## Building cubes

## Topic/Learning objectives of exhibit:

Geometry, problem-solving skills, volume.

## List of Materials Required:

- 4 A4 orange-coloured sheets of cardboard
- 7 A4 light blue coloured sheets of cardboard
- Glue/Tape
- Scissors


## Step-by-step Construction

Estimated Time: 30-40 minutes


| Step 1: Print <br> out the shapes <br> of the cubes | Print the cubes on <br> coloured cardboard or <br> coloured paper: <br>  <br> $2 \times 2 \times 2$ cube: <br> Two (2) L-shaped <br> pieces with 3 units <br> and one (1) double <br> cube |
| :--- | :--- | :--- |
| $3 \times 3 \times 3$ cube: <br> Six (6) L-shaped <br> pieces of 4 units <br> and one (1) L- <br> shaped piece of 3 <br> units |  |

Step 2: Cut
out the shapes
with scissors

Use scissors to cut out the shapes. Fold along the lines of the cut-out shape.


| Step 3: Use <br> tape or glue to <br> stick the sides <br> together | Use tape or glue to stick <br> the sides together to make <br> the cubes. Glue the small <br> pieces to the inside of the <br> cube surfaces. |
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(a)

## Assembly

## Estimated Time: 5 minutes

| Step 1: Prepare the exhibit board | Print out the corresponding board on A3 paper and laminate it (optional). | Building Cubes <br> Put the pieces together to make the cubes <br> Can you find another solution for the smaller cube? |
| :---: | :---: | :---: |
| Step 2: Ready to use | You are ready to use the exhibit! |  |

## Observations

The cubes can be constructed using wood cubes from arts and crafts by glueing each piece as a sturdier option. Other options include math links or a 3D printer.

