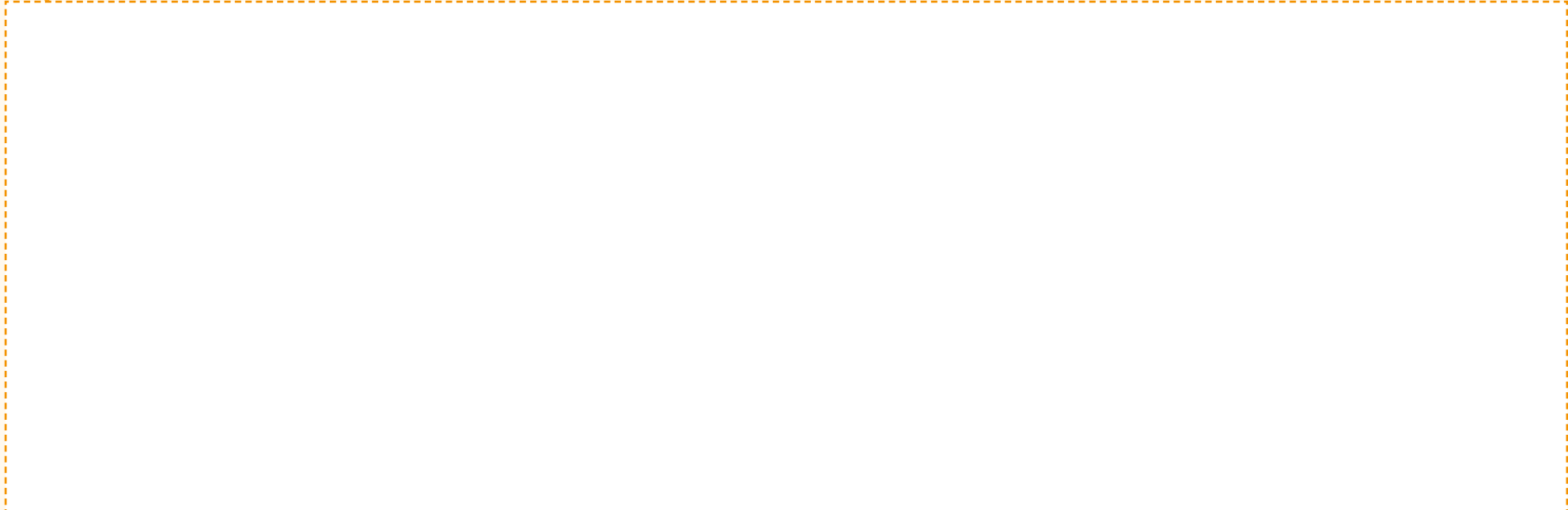
Big Green Roofs DT project

Create your own green roof topped building from recycled materials and cress seeds.

What you'll need:

- Things from your recycling - plastic bottles, yoghurt pots, cardboard boxes, milk bottle lids, plastic trays etc.
- Coloured paper or card
- Scissors
- Sticky tape or glue stick
- Cress seeds (you can buy these cheaply online)
- Cotton wool - balls or pads

You could also use:

- Coloured / decorative tape
- Crafty bits and pieces to decorate
- Magazines or newspapers to cut up and collage as backgrounds

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Explore

This is an architecture model-making activity exploring green building design. You'll create a model from recycled materials, decorate it and then grow your own living green roof on top.

All images © RIBApix

Ideas

Before we start making our models we need to think about what your building might look like. Where will your building be? What kind of building will it be? How will you include a green living roof in your design?

Take a look at some of the images above as starting points for your design.

When you have some ideas use the space on the next page to draw your designs.

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Design

Use the space below to draw ideas for your roofed garden. You could also use your recycled items as the inspiration for your building, using their different shapes and sizes as a starting point.

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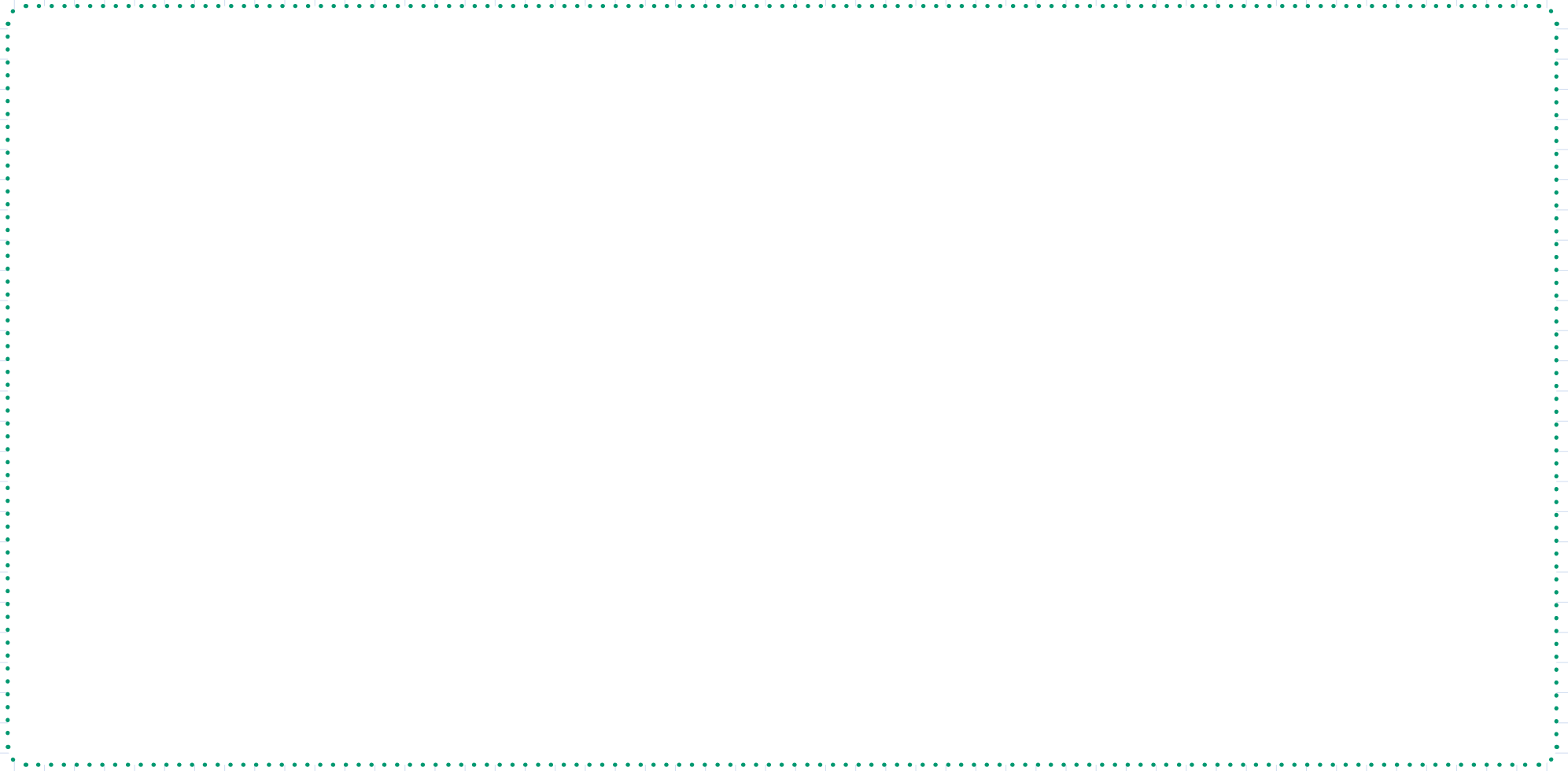
Make

Now you're ready to turn your ideas into a 3D green roofed model!

1 Gather together your recycled materials.

Start to arrange them into your proposed building design. You can cut or change your objects to fit in with your ideas.

4 Now back to your building design. Think about the different shapes and scales you are combining. Where will your green roof element or elements go?

How will you put the different things together? How will you attach them to each other? You may need a tray or box to sit your building in.

2 To grow your green roof you will be using cress seeds. These will need to be grown in any plastic objects you may have collected. The plastic objects will then form your green roof.

TOP TIP! Milk bottle lids are particularly good for this as they are shallow and hold water to help the seeds grow well.
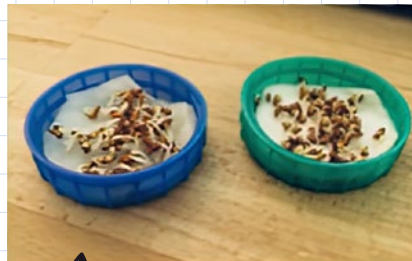
3 Place a piece of cotton wool (cotton wool balls or pads are both fine to use) at the bottom of the piece of plastic you will be using for your green roof/s.

Moisten the wool with some water so it is wet. Sprinkle a few seeds onto the wet cotton wool.

5 When you have created your recycled building, you can think about decorating it. Add coloured paper, card, tape or anything else you have to make your design stand out. Don't forget to add your green roof element.

Your seeds need light and water to grow. Leave your building on a windowsill or in a sunny room.

You will need to make sure the cotton wool is kept moist and you should see the seeds start to grow in a couple of days with the cress fully grown (and also ready to eat!) in 7 - 10 days.

This activity was written & designed by Katie Kennedy

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Designing different spaces project

Name a place activity

Read 'The Homes We Build'. Can you find a town or city which has been built...

in a hot climate ....

on a hill ....

in a cold climate ....

on or by water ....

in a dry climate ....

in the earth ....

in a wet climate ....

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Design techniques

Read 'The Homes We Build' and complete the table below to identify different design techniques in buildings to reduce problems people face in different parts of the world.

Problem	Design techniques to reduce the problem
It gets too hot	1) 2) 3) 4) 5) 6) 7) 8)

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Problem	Design techniques to reduce the problem
It gets too cold	1) .... 2) .... 3) .... 4) ....
There is lots of snow or rain	1) .... 2) .... 3) .... 4) .... 5) ....

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Problem	Design techniques to reduce the problem
There is lots of wind	1) .... 2) .... 3) ....

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Creative challenge

Read 'The Homes We Build' and choose a place you would like to design a home for. This could either be specific place (such as Spanish town) or a type of climate or landscape (such as desert or place prone to earthquakes).

Draw and label your home design thinking about;

a) The weather the building may face

b) The lifestyles of people who might live there (is it urban or rural farming)

c) Does it need to be practical or pleasing to the eye

Don't forget to add a title to make it clear what type of place you are designing for!

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