CHAPTER 3 Polynomials
3.1 Build Algebraic Models Using Concrete Materials
Volume Models With Linking Cubes

Example:
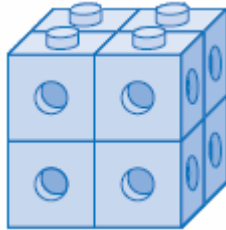A cube has a side length of 2 cm.

a) Model the cube with linking cubes.
b) Find the volume.
c) Find the surface area.

Solution:

a) The model is shown.

b) $V = s^3$
$\quad = 2 \times 2 \times 2$
$\quad = 8$

The volume is 8 cm^3.

c) $SA = 6s^2$
$\quad = 6 \times 2 \times 2$
$\quad = 24$

The surface area is 24 cm^2.

Practice:

1. A cube can be modelled using 125 linking cubes. Find the side length and the surface area.

Answers:
1. side lenth is 5 units, surface area is 150 square units