



### Lesson 3: Surveying Rooms

This lesson examines the proportions of rooms and their features through measurement. Students are introduced to the concept of plans and the associated terminology.

**Support material:** Surveying Guidelines, Drawing Guidelines, Information Sheet 2 “Architectural Symbols” and Information Sheet 3 “Landscape and Services Symbols”.



#### Spotlight

Drawing plans. Surveying.



#### Key Concepts

Size of room. Shape of doors and windows. Furniture, fixtures and decoration.

#### Review of work

Discuss the results of the drawings which students did in Lesson 2.

- How did the memory drawings compare with the drawings done from observation?
- What additional features did they observe?
- What features are important to include when describing a room?
- What is your favourite/least favourite feature in the room?

#### Discussion and demonstration

Distribute Information Sheet 2 “Architectural Symbols”, Information Sheet 3 “Landscape and Services Symbols” “Surveying Guidelines” and “Drawing Guidelines”

When an architect makes a drawing of a room, he/she draws **plans** and **elevations**. Talk about the concepts of plan and room elevation. Discuss the architectural symbols on Information Sheet 2.

Show students how to sketch a simple floor plan of a room. Show them how to use architectural symbols to indicate the positions of doors, windows, fixtures and furniture.

Demonstrate one or two measurements to the class — eg height and width of door/window; length of one wall; position/measurements of a radiator.

Using a prepared grid, demonstrate the concept of **scale**.



#### Activity — Surveying the classroom

1. Ask students to sketch a floor plan of the classroom, noting the number and position of doors, windows and other features. Allow about 15 minutes. The students must prepare these sketches first, as they will be using them for recording their survey information. Once the survey work and rough sketches are complete, they will be transferring the information onto clean graph paper, using an agreed scale.



2. Divide class into groups. Each group is responsible for doing its own surveying and recording its findings. Group members should decide who measures and who records. Within each group, one pair can be put in charge of collecting measurements for the plans while another pair collects measurements for room elevation. Someone can check information in "Surveying Guidelines".
3. Work in rotation. While one or two groups are measuring up, the others can be working on their plans.
4. Each group must measure and record: the floor; 4 walls (height and length); dimensions/locations of doors and windows; dimensions/locations of furniture and fixtures (cupboards, radiators, light switches etc.).
5. Help students to measure any odd-shaped alcoves or corners and adjust their drawings accordingly.
6. In collaboration with the class, choose a suitable scale. Make it as large as the paper size permits.
7. Using their measurements and the chosen scale, each group draws the plan and the four wall elevations.
8. Remind students that their drawings should note the positions of furniture and the placement of switches, sockets, vents and radiators.

**Materials** — Each group needs: a tape measure or metre stick, a large sheet of graph paper taped to a drawing board. Each student needs a pencil, eraser, ruler.

### Homework

1. Depending on class time, students may want to complete their class surveys as homework, especially if they need to do some tidying up.
2. Ask students to survey and draw their favourite room at home, using what they learned when surveying the classroom. Tell students that they will be discussing this assignment in the next class and that certain students may be asked to share their work with the class as part of the discussion.
3. **Scrapbook** — Tell students to dedicate a page/section in their Scrapbooks to **Floor Plans**. Photocopy or make sketch copies of floor plans using books in the school or local library. Label each floor plan and write a few lines about why it impressed them.
4. **Vocabulary Files** — Remind students to update their files.

### Cross-Curricular Connections

1. Design/Technical Drawing — Draw a scale plan reorganising the layout of your favourite room.
2. Technical Drawing — Draw scale plans of other rooms in your house.
3. Computer Studies — Use computer graphics to draw a scale plan and room elevations for a room of your choice.
4. Art/Physics — Learn more about scientific colour theory. Investigate the psychological effects of colour and the impact of colour in schools, hospitals etc.
5. Art/Literature/Languages — Choose a passage from a poem or a novel which



describes a room. (The passage could be in any language.) Make a drawing or painting of the room described.

6. Career Guidance — Invite a professional surveyor to give a careers talk to the class.
7. Design/Social Studies — How would a disabled student manage in your school? Find out. Taking one student in a borrowed wheelchair and another wearing a blindfold, start at the gate into your school grounds and trace the path to cloakroom, toilets, school hall, classroom, library, snackbar or canteen, and school office. Retrace your steps to the gate. Make notes as you go. What changes would you suggest?
8. Art/German — Study the Bauhaus school of design through the German language.
9. Media Studies — Make a video recording of one or more TV programmes on interior design. Write a review of each programme, commenting on what they suggest our homes should be like.