Building and modelling

IMPORTANT Parent or Carer –
Check that you are happy with any weblinks or use of the internet.

NB New activities are being added at the **top** of each document.

Activity 8 - Construction

Make the tallest paper cup pyramid

What to do	What you need
○ Set up the challenge. How tall can you build a construction using the cups? ○ Explore different ways of stacking them. All facing the same way, they nest. Towers of two can be created by stacking two bases or two rims together. Is there another way? ○ Allow more exploration before giving a clue, by placing two cups side by side and another on top in a pyramid shape. ○ Allow your child to explore and build, experiencing the way the structure will only be sturdy if the triangle structure is kept.	10-12 paper or plastic cups 
Extension Try racing (gently) with two people building pyramids at the same time. Try making walls two cups high. Try having a wide base (4 in a square) and building up.	**Questions to ask** How tall do you think you can make your shape? How can we stop it wobbling? Why does it fall down? How can you make it sturdier? How tall is it now? How many cups did you use? How many cups are on the base?

Activity 7 – Lego or another construction toy.

Build a bridge strong enough to hold a toy

What to do

- Create a river by drawing the shape on paper – you could cut this out or leave drawn on an intact sheet of paper.
- Set up the construction equipment and a character.
- Explain that your character wants to cross the river. Talk about why this might be.
- Ask if your child can help them cross the river. What could they do? *Build a bridge.* Talk about the fact that it must be sturdy enough to stay standing and strong enough to hold the weight of the character as they cross.
- Let your child explore building the bridge, looking for ways to make it stronger and stay upright.

What you need

River made from paper

Bridge building materials: Lego, Duplo, Magnetico, Meccano, blocks or any other construction equipment you have.

Small world figure to cross the bridge.

Extension

Explore using different building materials.

Try using more than one toy. Will the bridge be strong enough to hold up two dinosaurs?

Tell stories using the bridge. *'Who's that trip-trapping over my bridge?'*

Questions to ask

How will they get across the river? How could we help?

How can we make the bridge strong enough?

How can we stop it falling down?

Is the bridge long enough to cross the river?

What happens when the zebra stands on it?

Activity 6 - Construction

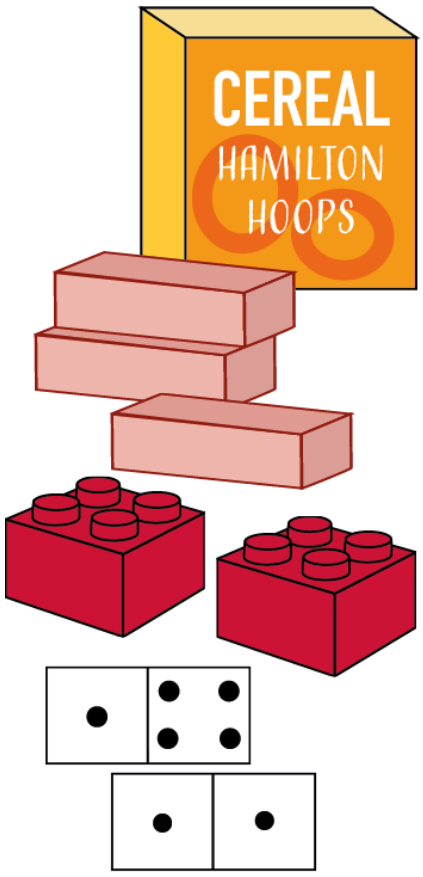
Make the tallest tower

What to do

- Set up the challenge. How tall can you build the tower?
- Explore the building blocks and think about ways to use them to build a tower.
- Allow your child to explore and build, experiencing the way the structure will wobble and fall as it gets taller.
- Encourage them to problem-solve, turning the orientation of the blocks and exploring different ways to steady the structure.
- Give plenty of time for experimenting and lots of praise.

What you need

Any regular sized or shaped building pieces, e.g. *blocks (not Lego), Jenga pieces, dominoes, mini cereal boxes, Duplo turned with buttons facing out,*



Extension

Encourage your child to compete with themselves. *The first tower came up to your knees – can you make the next one taller?*
Try different materials to build with.
Make up a story with the tower and some small play figures.

Questions to ask

How tall do you think you can make your tower?
How can we stop it wobbling?
Why does it fall down?
How can you make it sturdier?
How tall is it now?
How many blocks did you use?

Activity 5 – Larger scale building

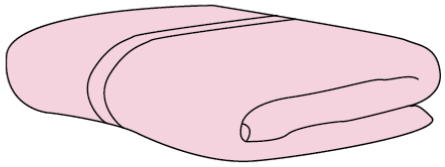
Build a living room den

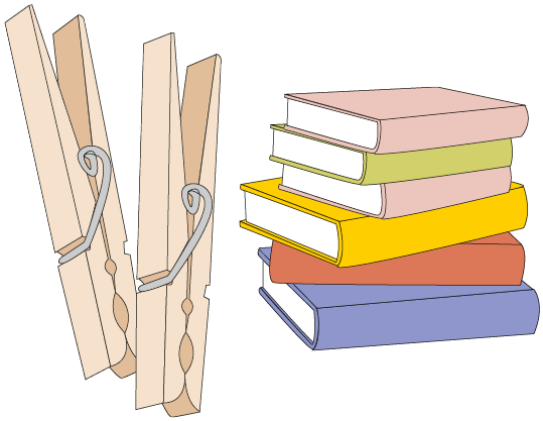
What to do

- Set up the challenge.
- Collect building materials from round the home, thinking about what will work well and encouraging your child to share their ideas.
- Test different solutions, again encouraging your child to discover what works and what doesn't.
- Give open ended prompts to support them and keep their perseverance strong, e.g. '*Hmm that blanket keeps slipping. How could we stop that happening*?'.
- Enjoy the den by bringing in toys, torches, books and cushions.

What you need

Household items for building the structure and then draping over, e.g. *dining room chairs, small tables, old fashioned clothes horse, sofa cushions, blankets, sheets, cushions, safe objects to weigh down the blanket (books work well), pegs*





Extension

Try making a den outside.

Make a den for a story character.

Make the den darker for spooky stories or add safe fairy lights.

Questions to ask

What could we use to make a den?

How tall will it need to be?

How many people need to fit inside?

How can we keep the walls standing?

What could be the roof?

How can we keep the blanket in place?

Activity 4 – Modelling using moulding materials

Make 'food' for a tea party

What to do

- Set up the activity – pick a guest to make a tea party for (this could be a household member, toy or fictional character e.g. *The Tiger Who Came to Tea*). Talk about the type of food which would be good to serve them with and how you might shape it
- While you child makes biscuits, cakes, sausage rolls, pizza etc. chat about what they are making.
- Encourage different techniques such as rolling, pressing cutters, pinching and scoring
- Arrange the food on nice plates and welcome your guest/s

What you need

Playdough (bought or made*)

Rolling pin, cutters, board, pastry tools or table knife and a pencil

Plates, platter, cake stand or similar

Extension

Count the different foods

Challenge your child to cater for contrasting guests, e.g. *a rabbit and a human*

Hold your tea party – you could even have a virtual one using Skype (or similar) with distant friends or family members

Questions to ask

What are you making? What flavour is it?

How can you make a really smooth/thin/ biscuit?

How can we put a pattern on your pie top?

How may cherries are there on the top of the cake?

What shape are your biscuits?

*Simple 10 minute playdough recipe: https://www.bbcgoodfood.com/howto/guide/playdough-recipe

Activity 3 – Modelling from found and recycled materials

Make a bug hotel

What to do

- Explain the task clearly. Insects like to hide in small, dry sheltered places from the weather and predators. This can be gaps in walls, holes in trees, piles of dry leaves. These places are becoming less common so we can help by making a bug hotel.
- Collect the materials – natural materials can be collected during a walk in the park
- Talk about ways to fill the container to make small nooks and crannies for insects to shelter in
- Explore packing the container with the found materials.
- Place or hang up your hotel in an outdoor space ready for the first guests to arrive

What you need

Something to provide the shell of the hotel: a card tube/kitchen roll insert, cut down milk carton, card coffee cup or plant pot

Thin twigs, sticks, dry leaves, pinecones, moss, bark, dead hollow stems

String or thread to suspend the finished hotel from

Extension

Set a challenge – e.g. can you create spaces of different sizes for different insects? Can you make a hotel that can hang from a tree/fit in the hedge/be waterproof?

Find out what animals might be taking up residence by looking at this link together: https://www.woodlandtrust.org.uk/blog/2019/09/how-to-build-a-bug-hotel/

Look at larger bug hotels online http://www.wildwestend.london/stories-feed/2017/4/26/insect-hotel

Questions to ask

How will you stop the parts from falling out?

What will make the hotel waterproof?

Where could we put it? What would be a good place?

How can we keep it light enough to sit on our hedge/stop it blowing away?

How can we design it so it will hang on our fence?

Activity 2 – Junk modelling

Make a spaceship from recycled materials

What to do

- Set up the construction materials.
- Explain the task clearly. They will build a spaceship using the materials collected – look at and handle them. Discuss which parts of the rocket could be made with different materials
- Talk about ways to fix the parts together, without instructing, e.g. *masking tape will hold parts together for a while but sticks straightaway, glue takes a while to dry but holds longer*
- Give plenty of time for experimenting. The process is more important than the finished product.

What you need

Any clean packaging – cereal boxes, tubes, plastic drinks bottles, cartons, pizza boxes, egg boxes, takeaway containers

Fixing materials – sticky tape, masking tape, PVA glue, elastic bands

Decorative elements: foil, ready mix paints, card, paper

Scissors, felt pens,

Extension

Set a challenge – e.g. can you create a rocket that will deflect rocks? Can you make a rocket that a family can live in?

Take the rocket on its first mission, launching it with a countdown from ten.

Write labels for the different parts of the craft.

Questions to ask

Tell me about your rocket. What does each part do?

Where is your rocket going to go?

What makes your rocket strong?

How did you fix the materials together?

Activity 1 – Lego or another construction toy.

Build a house for an animal

What to do	What you need
○ Set up the construction equipment. ○ Explain the task clearly. They are to build a home for an animal of their choice. Discuss which animal this might be? ○ Talk about what its home looks like. ○ Give an incentive for your child to persevere and make something really special. E.g. take a photo and send to a grandparent or other favourite relation.	This can be Lego, Duplo, Magnetico, Meccano or any other construction equipment you have. 
Extension Set a challenge – e.g. can you create a nest for a bird? Can you create a two-level house for a hamster? What about a split-level cage for a monkey?	**Questions to ask** How many pieces have you used – more than 20 or fewer than 20? What shape are the most useful pieces? Why is this home good for this animal? Tell me about the animal.