



I AM AN ARCHITECT

Young children are born curious about cause and effect. Big brother or sister may build a tower and along comes little brother or sister to knock it down. Don't worry it will just be time to build again, but maybe in a different location or with different materials. The structure becomes more complicated and with added features.

- Should there be a plan (blueprint)?
- Who will design the building (architect)?
- What kind of blocks can be used (construction materials)?
- Who will be using the building (tenant)?
- How will the building be used?

These simple questions can apply to a child's imaginative play just as they are applied to building in the real world. They are able to try out different scenarios that test different hypotheses.

Math is important to building. Children will have to estimate if their structure will fit in the designated area, if they have enough building materials for their plans. There may need to be changes made after noticing problems in the structures. You will be experimenting with different shapes in combining sound structure with innovative ideas.

Hands-on activities included in the kit offer suggested vocabulary, fun facts, and further reading. The chart below provides an overview of language, science, and math literacy skills highlighted in each activity.

	Activity #1 "Walk"	Activity #2 "Building"	Activity #3 "Homes"
Language	descriptive words	planning	habitats
Math	measuring	estimating	adapting
Science	observation	experimenting	problem solving



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#1: Take a Building Exploration Walk

SUMMARY: By taking a walk around your neighborhood or community with your child, you both can observe buildings and structures and describe what you see. If you cannot go outside take an inside walk by looking through magazines or books for interesting buildings. This is an opportunity to learn special words to use in your descriptions.

WORDS TO USE:

Architect –the person who designs buildings
Building Materials – what is used to create the structure (ex. Brick, stone, cement.)
Chimney – a structure that allows smoke to escape and that is often made of brick.
Construct – building something, putting something together
Exterior - the outside of the building or of a surface
Foundation - the support upon which something rests
Gutter – a trough along the eaves of a house to catch and carry off rainwater
Ramp – a sloping pathway connecting different levels
Roof – the upper covering part of a building
Stable – not likely to change suddenly or greatly

MATERIALS NEEDED:

Paper
Crayons
Pencil
Camera (optional)

ACTIVITY:

- Get ready to take a walk in your neighborhood or community
- Take a pad of paper and a pencil with you to record what you find.
- If you have a digital camera, take pictures of interesting buildings.
- Can you find a ramp, window, door, rain gutter, shutters, stairs, roof, garage, porch, porch light, foundation?
- When you return home, draw pictures of some of the structures that you saw or draw your house.
- If possible repeat the walk another time and look for different details on the buildings.

OBSERVATIONS:

- Which building on your walk was the biggest?
- Which building is the tallest?
- Which building is the smallest?
- How were the buildings similar?
- How were the buildings different?
- How do they compare with your house or apartment?
- Can you determine the use of the buildings? Offices? Homes? Stores?
- What kind of building do you live in? Apartment? Duplex? Single family? Townhouse?
- What shapes do you see in the exterior of the buildings that you saw?
- Describe the different kinds of roofs.
- Do you know the building materials used?
- Lie down on the floors in your house and look at the ceiling and describe what you see.

DID YOU KNOW?

- The Willis Tower (formerly known as the Sears Tower) is the tallest building in the USA and is 1,451 feet tall and has 108 stories.
- A brick is clay molded into blocks and dried.
- Windows are made from glass which is made from sand heated with chemicals

SUGGESTED READING:

E Bean	Building Our House
E Hoban	Cubes, Cones, Cylinders and Spheres
E Johnson	Alphabet City (concept)
E Suen	Raise the Roof
J 690 Hudson	Construction Zone
J 720 Arbogast	Buildings in Disguise
J 720 Hale	Dreaming Up: a celebration of building
J 720.483 Simon	Skyscrapers

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#2: Building with the Blocks

SUMMARY: After taking a walk around your house, in your neighborhood or in your community, or looking through books or magazines, create your own building or structure.

WORDS TO USE:

Architect - the person who designs and draws plans for buildings
Balance – a steady position
Blueprint – a detailed plan of something to be done
Construction Worker – someone who builds something, usually from a plan
Exterior – the outside part of the building or of a surface
Foundation - the support upon which something rests
Interior – the inside of the building
Structure – something built in a purposeful way
Tower – a building or structure that is higher than its length or width. Maybe higher than most of what it surrounds, or it may be attached to a larger structure.

MATERIALS NEEDED:

Blocks in the “I am an Architect Kit.”
Measuring tape
Paper and pencil

ACTIVITY:

- Let's be a construction worker and architect today, so wear your hard hat.
- With grown-up help try drawing a floor plan first before building. A quick outline will do.
- Look at all of the blocks and find out what you can make with some of the pieces or all of the pieces.
- Try making a new structure
- How high can you build a tower?
- Can you make a skinny tower? A fat tower?
- If the tower falls down, try building it again with a wider base.
- Measure the height and width of your building.
- Draw pictures or take photos of what you have built.

OBSERVATIONS:

- Why do you think some blocks did not stay standing?
- Did you remember to add exits to get out of your buildings?
- How would you use the different buildings if they were big and real?
- What shape is the foundation of your building? Square? Rectangular?
- Which blocks worked better for making towers?
- What would happen if we removed a block in the middle of the wall or tower?
- What would happen if we took a block out and made a door or window?
- How many blocks are in your tower? Wall? Floor?
- Which works better – walls made with blocks stacked on top of each other or blocks overlapping from row to row.

DID YOU KNOW?

- Blueprints were originally a photographic print made with white lines on a blue background.
- People have to submit their building plans to the local government to get approval to make sure the building will be safe.

SUGGESTED READING:

E Barton	Building a House
E Clement	Job Site
E Hoban	Construction Zone
E Hutchins	Changes, Changes
E Lewis	The Lot at the End of My Block
E Olson	Construction Countdown
E Roth	Hard Hat Area
J 629.225 Pallotta	The Construction Alphabet



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#3: Building a Home for a Friend

SUMMARY: By using common materials around the house, the child will explore how to create a livable structure for his/her stuffed animal or doll. It can be very basic or become elaborate with imagination.

WORDS TO USE:

Build – to make something by putting together parts or materials
Community – a group of animals living together and depending on one another
Design – creating or planning something using a sketch or model of what is to be made
Foundation – the support upon which something rests
Habitat – the place where an animal or plant lives or grows in nature
Structure – something built in a purposeful way
Tool – something used to perform a task

MATERIALS NEEDED:

Start collecting an assortment of safe food containers and boxes.
(Egg cartons, cereal boxes, yogurt cups, paper tubes, straws, shoeboxes, caps, lids, etc.) Building materials that will vary in size, shape, weight and texture.
Cardboard or paper for a roof
Thoroughly clean them if necessary before using in playtime.
Glue
Tape
Scissors

ACTIVITY:

- Choose a stuffed animal or doll to make a house for it.
- What kind of home would the animal or doll need?
- Have a grow-up help you write down your ideas
- Create a structure. Adults should cut out the windows and doors.
- Take or draw a picture of the building and start again with new ideas.
- Can you make a community of buildings?

- Next time you go for a walk look for animal houses. (ex. Nests)
- Try building first without using tape or glue. What happened? Do you need to use tape or glue to make your structure stable?

OBSERVATIONS:

- Can you describe what you built?
- Is it stable?
- Does it need a wider foundation?
- What did you need to build first?
- How did your stuffed animal get in and out of the building?
- How would people, animals get from the first floor to the top of the building if it were big enough for real ones?
- How tall is the building? Measure it.
- How wide is the building? Measure it.
- What extras did you include in your building? Windows? Doors? Roof? Garage?
- What would you need to decorate the interior of your building?
- How can you safely take the structure down?

DID YOU KNOW?

- The type of house that you live in may depend on where you live and the weather in your area. The same can be true for animals.
- A house facing south will get more of the sun's warmth.
- The inside of a house made underground can have the same temperature year round.

SUGGESTED READING:

E Carle	My Very First Book of Animal Homes (board book)
E Evans	Bang! Boom! Roar! A Busy Crew of Dinosaurs (concept)
E Marshall	The Three Little Pigs
E McLerran	Roxaboxen (BK/CD)
E Tryon	Albert's Alphabet (concept)
J 392.36 Gustafson	Imagine a House
J 392.35 Laroche	If You Lived Here: Houses of the World
J 591.564 Davies	Who Lives Here? (Lift the Flap)
J 591.564 Ham	Step Inside! A Look inside Animal Homes
J 591.564 Kalman	Homes of Living Things
J 591.564 Kelly	Even an Octopus Needs a Home
J 591.564 Wilkes	Animal Homes
J 624.1 Simon	Let's Try it Out with Towers and Bridges
J 790.133 Beswick	30 Fun Ways to Learn with Blocks and Boxes (PTC)

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