Monyetla Bursary Project
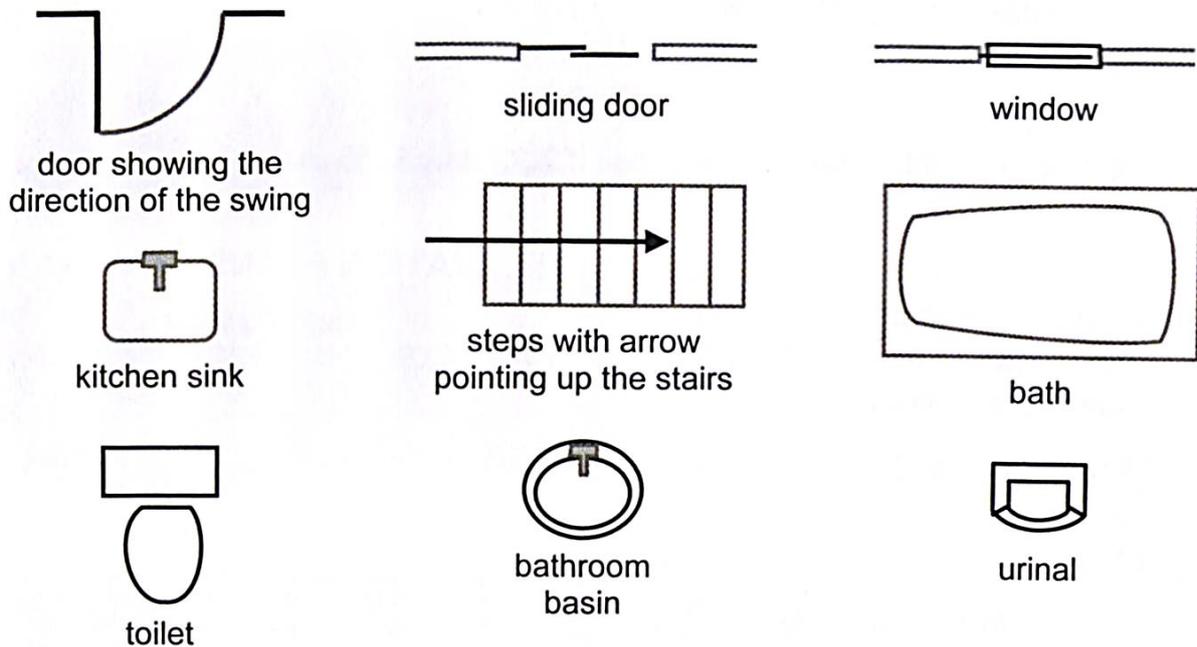
Grade 11

Lesson 3: Maps, plans and other representations of the real world

PLANS

1. Floor plan:

- Shows a 2D view of a building/structure from above, excluding the roof

- Provides the following information:

  o size and shape of each room (incl. lengths and widths of rooms and walls)

- - the position of exterior and interior walls, doors, windows and fixtures, such as toilets,

    basins, built-in cupboards, showers, etc.

- It does not provide information about the height of walls, nor the height of the structure

  or building.

- Commonly accepted drawing conventions are used on floor plans

door showing the direction of the swing

kitchen sink

toilet

sliding door

steps with arrow pointing up the stairs

bathroom basin

window

bath

urinal

2. Elevation plan:

- 2D pictures of the outside of a building or structure
- Provides information regarding the height of the structure/building and external features e.g. walls, doors and windows.
- It does not provide information about the size of rooms or interior fittings
- Named using compass directions, i.e. 'north' elevation is the side of the house that faces the compass direction 'north'.

3. Design plan:

- Drawings to show how a building/structure is made and how it functions or looks
- It often provides manufacturing and/or assembly details, such as measurements and attachment points of individual components.
- Commonly used for manufacturing of furniture and clothing.

MODELS

When you need to pack items into a container:

Length of container ÷ length of object   -   round answer down to whole number

Breadth of container ÷ breadth of object   -   round answer down to whole number

Height of container ÷ height of object   -   round answer down to whole number

Total = answer from length x answer from breadth x answer from height

INSTRUCTION AND ASSEMBLY DIAGRAMS

Make sure you use the correct names for components and give as much detail for your instruction as possible.

When giving directions, use landmarks, like street names and shop names. Make sure you use 'left' and 'right' correct. Turn your map so that North points up.

SCALE

1. Number scale:

1 : 100

- This scale means that 1 unit on the map is equalled to 100 of the same units in real life.
- When given the map or diagram length and you need to find the real life measurement – multiply by the number scale (x100)
- When given the real life measurement and you are asked to find the map or diagram measurement – convert the actual length to cm or mm, divide the actual length by the number scale (÷100)

2. Bar scale:

0 m   10 m   20 m
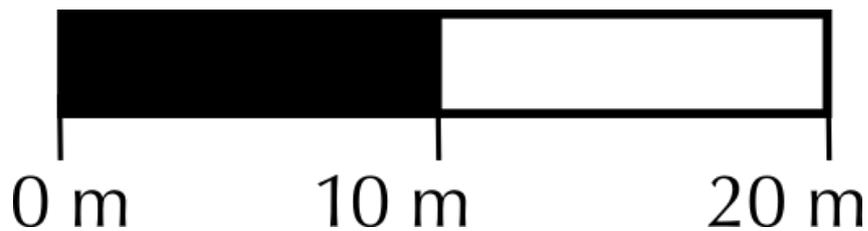
- First measure one bar segment
- Then measure the required length or distance on the diagram, if not given
- $\text{actual length} = \frac{\text{required length}}{\text{length of one bar segment}} \times \text{actual distance represented by one bar segment}$