OPEN CITY CELEBRATING ARCHITECTURE

‘Junkitecture’ Challenges

Challenge 01_London Junk Skyline

Challenge 02_Create Your Favourite Character’s Dream Room

Challenge 03_Around the World

'Junkitecture' Family Activty Challenge_01

London Junk Skyline Challenge

What is your favourite building in London? Is it the Shard, St Paul's Cathedral, The London Eye, The 'Gherkin'... or maybe you have a favourite building near where you live?
We want your help in creating the London skyline using junk material! Recreate your favourite building in London out of anything you have in your recycling bin...

Photos of winning family entries, judged with leading Architects, will be collaged into a London 'Junk' Skyline and:

- **added to the Open City website.**
- **sent as a pdf to winning families.**

Step 1: Gathering Junk

Work as a family to have a really good look in your recycling bin, bag or box. What could you use to build your masterpiece? Look out for: Cereal boxes (and inside bag), Egg boxes, Juice cartons/bottles, Toilet/kitchen paper/tinfoil rolls, milk bottles, Food trays, Bubble wrap, Soap dispensers, Scrap paper/Newspapers/Magazines, Paper/plastic cups etc

N.B. Please be careful with sharp edges, and make sure food trays and bottles are clean for you to work with.

Other materials that you could use that you might have lying around your home (not essential): String, Wire, Elastic bands, Paperclips, cocktail sticks, bamboo bbq sticks, Scrap fabric, etc

Step 2: Warm up exercise

What you'll need: Your collected junk and other materials, scrap paper and pencils and/or pens (colouring pencils, Felt-tips, biros etc)

- Place all your found junk objects on a table or the floor
- ALL look closely at this group of objects for various shapes
- ALL sketch draw the shapes you see
- ALL try drawing the outline of one or more of the objects, trying not to take your pen off the paper.
- Keep these sketches as we'd like to see them!

Step 3: Transform your junk into a building

What you'll need: Your collected junk, other materials, sketches, scrap paper, pens and access to the internet.

- List all the shapes (2D & 3D) that you see in your junk materials and sketches.
- Do these shapes remind you of any London buildings? Or shapes found in certain buildings?
- Take a look at Open House London's website here for 800 examples of London buildings.
- Now DECIDE on which London Building you're going to make a model of!

Step 4: Make your Model

What you'll need: Your junk material, and any other materials found, scissors, sticky tape, glue (you could make your own – see pg 4). Also hole puncher, stapler (not essential).

Before making look at:

- Model Making tips and techniques on pgs 2-4
- 'Think like an Architect' on pg 5
- Watch our video of making 'junkitecture' here!
- Now it's time to start making!
- Timings: Between 2 hours to 2 days! Depending on the model making techiques you use and size of your model.

Step 5: Sketch & Photograph your Model

What you'll need: scrap paper, pencils and/or pens, mobile phone camera.

Once you've finished your model:

- ALL sketch your model and label key features (eg materials and/or structure of the building, name of building, your family name etc)
- Photo your sketches and model – look at pg 6

Step 6: How to submit your model, sketches

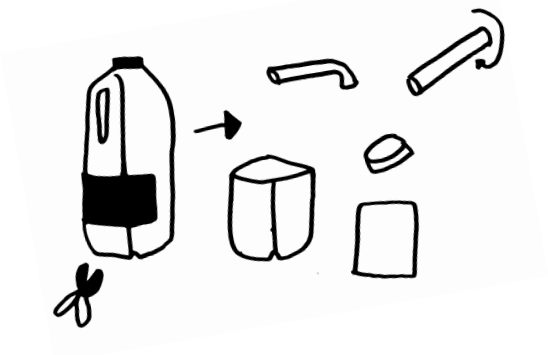
- Competition deadline: Monday 4th May
- Email your photos to education@open-city.org.uk
- Please provide your location, surname and age of children.
- Please let us know if a family member works in Creative Industries, as your entry will be judged in our professional category.
- Key judging criteria are: creative use of reused materials and creative engagement with the original building.

Skyline drawing by architecture student James Bromley.

Activity designed by: architecture educator, Venetia Wolfenden & architecture student, Caitlin Latimer-Jone & teacher extraordinaire, Neil Pinder.

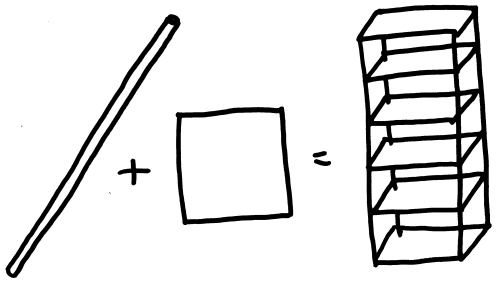
Model Making Tips & Techniques: 3D objects

Milk Bottles



1. Cut through the middle and around the handle.
2. Save the lid and other panels of plastic to build other parts of your model.
Can be used to make cubic rooms, windows, pipes, or rolled up to make columns.
TIP: the plastic can be stapled together.

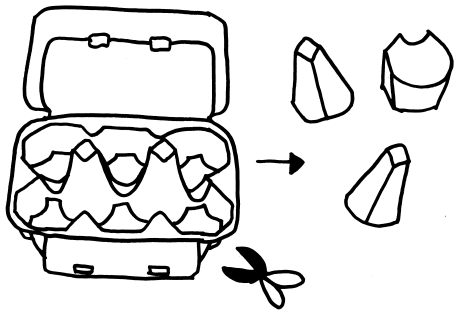
Straws



1. Carefully pierce holes in the corners of the pieces of card/paper. **TIP:** you could use a hole puncher.
2. Feed the straws through them. You can add as many floors as you can fit!
TIP: Can be used to make a simple structure of a building.

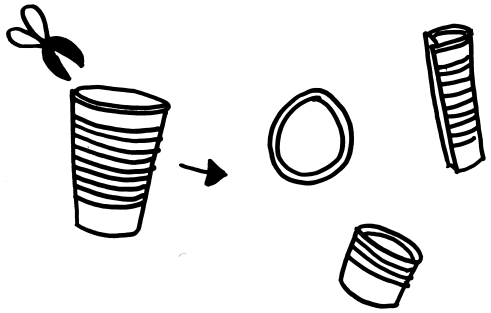
Organising Materials & Junk

Egg Box

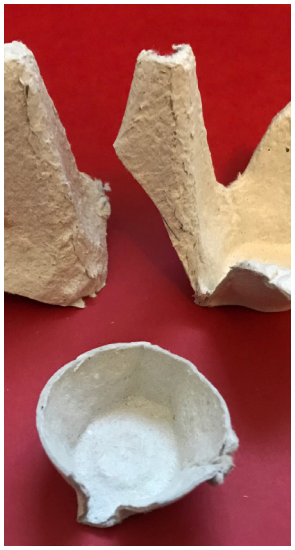


1. Cut into the egg box and around the middle spikes and internal egg holder pieces.
2. You could also use the box lid for your model too.
TIP: Can be used for the top of roofs or facades.

Paper/Plastic Cup



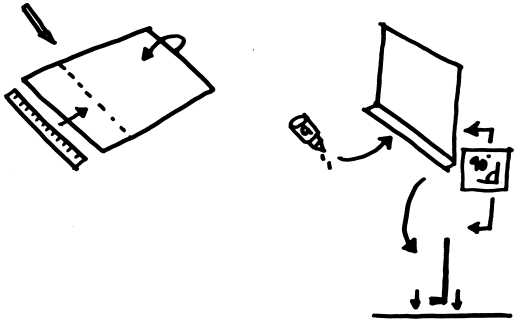
1. Cut around the cup into as many pieces as you want.
2. Make sure to save all the pieces for different parts of your buildings!
TIP: Can be used for windows, walls and curved roofs.



Egg Box Model Making

Model Making Tips & Techniques: 2D to 3D

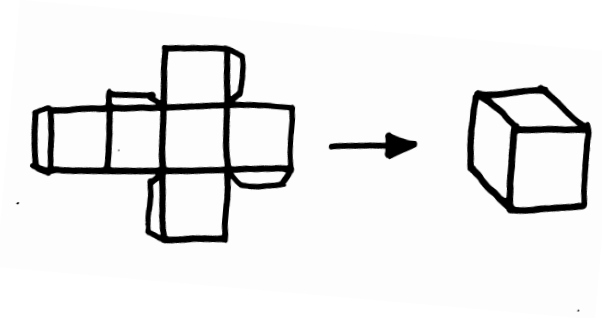
Folding Card/Paper



1. Measure a 2/3cm section of the card with a ruler, mark with a pencil and fold.
2. Holding at a 90 degree angle, use glue on the under side of the section and fix to your model base.

TIP: Can be used to make internal or external

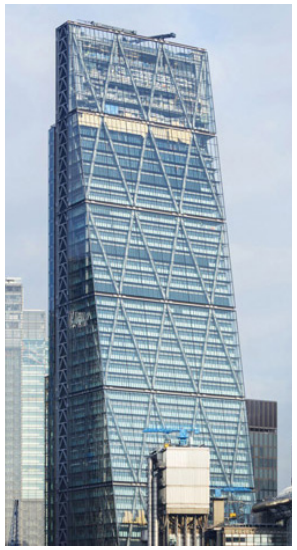
Nets



1. Draw the net pattern on your card/paper.
2. Cut around the lines carefully.
3. Fold together, can glue the edges if you want.

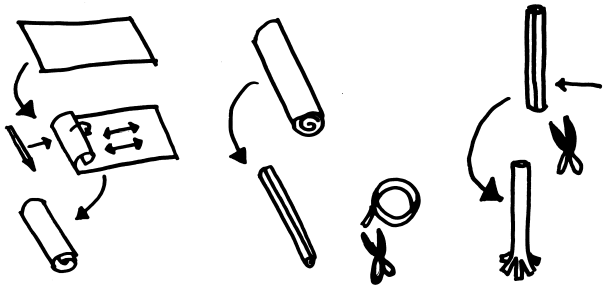
TIP: Can be used to make cubes, cuboids, prisms etc... play around with the different shapes!

Tate Switch House
(folding & nets)



The 'Cheesegrater'
(folding & nets)

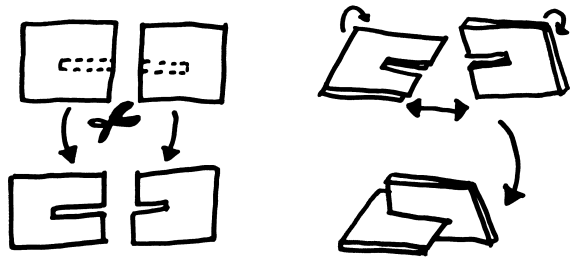
Rolling Card/Paper



1. Choose size and length of paper or card.
2. Roll into a tight tube and tape along the side.
3. Measuring a small length up the side of the tube, snip several slots along the end and push out to make the base.

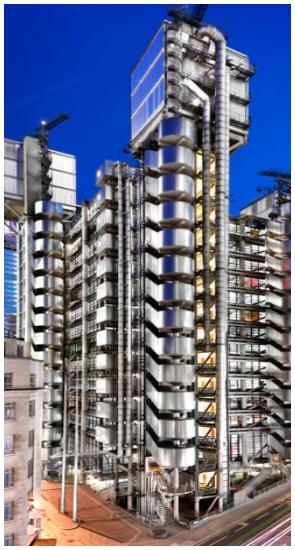
TIP: Can be used as columns.

Card/Paper Slot Joints

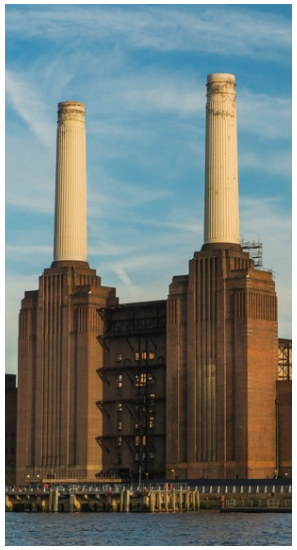


1. Cut squares of card/paper to size.
2. Measure through the middle equal lengths, and cut these out. Slot two pieces together.

TIP: Good for modular designs – elements that can be added together continuously.



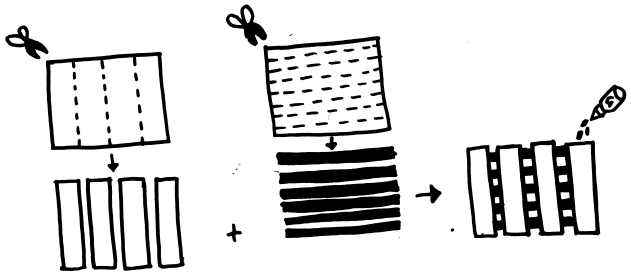
Lloyds Building
(slot joints & rolling)



Battersea Power Stn
(rolling & folding)

Model Making Tips & Techniques: Surfaces

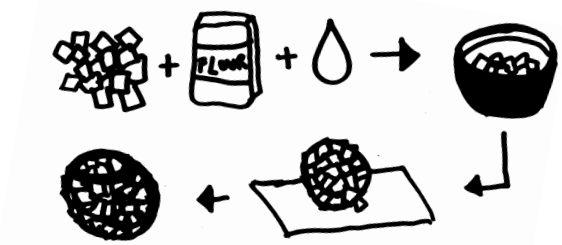
Lattice



1. Cut the pieces of paper/card in horizontal and vertical directions.
2. Weave them in and out of eachother or layer them on top of eachother.
3. Glue the edges down to make it secure.

TIP: Can be used for building facades.

Paper Mache



1. Mix one part sieved flour, one part water with a wooden spoon in a big bowl until you get a thick glue-like consistency.
2. Choose your mould and smear a small amount of vaseline to surface. Or use a balloon.
3. Cut strips of newspaper, paint them with glue on both sides and paste to mould. Let each layer dry before adding the next. **TIP:** Once you've added all layers,it's best to leave to dry over night.

Glue Recipe

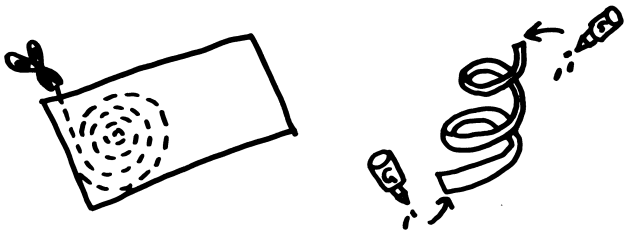
1. Mix together 1 table spoon of corn flour (or flour) with 1 table spoon of water until smooth.
2. Pour 1 cup of boiling water over mixture, stirring constantly with a wooden spoon to create a thin paste. Store in a jar.

N.B. This takes longer to dry than bought glue!

Making Paper Mache

The Millennium Dome (paper mache)

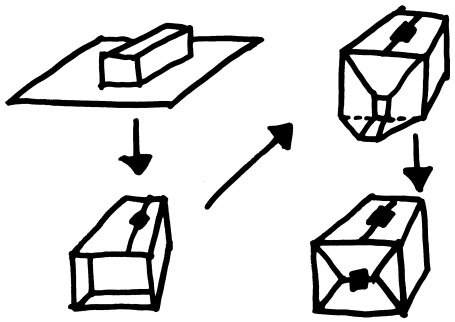
Spiralling



1. Using a sheet of thin card, draw out a wide spiral shape and cut out.
2. Stretch out the spiral and glue the ends to other structures at different levels either horizontally or vertically.

TIP: Can be used to make ramps.

Wrapping



1. Place the junk you want to wrap in the middle of the scrap paper.
2. Fold around the junk so its all covered.
3. Fold and tape the side, top and bottom.

TIP: Can be used for building blocks.

TIP: You could use magazine pages or newspaper or coloured paper to wrap.

The Gherkin (paper mache & spiralling)

Trellick Tower (wrapping & or lattice)

Think Like An Architect... things to consider!

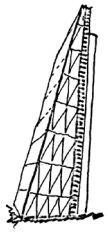
Function

What is a building used for? Is it used to:

- live in? (a home)
- work in? (an office)
- learn in? (a school)
- play sports in? (a stadium)
- pray in? (a church, a mosque, a temple)

Wembley Stadium

St Paul's Cathedral



Offices: The 'Cheesegrater'

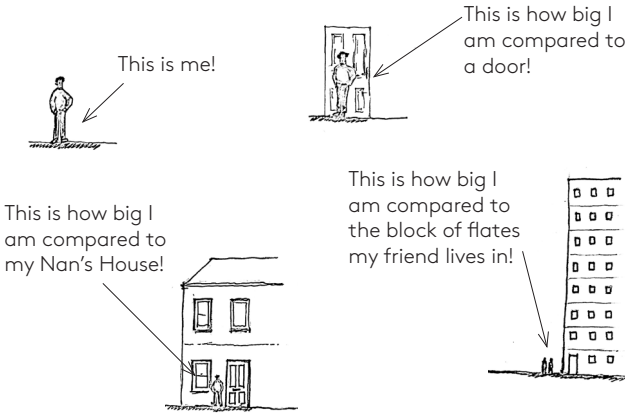
Materials

Materials are used to make buildings - both the structure and inside and outside surfaces. Materials can be made from naturally occuring substances or man-made products.

Natural material examples: timber (wood), stone, mud
Man-made material examples: concrete, bricks, steel, glass. (NB many of these use a mixture of natural and synthetic substances)

Scale: Proportion

How big is your chosen building compared to the others close to it? Think how big am I compared to a door, to my home?



Light

Inside of buildings are lit up by a combination of natural and artificial light.

Natural Light: Does sunlight come into the building? Are there lots of windows? Are there roof lights?

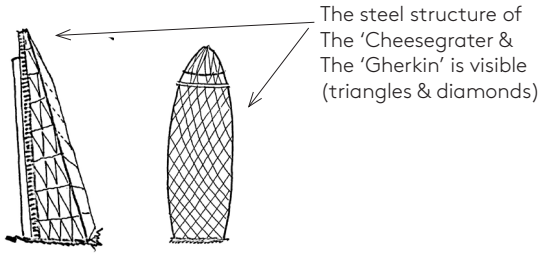
Artificial Light: Can you see lots of lightbulbs through the windows?

Structure

How does the building stand up? Think about what holds up the roof?

Can you see the structure? Clues:

- does it have steel or timber posts (columns) or beams visible?



Scale: Ratio

It's impossible to draw buildings at their real size on paper! Architects therefore need to scale down their drawings of buildings, furniture, people etc to fit on paper so that they can be measured by builders using special rulers.

Think 'Honey I shrunk the Kids'! Or look at your toy cars and dolls, which are scaled down by a ratio.

Photographing Your Work At Home (By Luke O'Donovan)

Photographing 3D work

Photographing your models is more subjective, and you can approach it in a number of creative ways.

Here's a few tips to help you get more professional images at home.

You can use any camera you have available - the example images were taken using an iPhone 6S.

Background

It is important to have a clear background in your images, to avoid distractions from your model. Using plain card usually works well (one sheet on the surface, one behind the model). A white model will stand out well against a dark or colourful background, or white on white will give a minimalist look. Glossy surfaces can reflect your model.

Camera Angles

As well as standard elevation shots, you can try using different angles to showcase different elements of your model. You can move 360 degrees around your model, and if you raise it on top of some books or a box, that allows you to look up from a lower angle. If you're using a phone or small camera, then you can get right up close to the model.

Scale

To give an idea of scale in your models, you can add recognisable figures, such as people or cars. If using human figures, think about how they interact with spaces in the model. A clear idea of scale is useful for architectural models, but for more abstract work it may be more interesting if the scale is unclear, and the viewer tries to work it out themselves.

Lighting

For a natural look, you can use sunlight by itself to light your model. However this leaves strong shadows, so if you want more even light and detail throughout the image, then you can use a second source of light from the other side to add light to the darker areas. This could be a reflector for a subtle look, or a desk lamp or phone flashlight if you prefer.

You can use a reflector (white card or another bright surface) as a second light source, to make light more even across your model for a smoother look, and softer shadows.

Think about lighting and background!

OPEN CITY CELEBRATING ARCHITECTURE

'Junkitecture' Family Activity Challenge_02

Create your favourite character's Dream Room!

Who is your favourite character? Is it a character from a book, a cartoon, a film, the television... is it a superhero? Or maybe you have a favourite toy?
We want your help to create Dream Rooms for your favourite characters using junk material!

Photos of winning family entries, judged with leading Architects, will be collaged into a Dream House where all your favourites characters can live, and:

- **added to the Open City website.**
- **sent as a pdf to winning families.**

Step 1: Choose your family's favourite character

You might need to vote!

Step 2: Think like your character!

What you'll need: Scrap paper and pencils.

Now that you've decided on your character, write a list each of what you think your chosen character would want in their Dream Room. Think about:

- What do they like doing?
- Could they do this in their Dream Room? Would they need special features or furniture?

Exchange your ideas! Together, agree on what your character would like in their Dream Room, this is important for when you start reusing your junk and designing the room!

Step 3: Imagine your character's Dream Room!

What you'll need: Your collected junk.

1. Work as a family to have a really good look in your recycling bin, bag or box. What could you use to build your masterpiece? Look out for: Cereal boxes (and inside bag), Egg boxes, Juice cartons/bottles, Toilet/kitchen paper/tinfoil rolls, milk bottles, Food trays, Bubble wrap, Soap dispensers, Scrap paper/Newspapers/Magazines, Paper/plastic cups etc.

N.B. Please be careful with sharp edges, and make sure food trays and bottles are clean for you to work with.

2. Place all your found junk objects and other materials on a table or the floor. Look back at your agreed list of what your Character would like in their Dream Room. ALL look very carefully at the junk, think about the shapes you can see.
TIP: Look at 'Think Like an Architect' on page 2.

Step 4: Design Your Character's Dream Room!

What you'll need: Your collected junk and other materials, your list of what your character would like in their Dream Room, scrap paper, pencils.

Sketch ideas about how your Character's 'Dream Room might look! Think about:

- How big is the room compared to your character?
- Is the room square or a more unusual shape?
- Can your character see out of the room?
- Is there more than one level in the room?
- Is it dark or light? Cosy or shiny?

TIP: Look at 'Draw Like an Architect' on pg 3.

Step 5: Build your character's Dream Room!

What you'll need: Your list of what your character would like in their Dream Room, your design drawings, your junk material and any other materials, scissors, sticky tape, glue.

TIP: Before you start building, have a look at:

- Your design sketches
- Model Making tips and techniques on pgs 4-6
- Watch our video of making Genie's Dream Room here!

Now it's time to start making! Timings: Between 2 hours to 2 days! Depending on the model making techniques and size of your model.

Step 6: Photograph your Model

What you'll need: Mobile phone camera.

TIP: Photograph your design sketches and look at our Photography advice on pg 7.

Step 6: How to submit your model, sketches

- Competition deadline: **Friday 22nd May**
- Email your photos to education@open-city.org.uk
- Please provide your location, surname and age of children, and let us know which character you have designed for!
- Please let us know if a family member works in Creative Industries, as your entry will be judged in our professional category.
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Activity designed by: architecture educator, Venetia Wolfenden & architecture student, Caitlin Latimer-Jones & teacher, Neil Pinder.

OPEN CITY CELEBRATING ARCHITECTURE

Think Like An Architect... things to consider!

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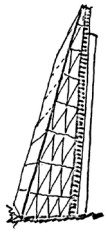
St Paul's Cathedral



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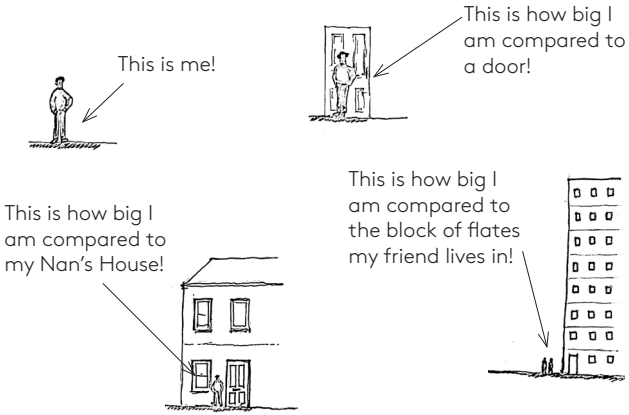

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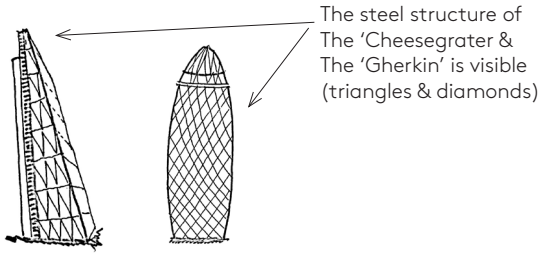

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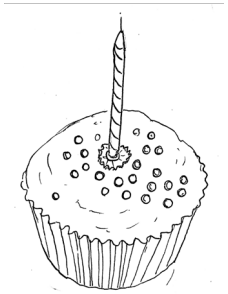
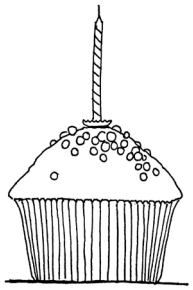
Draw Like An Architect... things to consider!

Drawings

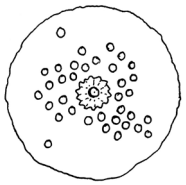
Drawings, along with models, help architects visualise what they're designing. Different types of drawings help to describe different things. To explain let's use a birthday cup-cake!



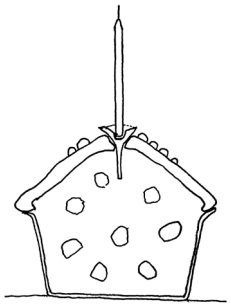
A SKETCH - a quick 3D drawing (using no ruler) that helps you have an overall view of the cake.



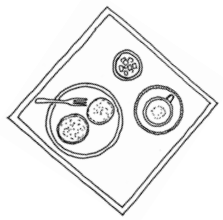
An ELEVATION - is a view of the cup-cake from the side. It looks directly at it so you don't see any curves.



A PLAN - is a view that shows what the cup-cake looks like when you look down on it from above.

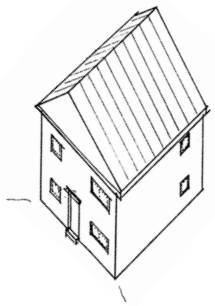


A SECTION - is a view that shows what the cup-cake looks like when a cut is made through it.

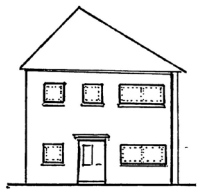


A MAP or SITE PLAN - is a view that shows what the cup-cake looks like, in it's surroundings (context) when you look down on it from above.

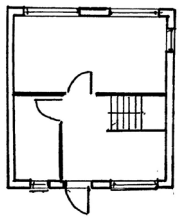
Here are examples of the same type of drawings used to describe a two storey house:



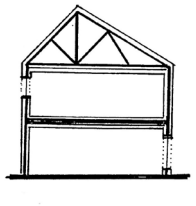
A 3D drawing - an AXONOMETRIC that helps you have an overall view of the house.



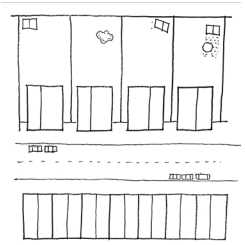
An ELEVATION view looks at one side of the house from the outside.



A PLAN view is like a bird's eye-view - cutting the roof off and looking down into the house.



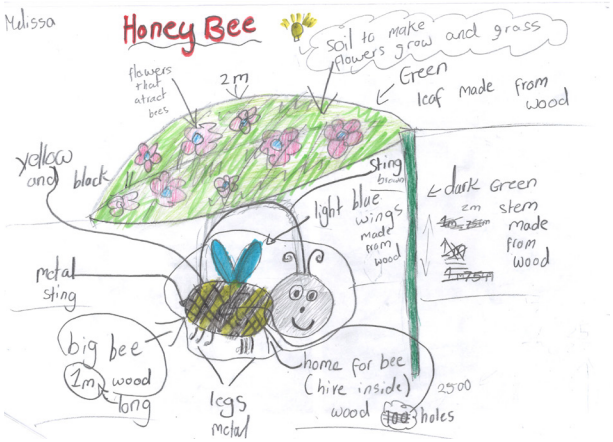
A SECTION view is like a slice through the house.



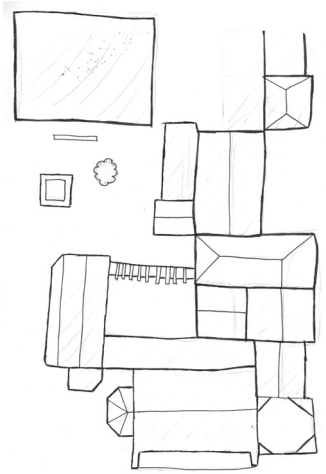
A MAP or SITE PLAN - is a view of the house in context - here it shows the house in it's street.

Drawings by Young People:

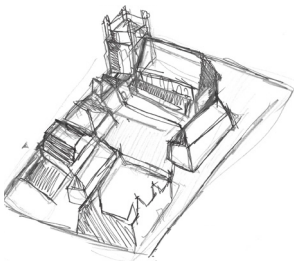
Elevation drawing (with labels) of a Honey Bee 'dream room' designed & drawn by a 9 year old.



Drawings of an architectural scale model describing a group of buildings by 13 year olds.



Site Plan

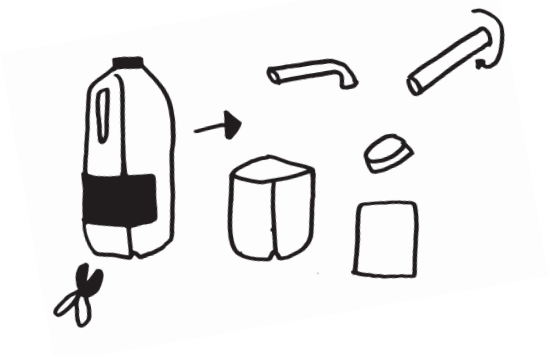


3D Sketch

Elevation

Model Making Tips & Techniques: 3D objects

Milk Bottles

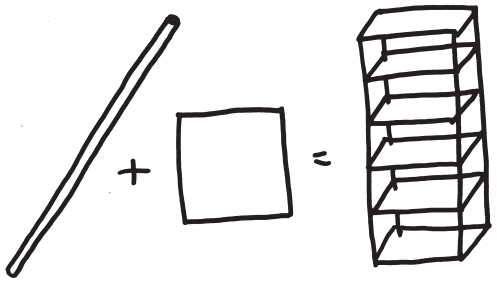


1. Cut through the middle and around the handle.
2. Save the lid and other panels of plastic to build other parts of your model.

Can be used to make cubic rooms, windows, pipes, or rolled up to make columns.

TIP: the plastic can be stapled together.

Straws

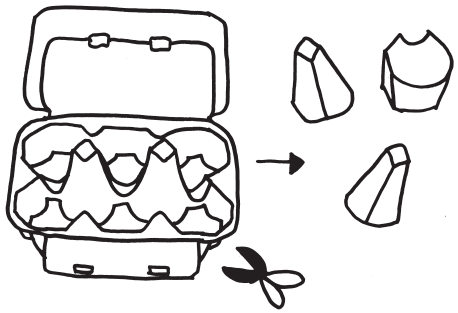


1. Carefully pierce holes in the corners of the pieces of card/paper. **TIP:** you could use a hole puncher.
2. Feed the straws through them. You can add as many floors as you can fit!

TIP: Can be used to make a simple structure of a building.

Stacking coffee cups & connecting with straws

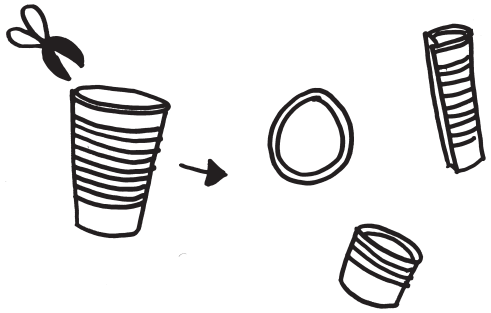
Egg Box



1. Cut into the egg box and around the middle spikes and internal egg holder pieces.
2. You could also use the box lid for your model too.

TIP: Can be used for the top of roofs or facades.

Paper/Plastic Cup



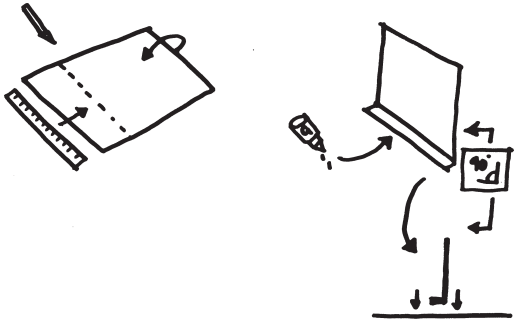
1. Cut around the cup into as many pieces as you want.
2. Make sure to save all the pieces for different parts of your buildings!

TIP: Can be used for windows, walls and curved roofs.

Using Straws & Card Slot Joints

Model Making Tips & Techniques: 2D to 3D

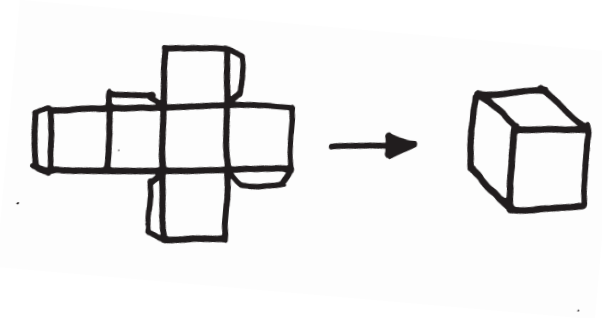
Folding Card/Paper



1. Measure a 2/3cm section of the card with a ruler, mark with a pencil and fold.
2. Holding at a 90 degree angle, use glue on the under side of the section and fix to your model base.

TIP: Can be used to make internal or external walls.

Nets

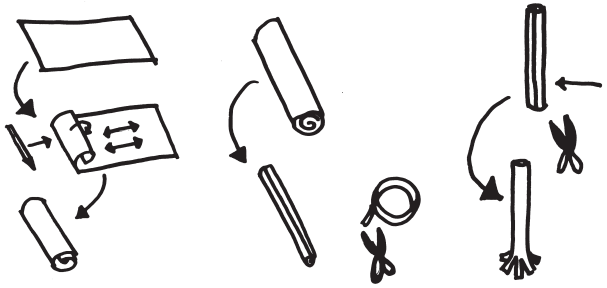


1. Draw the net pattern on your card/paper.
2. Cut around the lines carefully.
3. Fold together, can glue the edges if you want.

TIP: Can be used to make cubes, cuboids, prisms etc... play around with the different shapes!

Building A Dream Room

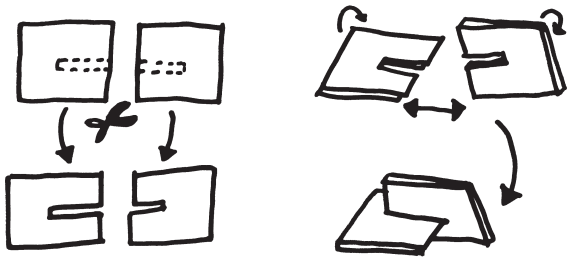
Rolling Card/Paper



1. Choose size and length of paper or card.
2. Roll into a tight tube and tape along the side.
3. Measuring a small length up the side of the tube, snip several slots along the end and push out to make the base.

TIP: Can be used as columns.

Card/Paper Slot Joints



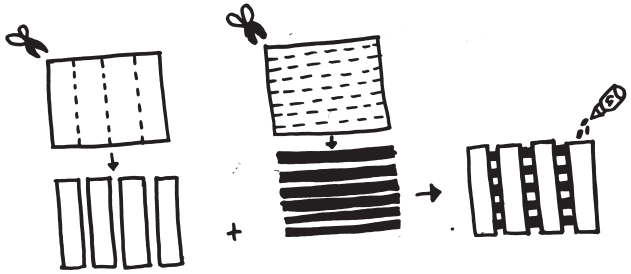
1. Cut squares of card/paper to size.
2. Measure through the middle equal lengths, and cut these out. Slot two pieces together.

TIP: Good for modular designs – elements that can be added together continuously.

Decorating A Dream Room

Model Making Tips & Techniques: Surfaces

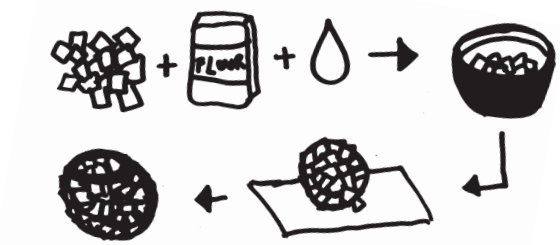
Lattice



1. Cut the pieces of paper/card in horizontal and vertical directions.
2. Weave them in and out of eachother or layer them on top of eachother.
3. Glue the edges down to make it secure.

TIP: Can be used for building facades.

Paper Mache



1. Mix one part sieved flour, one part water with a wooden spoon in a big bowl until you get a thick glue-like consistency.
2. Choose your mould and smear a small amount of vaseline to surface. Or use a balloon.
3. Cut strips of newspaper, paint them with glue on both sides and paste to mould. Let each layer dry before adding the next. **TIP:** Once you've added all layers,it's best to leave to dry over night.

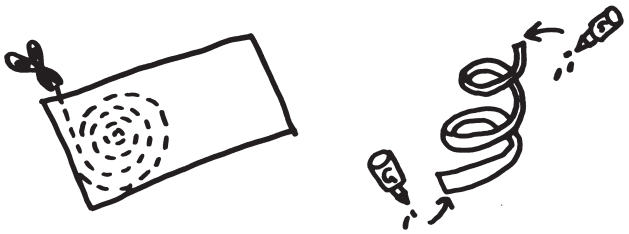
Glue Recipe

1. Mix together 1 table spoon of corn flour (or flour) with 1 table spoon of water until smooth.
2. Pour 1 cup of boiling water over mixture, stirring constantly with a wooden spoon to create a thin paste. Store in a jar.

N.B. This takes longer to dry than bought glue!

Making Paper Mache

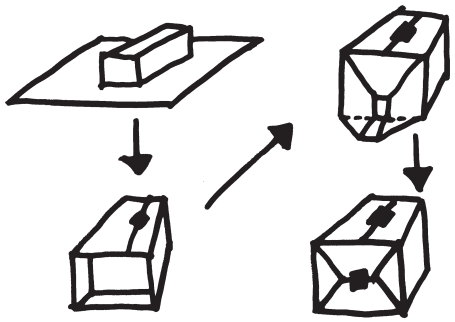
Spiralling



1. Using a sheet of thin card, draw out a wide spiral shape and cut out.
2. Stretch out the spiral and glue the ends to other structures at different levels either horizontally or vertically.

TIP: Can be used to make ramps.

Wrapping



1. Place the junk you want to wrap in the middle of the scrap paper.
2. Fold around the junk so its all covered.
3. Fold and tape the side, top and bottom.

TIP: Can be used for building blocks.

TIP: You could use magazine pages or newspaper or coloured paper to wrap.

Making Spirals & Lattices

Photographing 2D Work

Photographing 2D works is generally quite straightforward. It's generally best to do this by daylight, close to a bright window if possible.

If you have access to a scanner at home, then it's probably best to use this instead of a camera.

You can use any camera you have available - the example images were taken using an iPhone 6S.

Background

It is important to have a clear background in your images, to avoid distractions from your drawing or model.

Make sure that your 2D work is on a flat surface, and your phone/camera is perfectly parallel to your work as you photograph it, otherwise the perspective will be distorted. Your work should fill as much of the photo as possible.

Using plain card usually works well (one sheet on the surface, one behind the model). A white model will stand out well against a dark or colourful background. Glossy surfaces can reflect your model.

Photographing 3D Work

Photographing your models is more subjective, and you can approach it in a number of creative ways.

Scale

To give an idea of scale in your models, you can add recognisable figures, such as people or cars. If using human figures, think about how they interact with spaces in the model. A clear idea of scale is useful for architectural models, but for more abstract work it may be more interesting if the scale is unclear, and the viewer tries to work it out themselves.

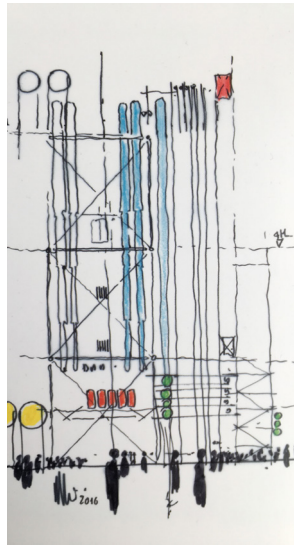
Camera Angles

As well as standard elevation shots, you can try using different angles to showcase different elements of your model. You can move 360 degrees around your model, and if you raise it on top of some books or a box, that allows you to look up from a lower angle. If you're using a phone or small camera, then you can get right up close to the model.

Lighting

For a natural look, you can use sunlight by itself to light your model. However this leaves strong shadows, so if you want more even light and detail throughout the image, then you can use a second source of light from the other side to add light to the darker areas. This could be a reflector for a subtle look, or a desk lamp or phone flashlight if you prefer.

You can use a reflector (white card or another bright surface) as a second light source, to make light more even across your model for a smoother look, and softer shadows.



Think about angles, lighting and background!

'Junkitecture' Family Activity Challenge_03

Around The World Challenge

If you could travel anywhere in the world right now, where would you go? Do you have a favourite building, sculpture or landmark in a different country? Or even a favourite spot in the UK!
Maybe you'd like to take a trip to the Egyptian Pyramids to meet the mummies, or climb the Eiffel Tower to see Paris from up high, or how about checking out Gateshead's majestic Angel of The North?

We'd like you to choose your favourite and make it using junk material you have at home!

Photos of winning family entries, judged by leading Architects, will be collaged into a world map and:
- **added to the Open City website.**
- **sent as a pdf to winning families.**

Don't forget to check out our new Tik Tok page for other exciting activities related to this challenge! Check out page 7 for more information if you'd like to make a video.

#junkitecture models of London Landmarks by the Khatun family

Step 1: Gathering Junk

Work as a family to have a good look in your recycling bin. What could you use to build your masterpiece? Look out for: Cereal boxes (and inside bag), Egg boxes, Juice cartons/bottles, Toilet/kitchen paper/tinfoil rolls, milk bottles, Food trays, Bubble wrap, Scrap paper/Newspapers/Magazines, Paper/plastic cups etc.

N.B. Please be careful with sharp edges, and make sure food trays and bottles are clean for you to work with.

Step 2: Warm up exercise

What you'll need: Your collected junk and other materials, scrap paper and pencils and/or pens (colouring pencils, Felt-tips, biros etc)

- Place all your found junk objects on a table or the floor
- ALL look closely at this group of objects for various shapes and draw the shapes you see
- ALL try drawing the outline of one or more of the objects.
- Keep these sketches as we'd like to see them!

Step 3: Transform your junk into a building

What you'll need: Your collected junk, other materials, sketches, scrap paper, pens and access to the internet.

- List all the shapes (2D & 3D) that you see in your junk materials and sketches.
- Do these shapes remind you of any buildings/landmarks? Or shapes found in certain buildings?
- Perhaps use the internet to search for famous world landmarks for inspiration!
- Now DECIDE on which landmark from around the world you're going to make a model of!

Step 4: Make your Model

What you'll need: Your junk material, and any other materials found, scissors, sticky tape, glue (you could make your own – see pg 4). Also hole puncher, stapler (not essential).

Before making look at:
- Model Making tips and techniques on pgs 2-4
- 'Think like an Architect' on pg 5
- Watch our video of making 'junkitecture' here!
- Now it's time to start making!
- Timings: Between 2 hours to 2 days! Depending on the model making techiques you use and size of your model.

Step 5: Sketch & Photograph your Model

What you'll need: scrap paper, pencils and/or pens, mobile phone camera.

Once you've finished your model:
- ALL sketch your model and label key features (eg materials and/or structure of the building, name of building, your family name etc)
- Photo your sketches and model – look at pg 6

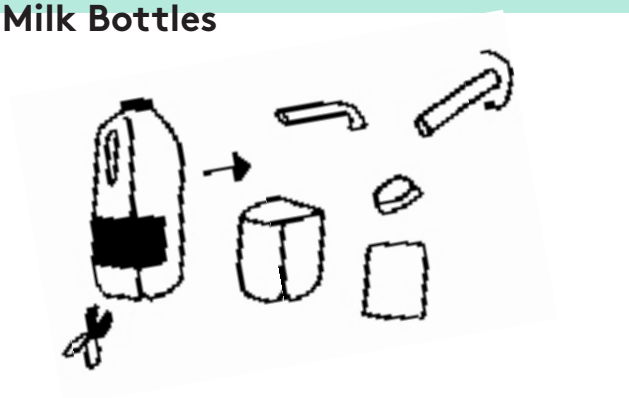
Step 6: How to submit your model, sketches

- Competition deadline: Friday 5th June
- Email your photos (& link to your tiktok video, if submitting) to education@open-city.org.uk
- Please provide your location, surname and age of children.
- Please let us know if a family member works in Creative Industries, as your entry will be judged in our professional category.
- Key judging criteria are: creative use of reused materials and creative engagement with the original landmark, building or sculpture.

Activity designed by: architecture educator, Venetia Wolfenden & architecture student, Caitlin Latimer-Jone & teacher, Neil Pinder.

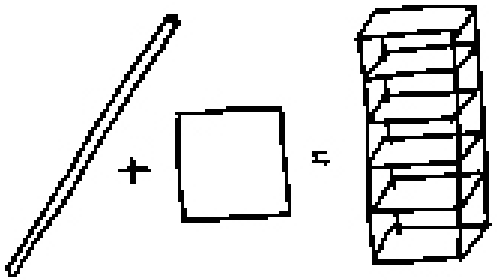
Model Making Tips & Techniques: 3D objects

Milk Bottles



1. Cut through the middle and around the handle.
2. Save the lid and other panels of plastic to build other parts of your model.
Can be used to make cubic rooms, windows, pipes, or rolled up to make columns.
TIP: the plastic can be stapled together.

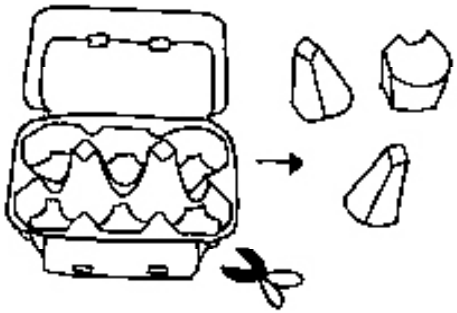
Straws



1. Carefully pierce holes in the corners of the pieces of card/paper. **TIP:** you could use a hole puncher.
2. Feed the straws through them. You can add as many floors as you can fit!
TIP: Can be used to make a simple structure of a building.

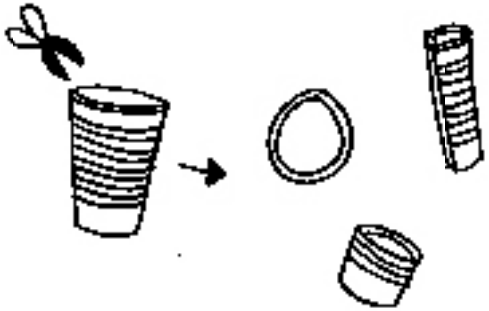
Organising Materials & Junk

Egg Box

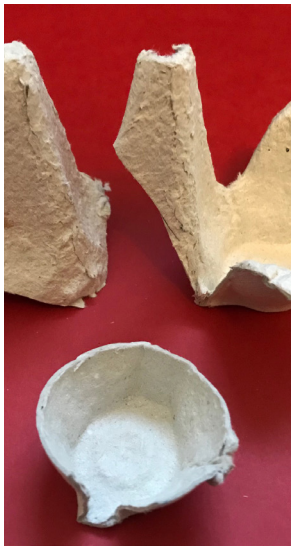


1. Cut into the egg box and around the middle spikes and internal egg holder pieces.
2. You could also use the box lid for your model too.
TIP: Can be used for the top of roofs or facades.

Paper/Plastic Cup



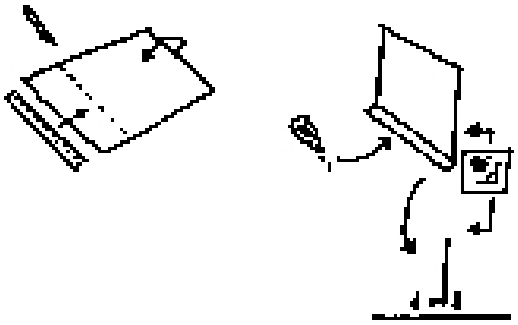
1. Cut around the cup into as many pieces as you want.
2. Make sure to save all the pieces for different parts of your buildings!
TIP: Can be used for windows, walls and curved roofs.



Egg Box Model Making

Model Making Tips & Techniques: 2D to 3D

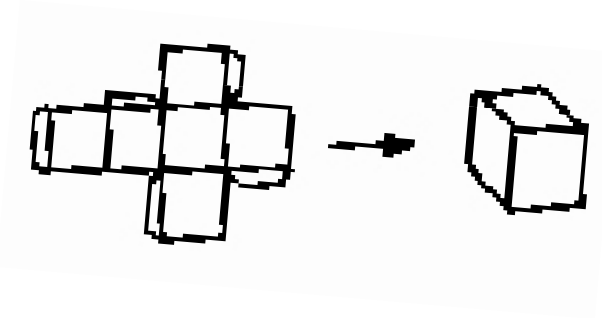
Folding Card/Paper



1. Measure a 2/3cm section of the card with a ruler, mark with a pencil and fold.
2. Holding at a 90 degree angle, use glue on the under side of the section and fix to your model base.

TIP: Can be used to make internal or external walls.

Nets



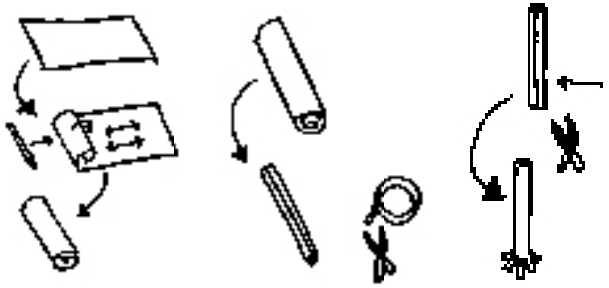
1. Draw the net pattern on your card/paper.
2. Cut around the lines carefully.
3. Fold together, can glue the edges if you want.

TIP: Can be used to make cubes, cuboids, prisms etc... play around with the different shapes!

Great Wall of China (folding & nets)

Pyramids of Giza, Egypt (folding & nets)

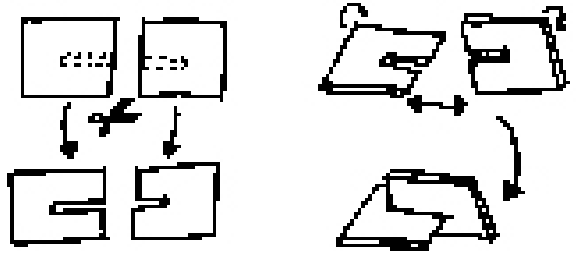
Rolling Card/Paper



1. Choose size and length of paper or card.
2. Roll into a tight tube and tape along the side.
3. Measuring a small length up the side of the tube, snip several slots along the end and push out to make the base.

TIP: Can be used as columns.

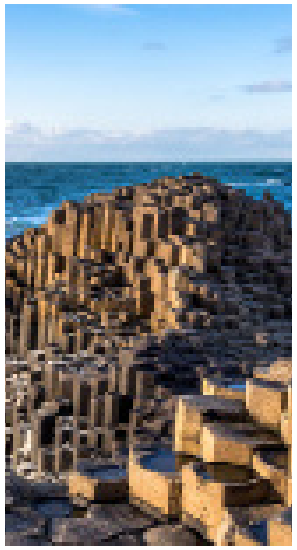
Card/Paper Slot Joints



1. Cut squares of card/paper to size.
2. Measure through the middle equal lengths, and cut these out. Slot two pieces together.

TIP: Good for modular designs – elements that can be added together continuously.

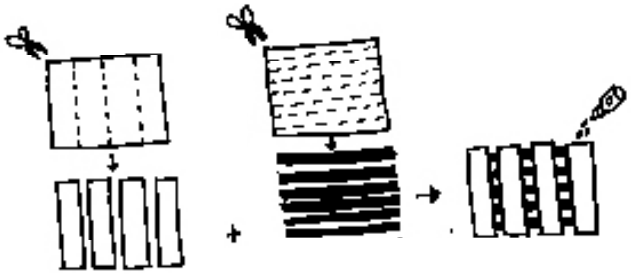
Leaning Tower of Pisa, Italy (rolling)



Giants Causeway, N Ireland (card slots)

Model Making Tips & Techniques: Surfaces

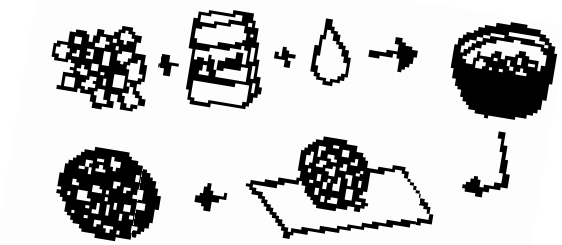
Lattice



1. Cut the pieces of paper/card in horizontal and vertical directions.
2. Weave them in and out of eachother or layer them on top of eachother.
3. Glue the edges down to make it secure.

TIP: Can be used for building facades.

Paper Mache



1. Mix one part sieved flour, one part water with a wooden spoon in a big bowl until you get a thick glue-like consistency.
2. Choose your mould and smear a small amount of vaseline to surface. Or use a balloon.
3. Cut strips of newspaper, paint them with glue on both sides and paste to mould. Let each layer dry before adding the next. **TIP:** Once you've added all layers,it's best to leave to dry over night.

Glue Recipe

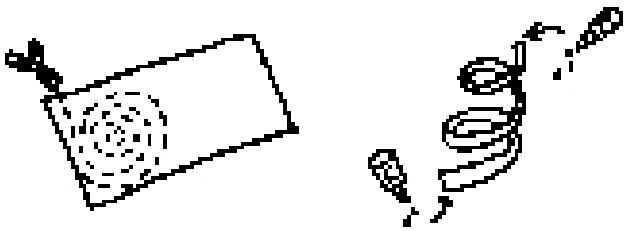
1. Mix together 1 table spoon of corn flour (or flour) with 1 table spoon of water until smooth.
2. Pour 1 cup of boiling water over mixture, stirring constantly with a wooden spoon to create a thin paste. Store in a jar.

N.B. This takes longer to dry than bought glue!

Making Paper Mache

Millennium Dome, UK (paper mache)

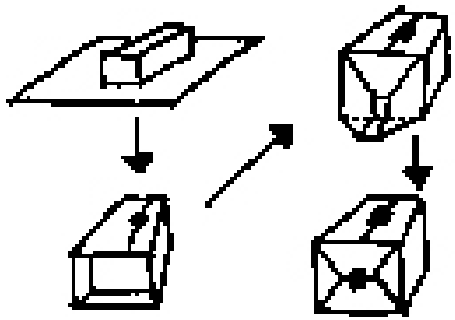
Spiralling



1. Using a sheet of thin card, draw out a wide spiral shape and cut out.
2. Stretch out the spiral and glue the ends to other structures at different levels either horizontally or vertically.

TIP: Can be used to make ramps.

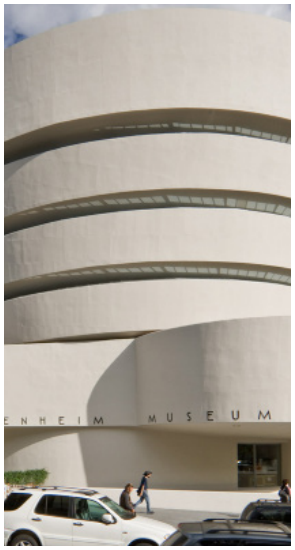
Wrapping



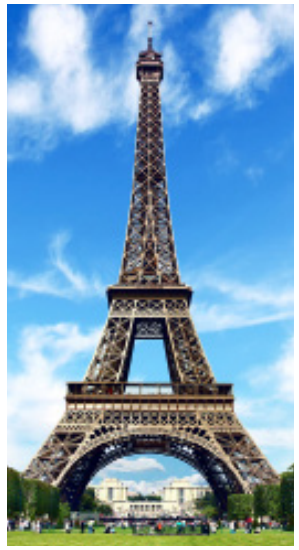
1. Place the junk you want to wrap in the middle of the scrap paper.
2. Fold around the junk so its all covered.
3. Fold and tape the side, top and bottom.

TIP: Can be used for building blocks.

TIP: You could use magazine pages or newspaper or coloured paper to wrap.



The Guggenheim Museum, America (spiralling)



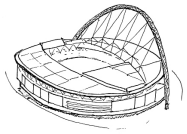
The Eiffel Tower, France (lattice)

Think Like An Architect... things to consider!

Function

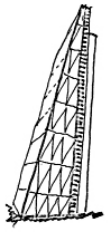
What is a building used for? Is it used to:

- live in? (a home)
- work in? (an office)
- learn in? (a school)
- play sports in? (a stadium)
- pray in? (a church, a mosque, a temple)



Wembley Stadium

St Paul's Cathedral



Offices: The 'Cheesegrater'

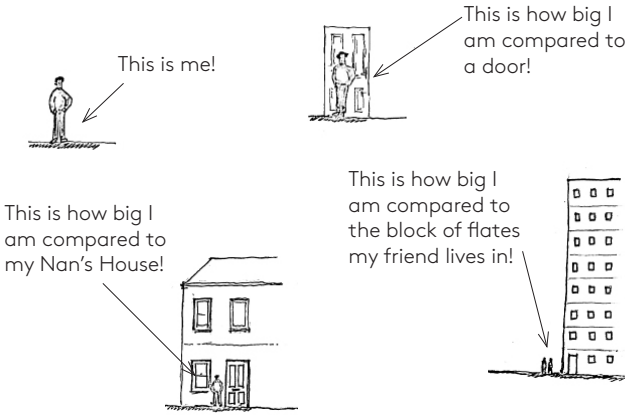
Materials

Materials are used to make buildings - both the structure and inside and outside surfaces. Materials can be made from naturally occuring substances or man-made products.

Natural material examples: timber (wood), stone, mud
Man-made material examples: concrete, bricks, steel, glass. (NB many of these use a mixture of natural and synthetic substances)

Scale: Proportion

How big is your chosen building compared to the others close to it? Think how big am I compared to a door, to my home?



Light

Inside of buildings are lit up by a combination of natural and artificial light.

Natural Light: Does sunlight come into the building? Are there lots of windows? Are there roof lights?

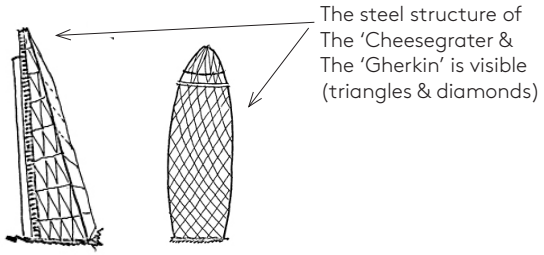
Artificial Light: Can you see lots of lightbulbs through the windows?

Structure

How does the building stand up? Think about what holds up the roof?

Can you see the structure? Clues:

- does it have steel or timber posts (columns) or beams visible?



Scale: Ratio

It's impossible to draw buildings at their real size on paper! Architects therefore need to scale down their drawings of buildings, furniture, people etc to fit on paper so that they can be measured by builders using special rulers.

Think 'Honey I shrunk the Kids'! Or look at your toy cars and dolls, which are scaled down by a ratio.

Photographing Your Work At Home (By Luke O'Donovan)

Photographing 3D work

Photographing your models is more subjective, and you can approach it in a number of creative ways.

Here's a few tips to help you get more professional images at home.

You can use any camera you have available - the example images were taken using an iPhone 6S.

Background

It is important to have a clear background in your images, to avoid distractions from your model. Using plain card usually works well (one sheet on the surface, one behind the model). A white model will stand out well against a dark or colourful background, or white on white will give a minimalist look. Glossy surfaces can reflect your model.

Camera Angles

As well as standard elevation shots, you can try using different angles to showcase different elements of your model. You can move 360 degrees around your model, and if you raise it on top of some books or a box, that allows you to look up from a lower angle. If you're using a phone or small camera, then you can get right up close to the model.

Scale

To give an idea of scale in your models, you can add recognisable figures, such as people or cars. If using human figures, think about how they interact with spaces in the model. A clear idea of scale is useful for architectural models, but for more abstract work it may be more interesting if the scale is unclear, and the viewer tries to work it out themselves.

Lighting

For a natural look, you can use sunlight by itself to light your model. However this leaves strong shadows, so if you want more even light and detail throughout the image, then you can use a second source of light from the other side to add light to the darker areas. This could be a reflector for a subtle look, or a desk lamp or phone flashlight if you prefer.

You can use a reflector (white card or another bright surface) as a second light source, to make light more even across your model for a smoother look, and softer shadows.

Think about lighting and background!

Using Tik Tok To Show-off Your Landmakrk!

TikTok into Architecture Instructions

TikTok is a social media platform which allows users to create interactive fun videos – whether this be of dancing, lip-syncing or comedic.

You can create videos by either filming directly from the app, or on your phone and then editing it within the app.
Filming directly in the app allows a maximum of 15 seconds and using a video from your phone, allows a maximum of 60 seconds.

If you don't have the TikTok app:

- download it from the Apple or Google Play store.
- create an account - if between the age of 13 and 18, you must get parental consent and have the account monitored by the parent. If under 13, you must create your TikTok videos on a parent's account.

Step 1: Pick your favourite landmark (building, monument, sculpture) and you could also find a photo of it on the internet!

Step 2: Create a dance and pick a song (from the soundtracks in the app) that you feel represents or links to your chosen landmark or the country where it is. Be as creative as you like!

Step 3: Making the video - Filming:
Film yourself/family dancing, and you could also film your family making their junkitecture model, or film/photograph it in stages.

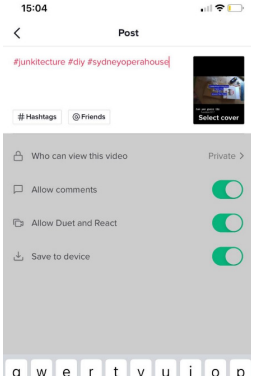
- Film directly into the app if you already have ideas of the TikTok you want to create **OR** film using your phone camera so that you can choose from the outtakes.
- **TIP:** If filming via the app, you can choose from a range of available effects and filters before filming your video e.g. the green screen filter which allows you to insert a picture of your chosen landmark into the video. You can even set a self-timer to give yourself time to prepare – choose from either 3 or 10 seconds.

Step 4: Making the video – Editing:
Once filmed, you can edit the video to your liking - choose from different screen effects, filters, stickers, other sounds and even add text!

Step 5: When you are happy with your video, post it on TikTok with a caption and @ intoarchitecture/@familiesintoarchitecture #junkitecture!!

NOTE: You have the option to share this publicly, with select friends or privately and if you feel like there is more to add, you can save it as a draft to return to later!
You also have the option to allow comments on the post and to have other people create a duet and react video with yours.

Posting your video:



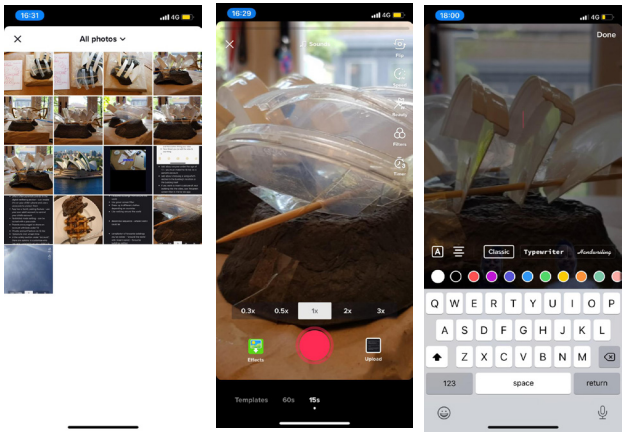
Note: TikTok Parental Controls? Child Safety:

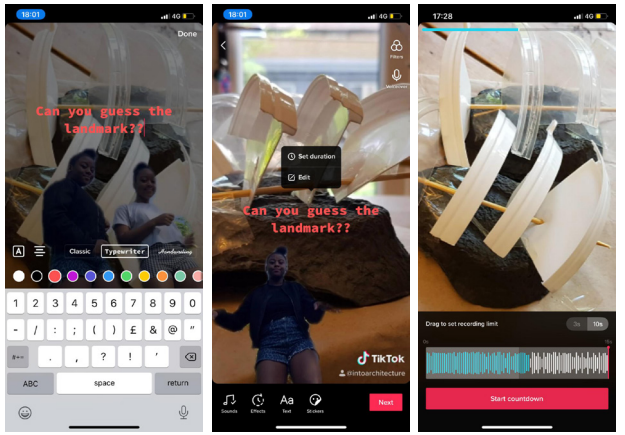
- offers a few parental controls in the digital well being section - can enable this on your child's phone and use a passcode to protect them.
- App has a family pairing feature - use your own adult account to control your child's account.
- Restricted mode setting - can be locked with a passcode.
- Parents encouraged to share an account with kids under 13.
- Private account feature on tiktok
- Options to limit screen time
- In the safety section under "account", there are options to customise who can post comments on your child's tiktok and who they can duet with.

Step 6: Don't forget to submit your video!
You can do this by copying your video and sharing it's link and emailing it to education@open-city.org.uk

If you also made a #junkitecture model of your favourite landmark, please send your TikTok video link with the photos and drawings of it.
Have fun!

Screen shots from making our video:
You can watch our tiktok video here





TikTok activity designed by: architecture student, Kiara-Eve Clarke & teacher, Neil Pinder.