

PRIMARY SCHOOL DESIGN CONSIDERATIONS

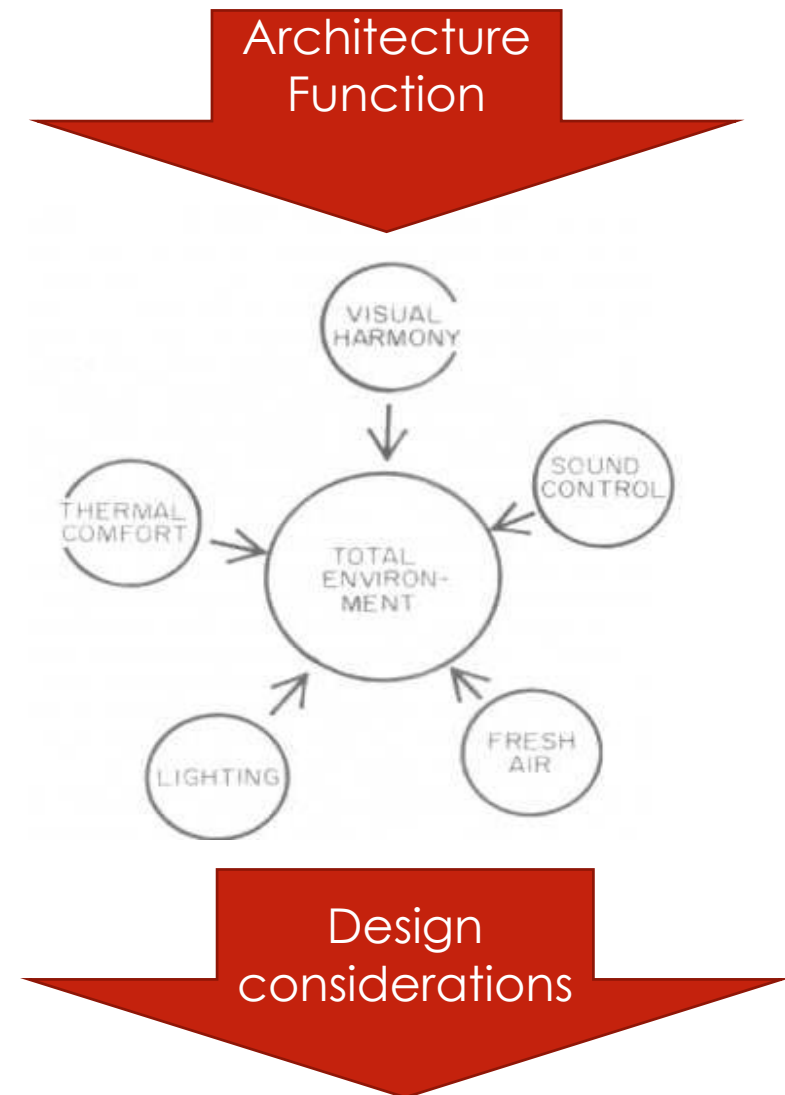
Architecture Design4 Staff -Hawnaz Magid

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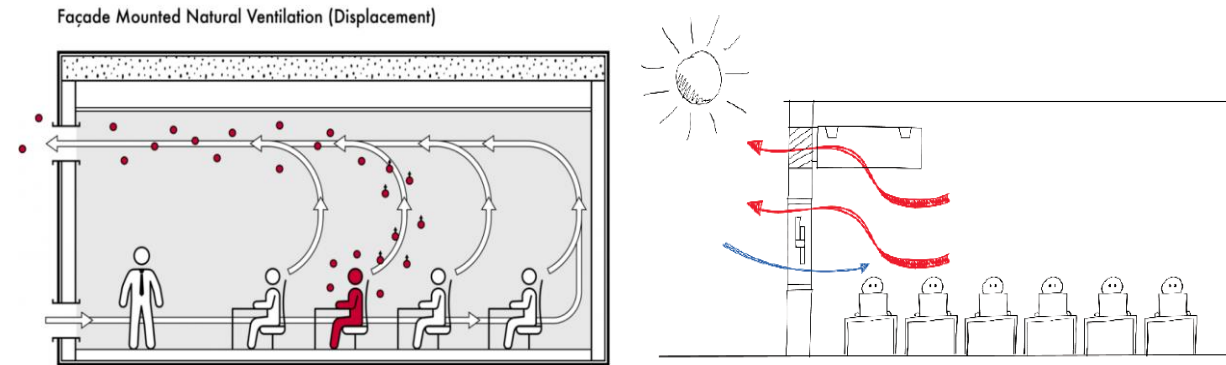
PRIMARY SCHOOL

- **A program** of needs for a building or the base for a master plan evolves from the basic study and evaluation of options, leading through successive revisions to descriptions of spaces in terms of **numbers, sizes, and characteristics** .
- **Architecture Function** : The mechanical elements are the basic, but not the only, consideration for the entire job of climate control. The orientation, the **plan arrangement**, the design of the building, and the materials used can contribute to the quality of comfort achieved and to the economy.



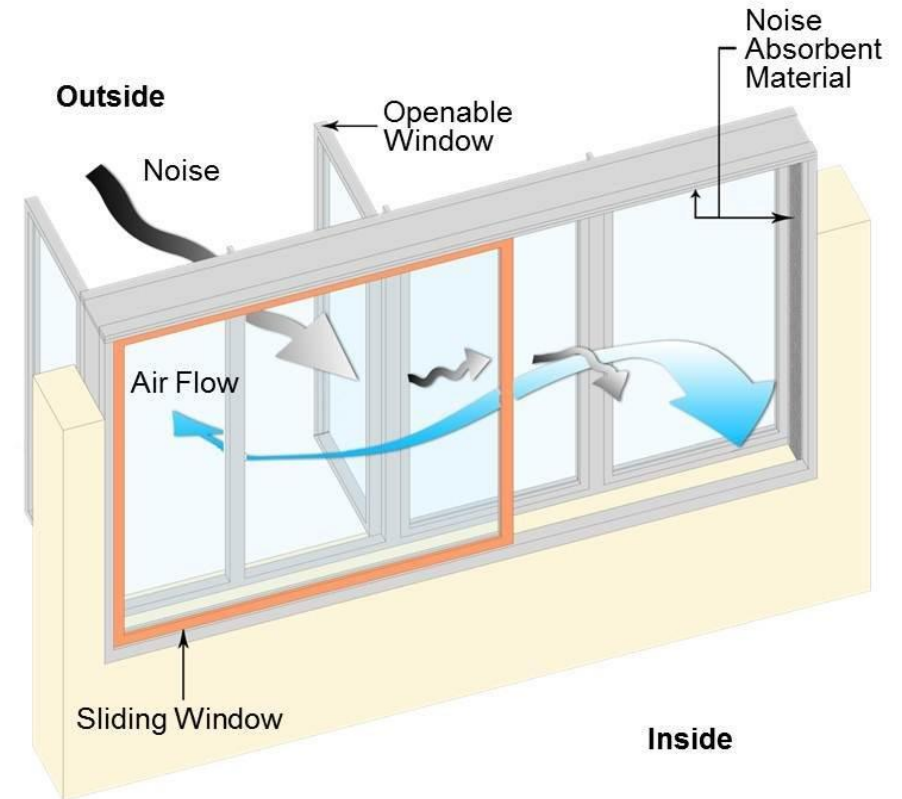
DESIGN CONSIDERATIONS

- **(a) Natural day lighting** should be exploited when designing rooms, to minimize the dependence on artificial lighting. Glare must be avoided. Windows for teaching spaces should have a horizontal vista.
- **A good quality daylight distribution** is required in each room with the average day lighting factor for each room to be a minimum of **4.5%** with the emphasis on an even light distribution throughout the space.
- **(b) Ventilation** should be natural ventilation by means of permanent wall vents and windows with opening sections. Vents should contain baffles for noise, wind and rain.



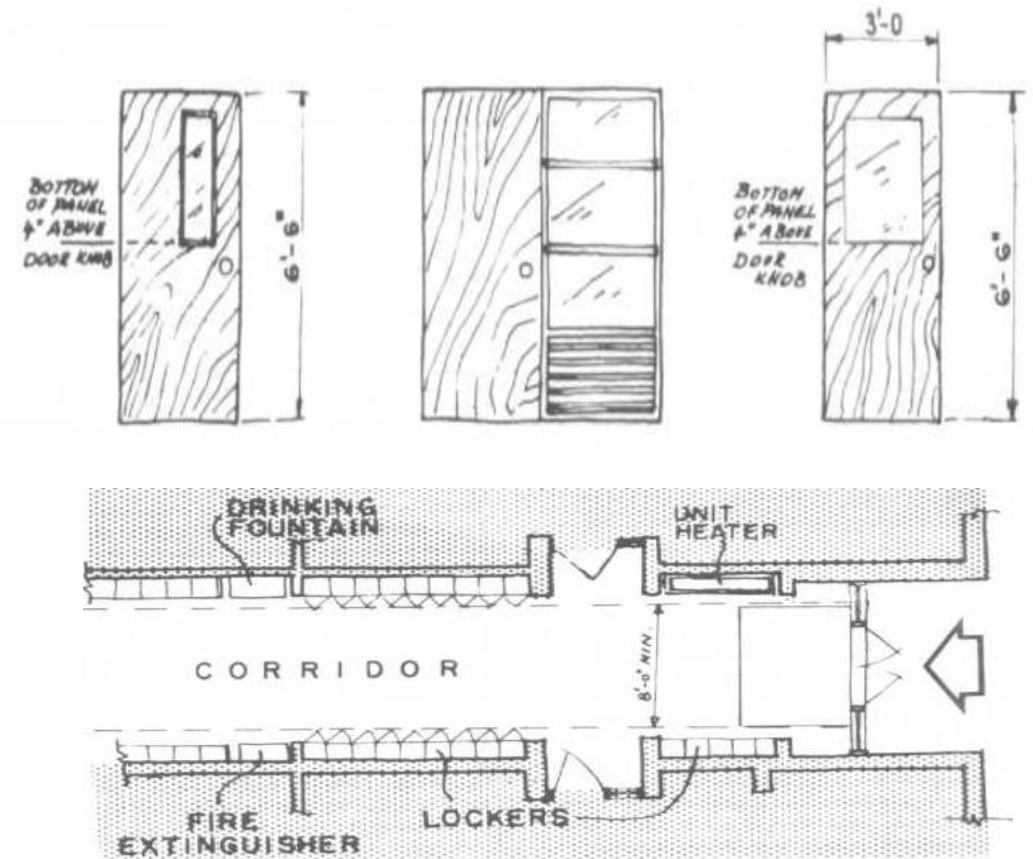
DESIGN CONSIDERATIONS

- **(c) Windows** generally should be double glazed, easy to clean and maintain, and have high- and low-level opening sashes.
- The **position and size** of opening window sashes must take into account ease of operation, **natural ventilation** requirements, maintain an adequate level of **safety, prevent noise pollution.**



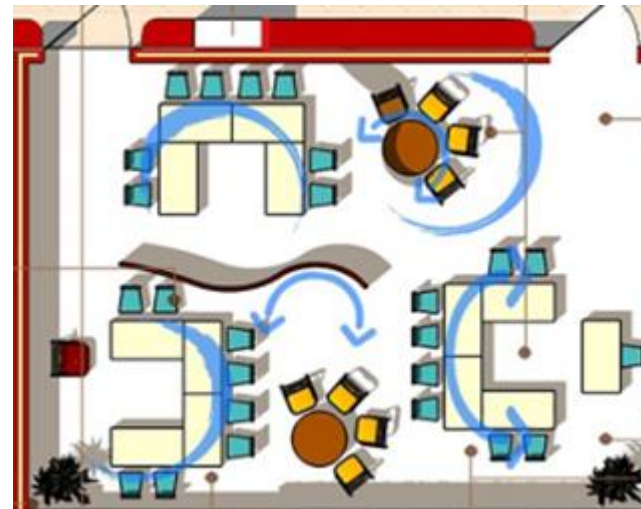
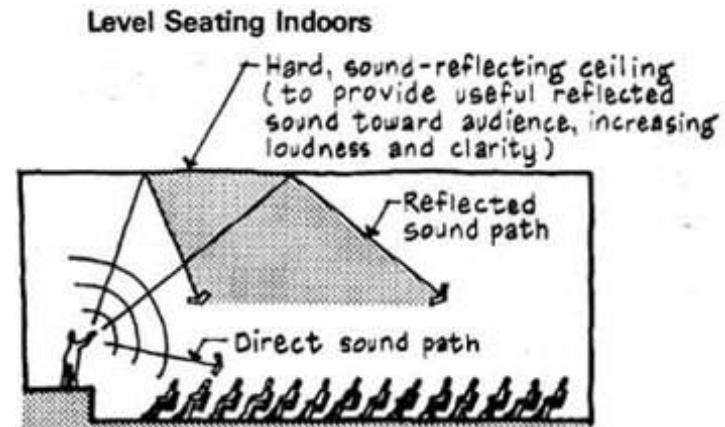
DESIGN CONSIDERATIONS

- **(d) Doors** should be easy to open and close. Care should be taken in the design of the door, frame, and opening mechanism to protect against injury to fingers, etc. An adequate glazed viewing panel in the solid core door from all rooms to the corridors should be provided for the benefit of small children. Door closers should only be fitted to doors classified as fire safety doors.

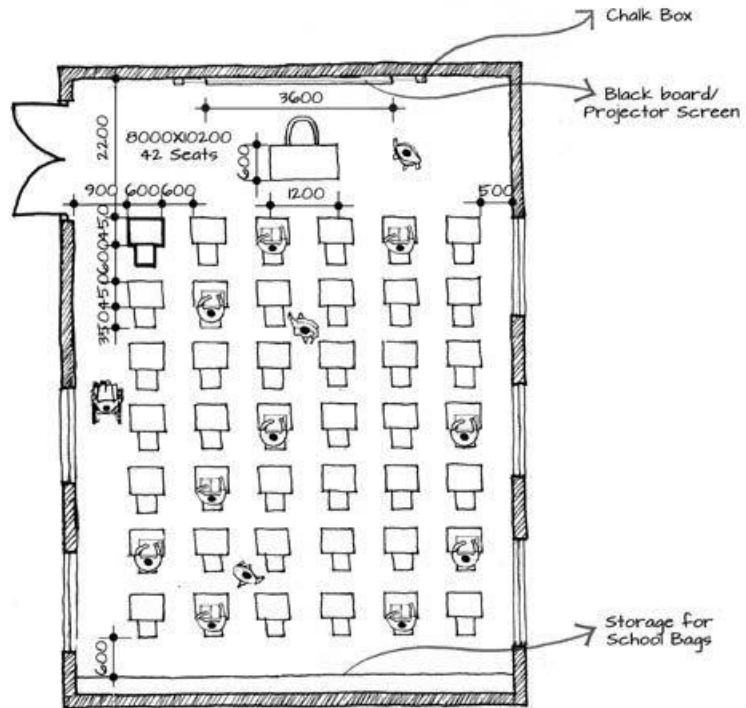


ACOUSTICS

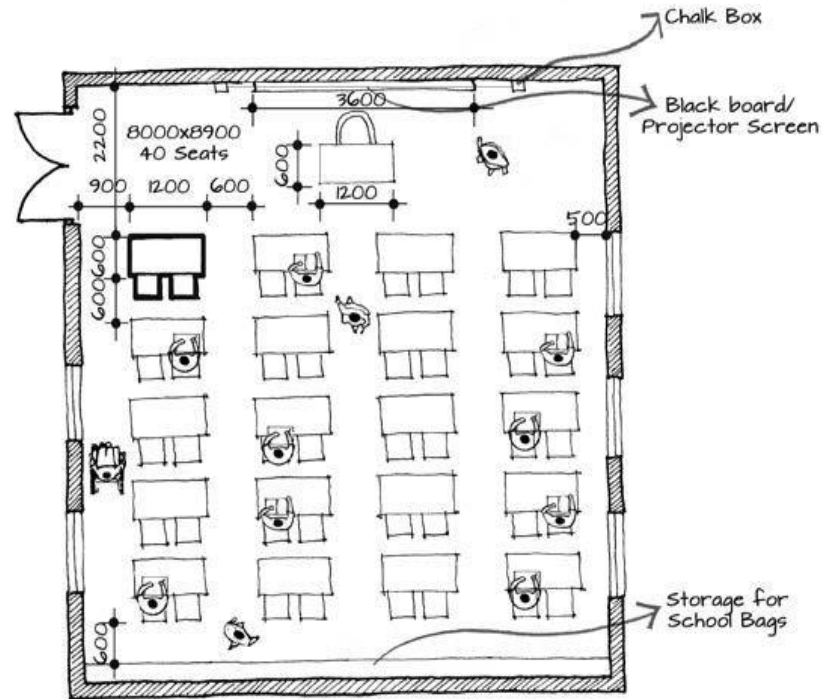
- **Acoustics** is a branch of physics that deals with the study of mechanical waves in gases, liquids, and solids including topics such as vibration, sound, ultrasound and infrasound.
- The objective is to provide acoustic conditions in schools that
- **(b)Facilitate clear communication** of speech between teacher and student, and between students.



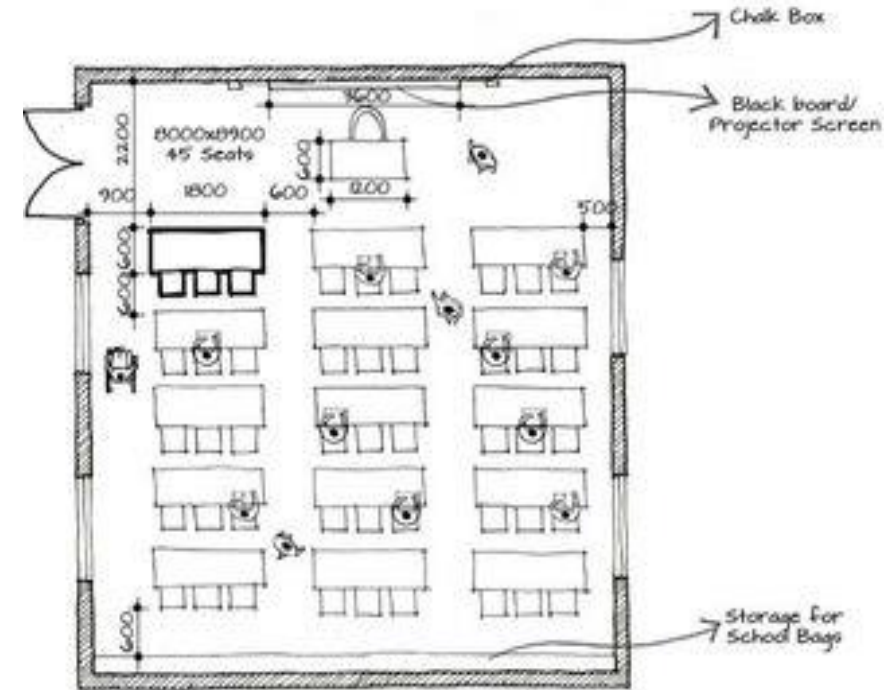
ACOUSTICS



All dimensions are in mm



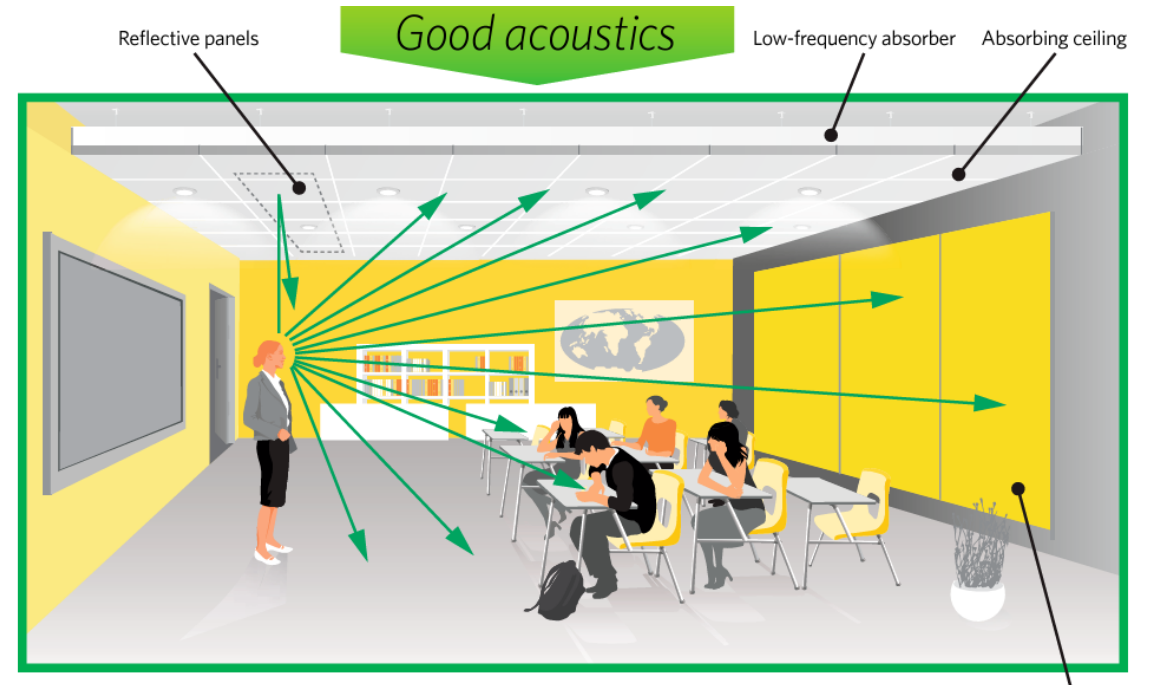
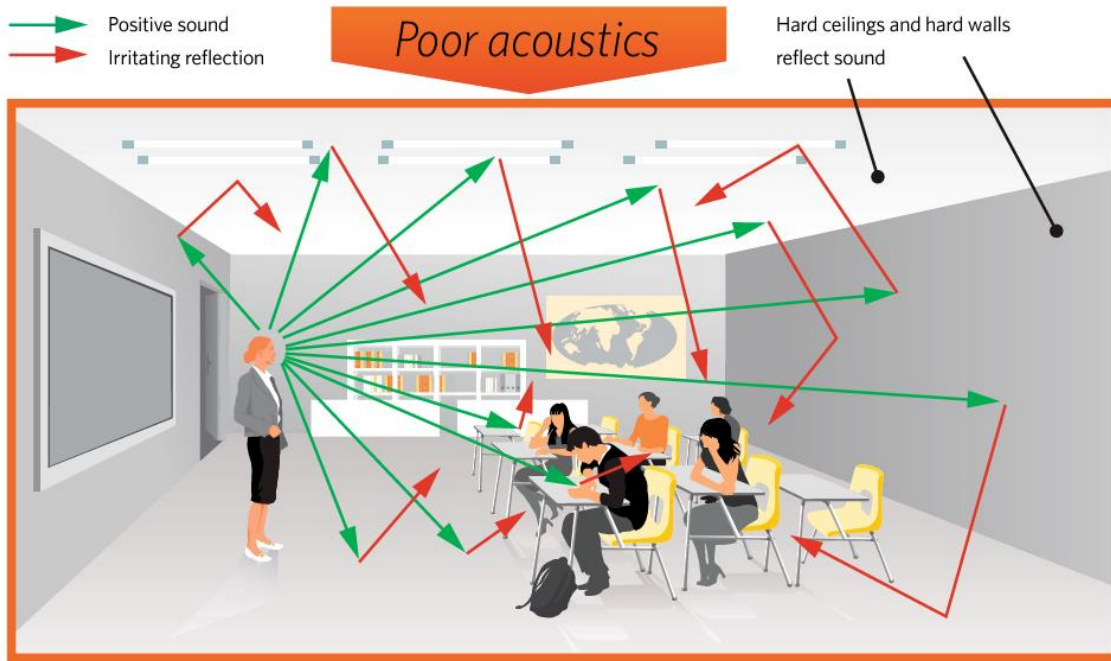
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ACOUSTICS

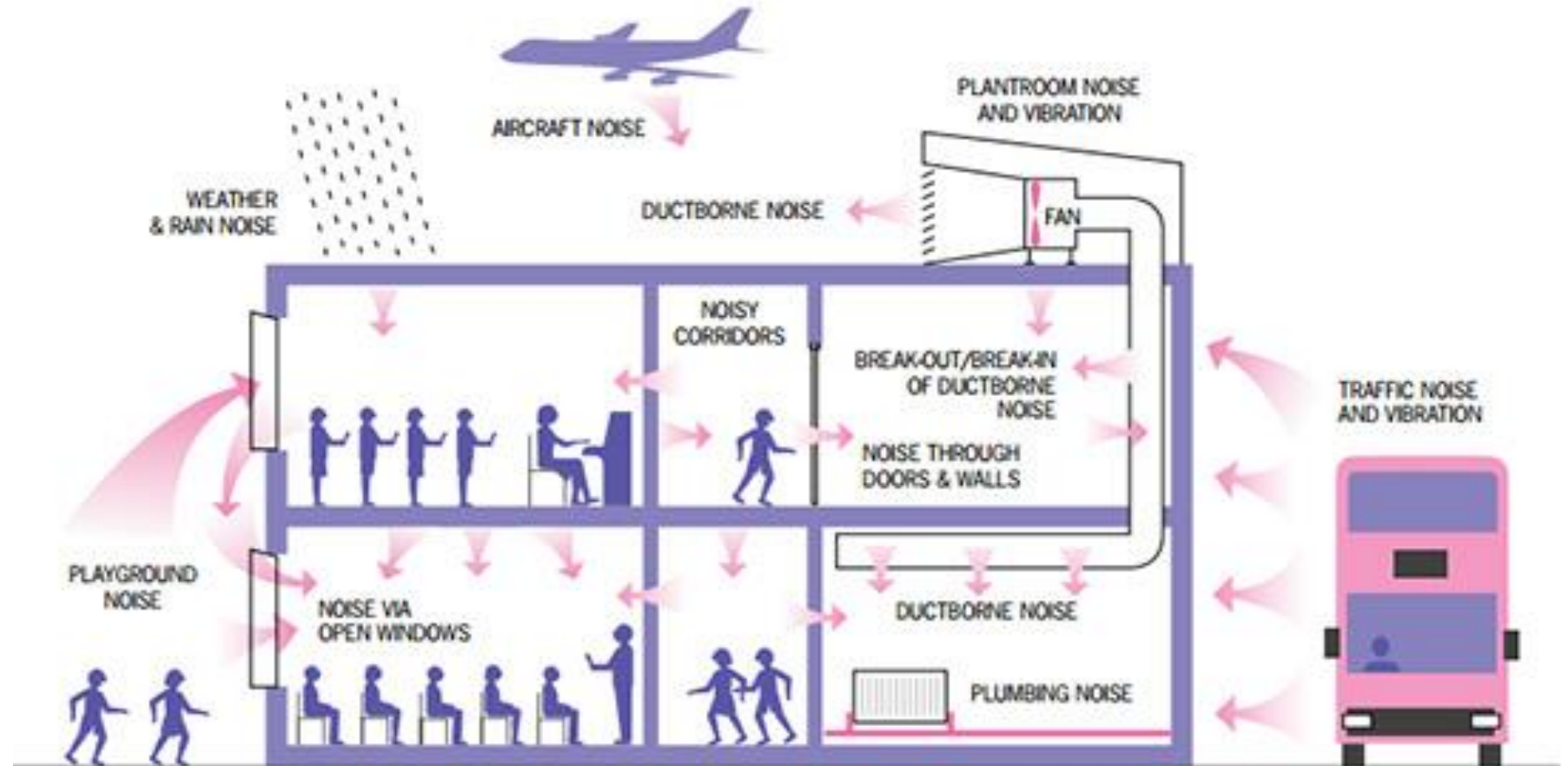
(b) Sound isolation - from ceiling and wall



Absorbing wall panel

ACOUSTICS

- (c) do not interfere with study activities.



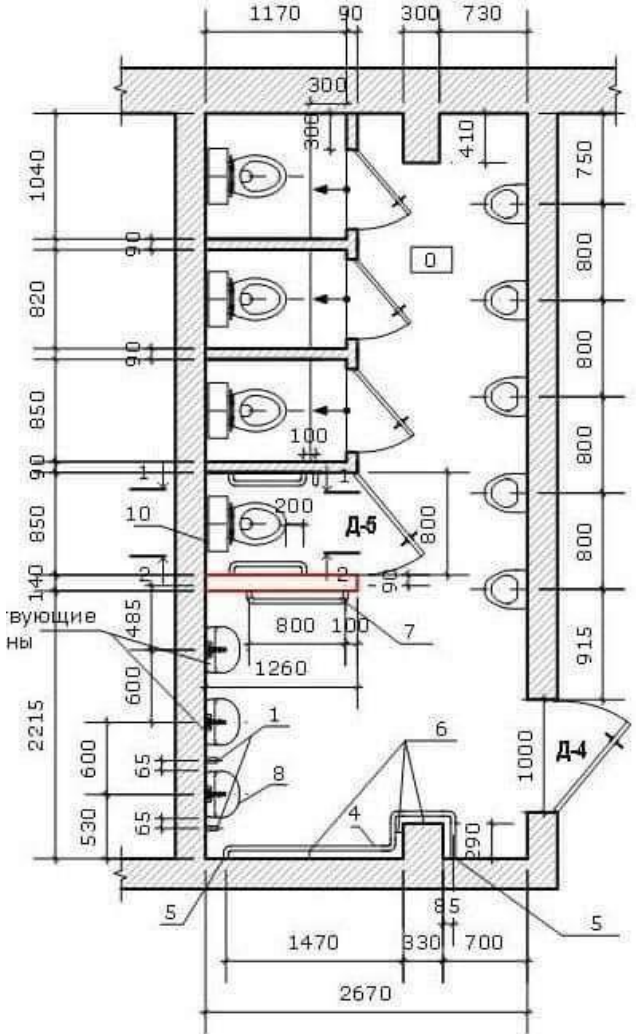
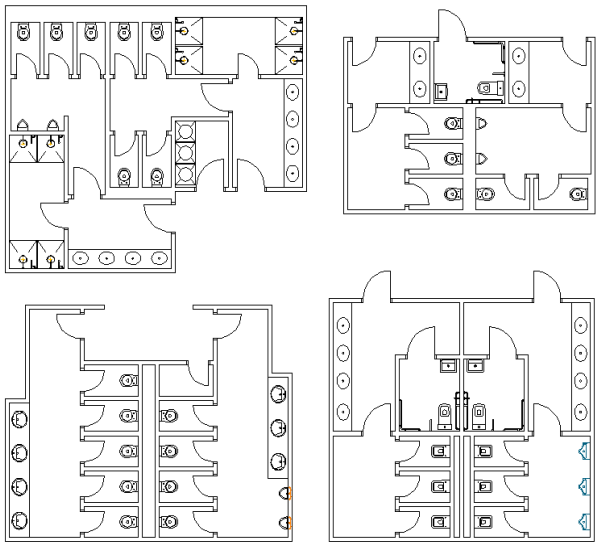
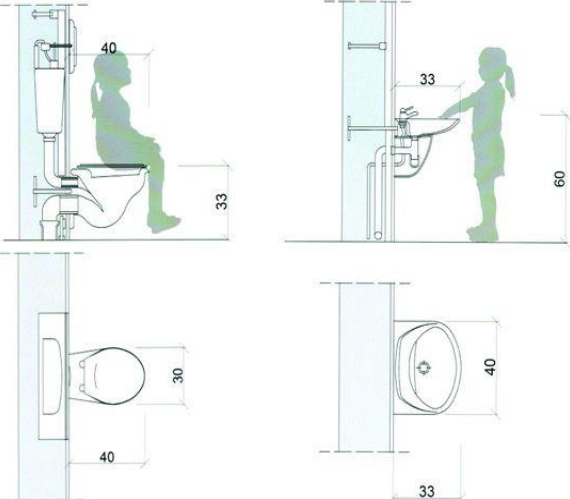
FINISHES

- **(a) Floor finishes must safe**, hardwearing and suitable for their intended use. Designers should consider the Health and Safety implications of the selected flooring (e.g. **non-slip**, chemically **resistant**, etc.) and in particular the risks associated with junctions between surfaces with different slip resistances. Floor finishes will normally be a sheet flooring consistent with the room's use and **Health & Safety considerations**.
- **(b) Wall finishes** generally to be **durable**, **resistant to wear & easily cleaned**.



SPACES & FURNITURE

- (a) Fixed furniture and fittings
- toilets, sink & units to wet areas,
- hat & coat hooks and rails, (cloakroom)
- kitchenette units,



SPACES & FURNITURE

- **built-in storage units**



- **Corridor sitting**



SPACES & FURNITURE

- **Shelving**
- Materials and construction should be sufficiently robust to prevent sagging. In the interests of safety, wood cladding should be provided for the exposed ends of all shelving.
- -Average interval between shelves - 300 mm
- -Minimum space below bottom shelf - 750 mm
- -Depth of shelves - 300 mm

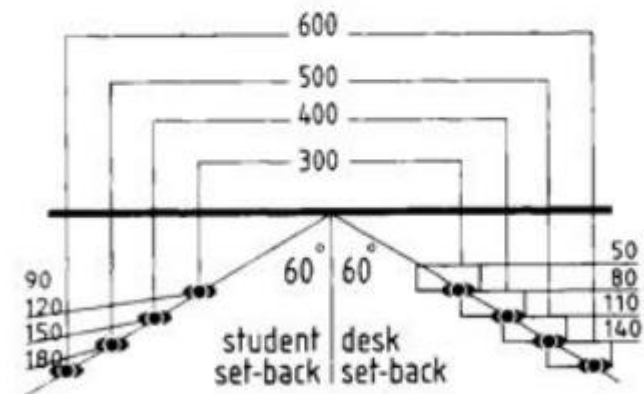


SPACES & FURNITURE

FURNITURE LAYOUT

- **(b) Interactive Whiteboards** – a minimum board area of **2.1 m²** should be provided in each classroom. The lower edge should be not more than **700 mm** from the floor.
- The location of the whiteboard is very important, the design team shall liaise closely to ensure everyone in the classroom is able to see and interact with it. Display Boarding – a generous area of display boarding should be provided. Soft wall board suitable for drawing pins and preferably unframed may run from skirting level or work top height to top of door frame height. Display boards should be painted or covered with fabric.

CHALKBOARD VIEWING



The minimum set-back for students and desk will vary according to the room width. However, the teacher needs a space 1.30 m deep to move about

SPACES & FURNITURE

- **Sinks** – a sink unit with hot and cold-water supply and drainer/laying space on both sides should be provided. Height should be appropriate to the age of the pupils. The sink should preferably be positioned at the whiteboard end of the room, on or near the outside wall of the classroom.

PRIMARY SCHOOL CLASSROOMS SPACE AND ENVIRONMENT

