


BUILD YOUR DREAM HOUSE (LEVEL 1)

Description	Learners will create a model of their dream house or room and learn about geometry and operations!
Leading Question	How can we use shapes to build our dream house?
Total Time Required	~ 3.5 hours in total over 4 days
Supplies Required	Paper/cardboard, ruler/measuring tape, color pens, scissors, glue/tape/stapler
Learning Outcomes	<ol style="list-style-type: none"> 2 dimensional shapes and their properties Addition within 10
Previous Learning	- Numbers 1-10

DAY 1

Today you will learn about creating a model of our dream house and practice some math!

Suggested Duration	Activity and Description
20 minutes	<ul style="list-style-type: none"> Introduction: we are going to learn how to create a model of our dream house and practice some math! First, let's learn about some shapes that we can use to build our house. Option 1: the learner will complete the Beauty in Shapes project before starting Build Your Dream Home to get a more detailed introduction to 2-dimensional shapes OR Option 2: the learner can complete these brief activities to get a quick introduction to 2D shapes. First, show the learner these shapes and ask her or him to identify them <div style="text-align: center;">  </div> <ul style="list-style-type: none"> Introduce the learner to 2 dimensional shapes:

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<https://forms.gle/LGAP9k17fMyJrKJN7>

- A triangle has three sides and three corners
- A square has four sides of equal length, and all its angles are right
- A rectangle has four sides. Opposite sides are of equal length, and all its angles are right.
- A circle is a round shape. All its points are of equal distance from the Center point.

20 minutes

- Let's draw each shape! Bring out your paper, pen or pencil and a ruler or any flat object with a straight side like a phone/bookmark/cardboard or fortified paper:
 - Use a ruler to draw a square with 4 equal sides and right angles, and a rectangle with equal opposite sides and right angles. Use the corner of a mobile phone or a notebook to make sure your angle is right.
 - Plot three points that are **not on a straight** line and join each point to the next one to draw a triangle
 - Use a thread tied to a needle on one end and a pencil on the other. Fix the needle in one spot on a paper and move the pencil away, stretching the thread. Rotate the pencil while holding the needle in the same spot to draw a circle. You can also use a finger to pin down one end of the thread instead of a needle as shown below



Source: <https://www.wikihow.com/Draw-a-Circle>

DAY 2

Today you will think about how we can design our house.

Suggested Duration

Activity and Description

15 minutes

- The learner will walk around the house and try to identify basic geometric shapes in ceilings, walls, and different objects around the house.

20 minutes

- With the help of an adult, the learner will list the shapes and objects in their notebook as follows:
 - Living room: square wall, rectangle table, rectangle couch etc.
 - My bedroom: square wall, rectangle ceiling, round window etc.
- The learner will do a tally count of the total number of shapes in each room and complete the table below in her or his notebook

Room	Square	Circle	Rectangle	Triangle
e.g. living room	II	I	IIII	
e.g. kitchen	I	III	II	I
Total	3	4	7	1

- Reflection questions:
 - What shape is the most common in our house.

30 minutes

- The learner will try to draw the design of the house on a piece of paper. Instead of a top view of the room, the learner can draw the wall of one or more rooms or spaces on separate pieces of paper/pages of his or her notebook. The help of an adult might be needed. Some examples:



DAY 3

Today you will come up with ideas for their house or room blueprint.

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Suggested Duration	Activity and Description
20 minutes	<ul style="list-style-type: none"> Today, the learner will come up with ideas for their house or room blueprint. Prompts <ul style="list-style-type: none"> How do I want my house or room to look? Will the walls be square or rectangular? Can they be triangular? What other objects do you want there that you can draw? How many square, circle, rectangle, and triangle shaped objects have we listed?
10 minutes	<ul style="list-style-type: none"> The learner will recreate the tally table from day 2 in their notebook or piece of paper and count the total for each shape.
30 minutes	<ul style="list-style-type: none"> The learner will draw and color all the shapes according to the total shown in the table. E.g. 4 rectangles of different sizes, two circles, one triangle etc. Each shape will represent part of the room – one rectangle is the wall; a circle can be glued on to the wall to represent a mirror. Another rectangle can be glued to represent a photo frame etc.

DAY 4

Today you will play a treasure hunt game!

Suggested Duration	Activity and Description
30 minutes	<ul style="list-style-type: none"> Today, the learner will continue decorating different walls, cutting out shapes and gluing objects on to walls, and finally putting the different parts together. An adult will help with gluing the different parts together. The wall and floor can be glued as follows <div style="text-align: center;"> <p>Fold the part below the dotted line and glue it underneath the</p> <p>Paper 1 – wall with tv, table, and mirror glued on or drawn</p> </div> <ul style="list-style-type: none"> Tips: <ul style="list-style-type: none"> The learner should color walls and floors before gluing or stapling them together

	<ul style="list-style-type: none">- The bottom part of the wall can be folded by an adult to go under the floor- The learner can also, with the help of an adult, draw different objects onto walls instead of gluing and pasting them● Optional: Learners can make several rooms and arrange them side by side to create a house.
10 minutes	<ul style="list-style-type: none">● The learner will present the finished house to his or her family and describe how she or he designed each wall and the shapes of different objects and what they represent.

ASSESSMENT CRITERIA

Completed house or room with walls and floors comprised of 2D shapes

ADDITIONAL ENRICHMENT ACTIVITIES

Learners can be taught the properties of some 3-dimensional shapes such as cuboids, cylinders, cones and spheres and asked to create some of these to build their house

MODIFICATIONS TO SIMPLIFY

The learner can design the different rooms of his or her house on paper without making cut-outs of the different objects