

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Dark Room

Lecture 1

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By

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DARKROOM
DO NOT ENTER

Aims of the lecture:

- **what is dark room**
- **its criteria**
- **Components & functions**
- **Safe Light**

A dark, atmospheric photograph of a room. A single, bright light source, possibly a window or a lamp, is visible in the upper right, casting a strong, yellowish glow across the scene. The light illuminates a portion of a wall and a ceiling, creating a sharp contrast with the deep shadows that fill the rest of the room. The overall mood is mysterious and somber.

What is the dark Room ?

- **Dark room :**

The place where we are **dealing with** sensitive radiographic films , as

- **Fill & remove** Films in Cassettes
- **Film Processing**



- Dark or semi dark during Processing works
- As a Room = It has a components.

Such like :

safe light, ordinary light , Processing Tanks , Film holders

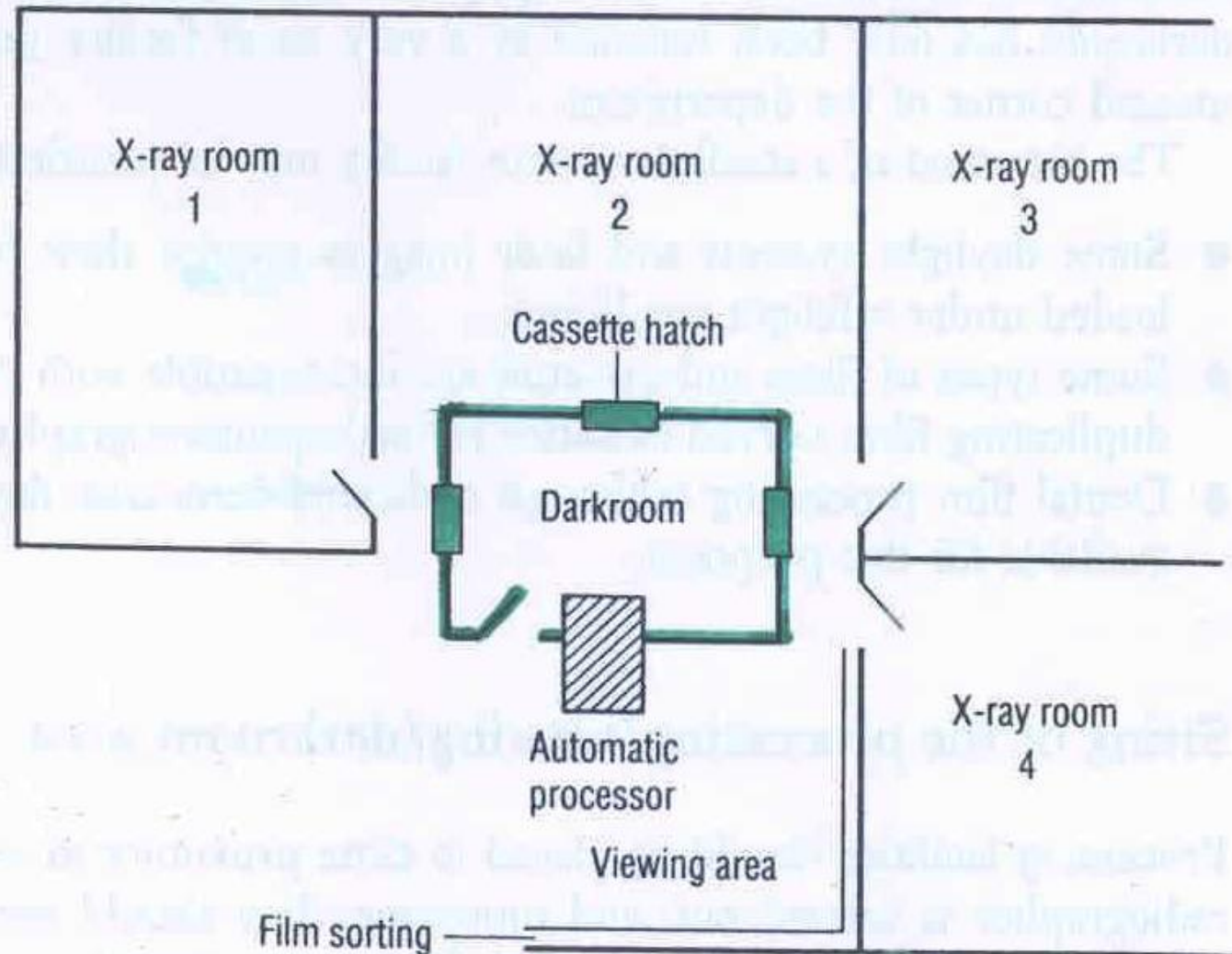
مواصفات الغرفة المظلمة



مكان ، مساحة ، مدخل ، اضاءة ، تهوية و مكونات الخ

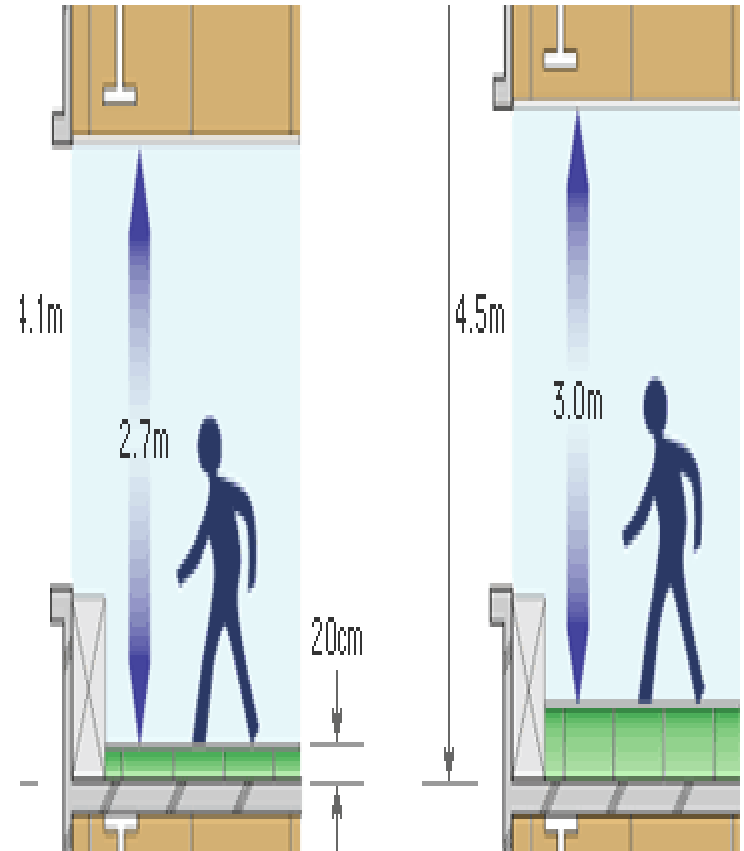
Location

Central



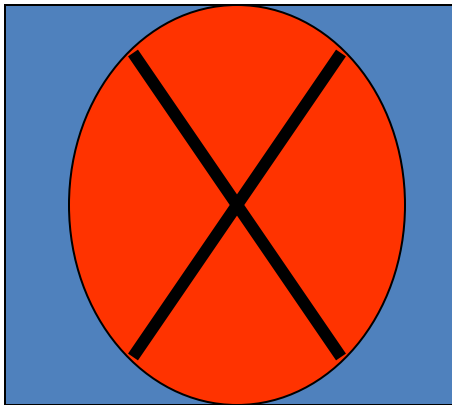
Area

- ✓ Minimum **floor area** of **10 meter²**
- ✓ **Ceiling height** of **2.5 - 3** meter
- ✓ Size may be reduced depending upon the department needs



SHAPE

- Elongated better than squared



Components

- **1- WALLS**
 - Solid
 - Paints reflex light
 - Easy Clean



■ 2- CEILING

— Enough height , reflect light , no cracks

■ 3- Floor

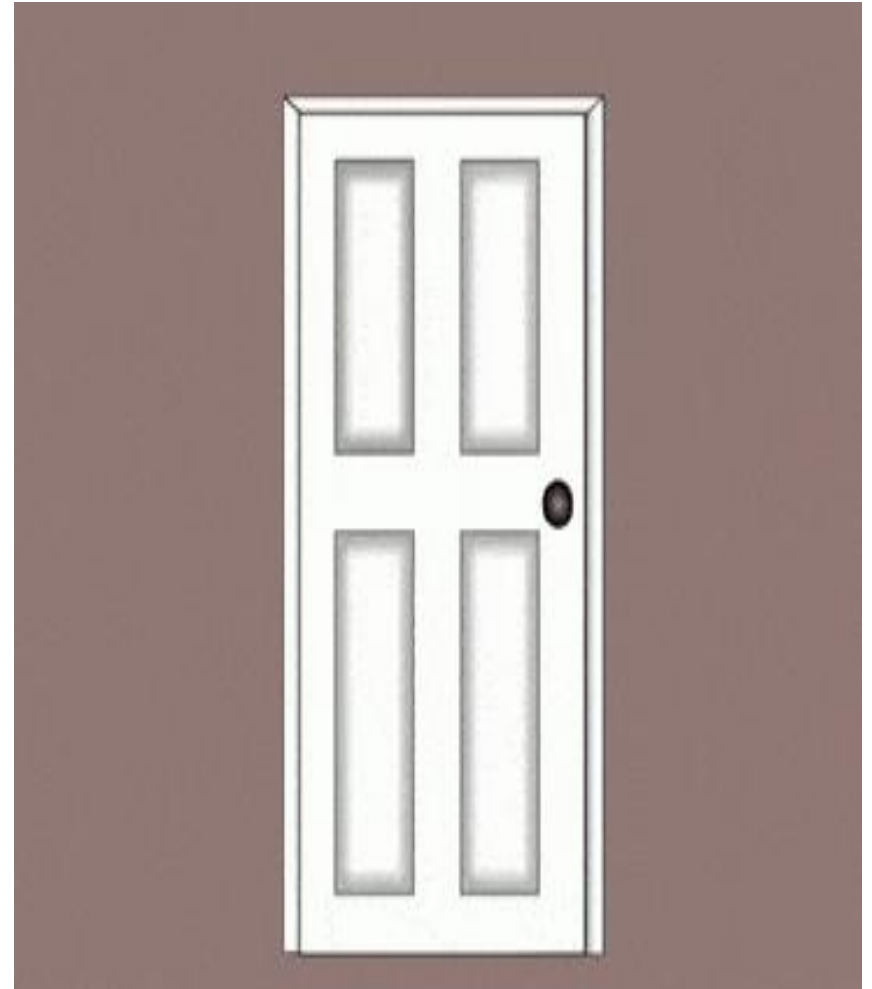
- **not woody** , not cement ,
- Easy clean

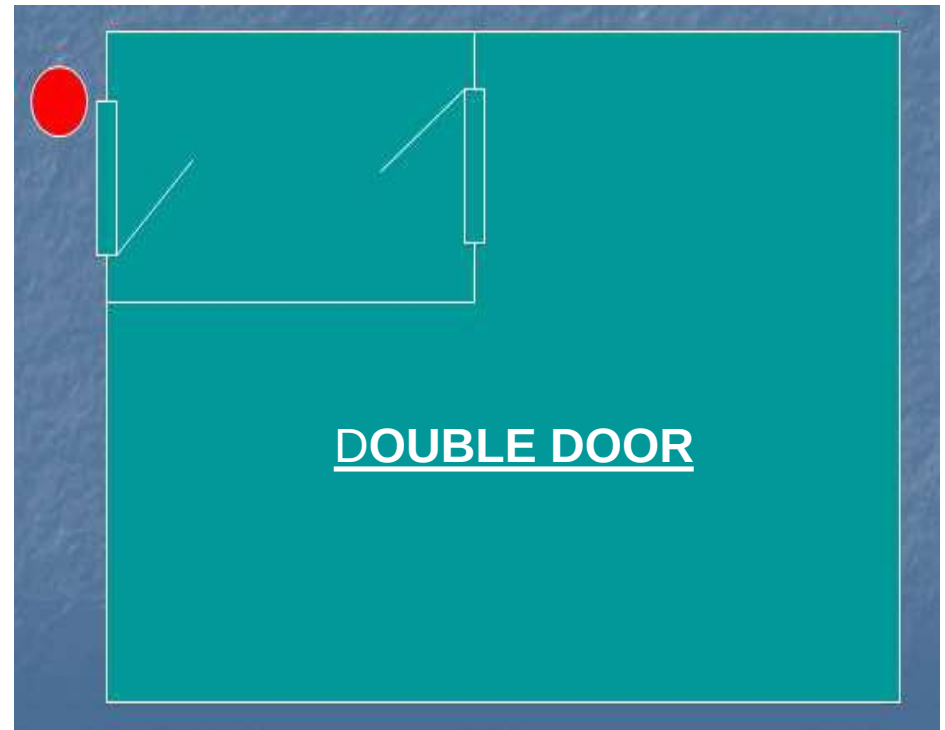
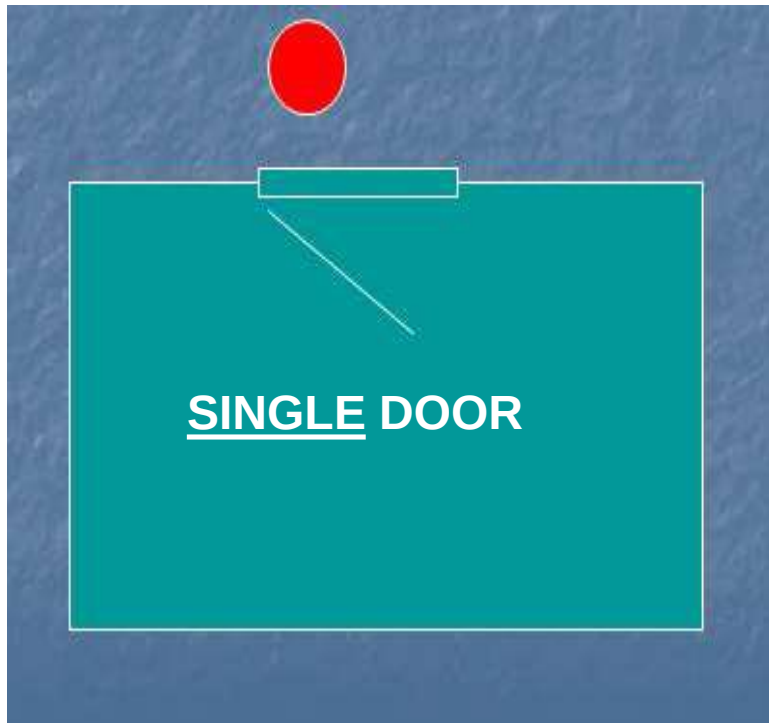


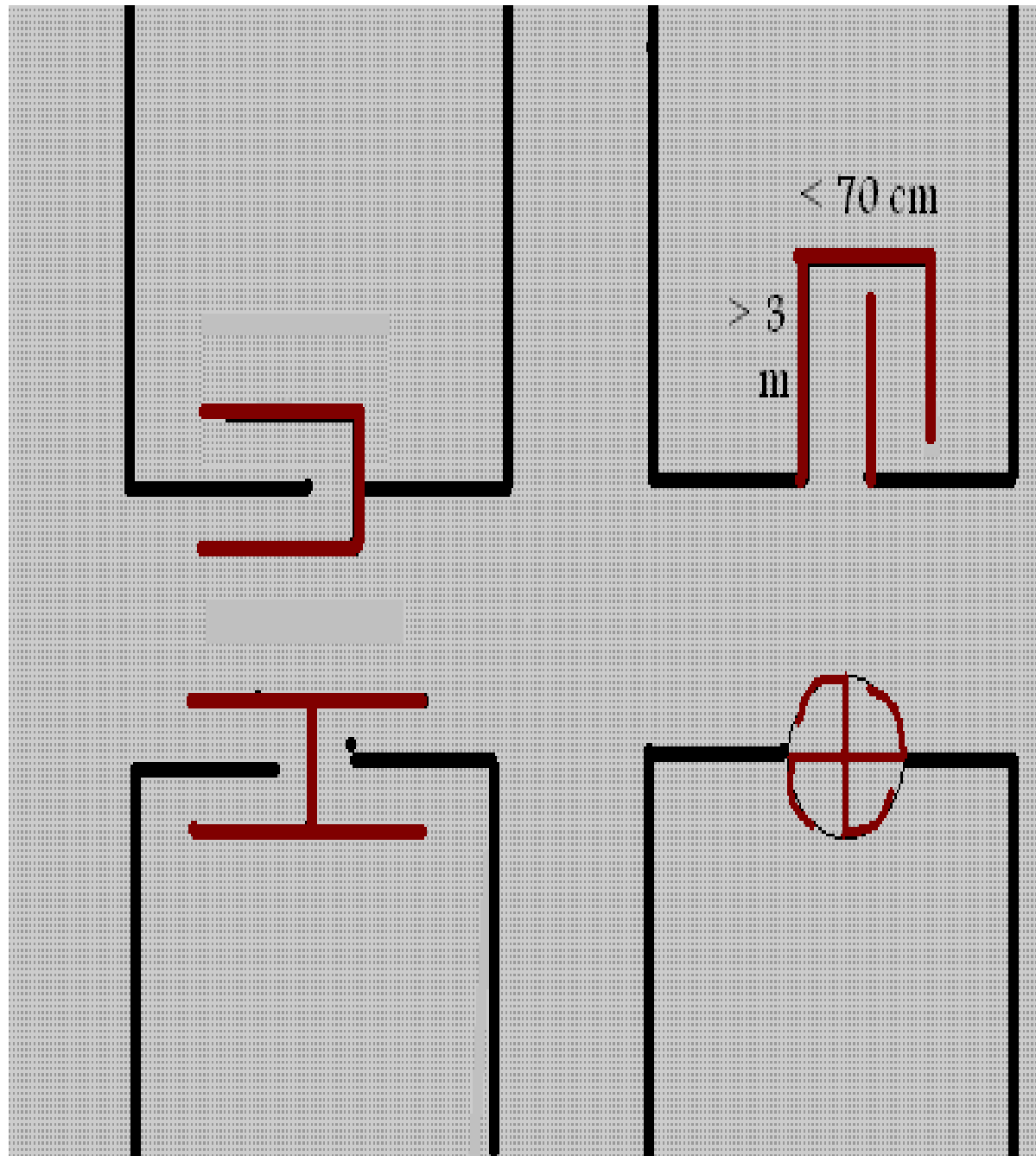


TYPE OF ENTRANCE

- SINGLE DOOR SYSTEM
- DOUBLE DOOR SYSTEM
- MAZE TYPE ENTRANCE
- LABYRINTH
- ROTATING DOOR SYSTEM







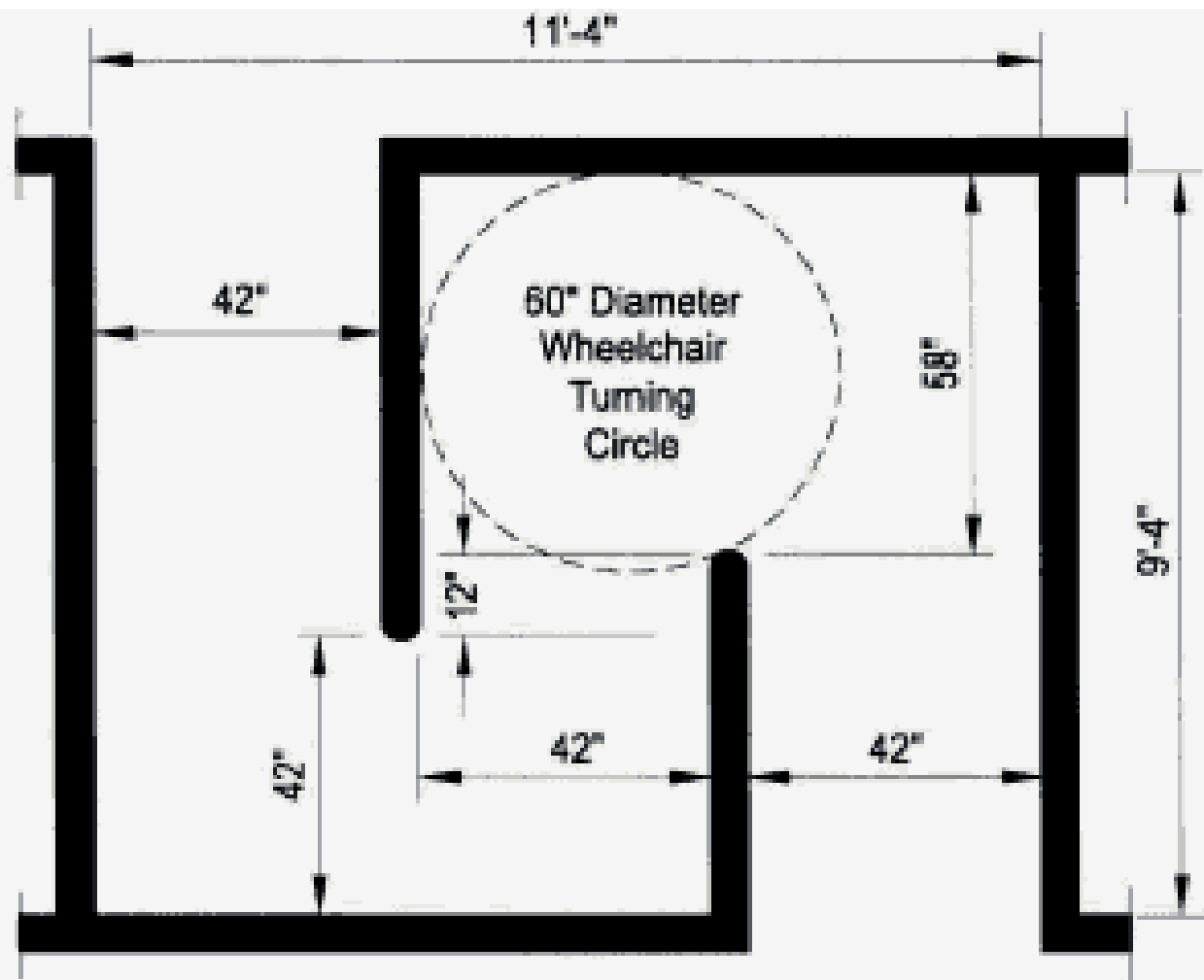
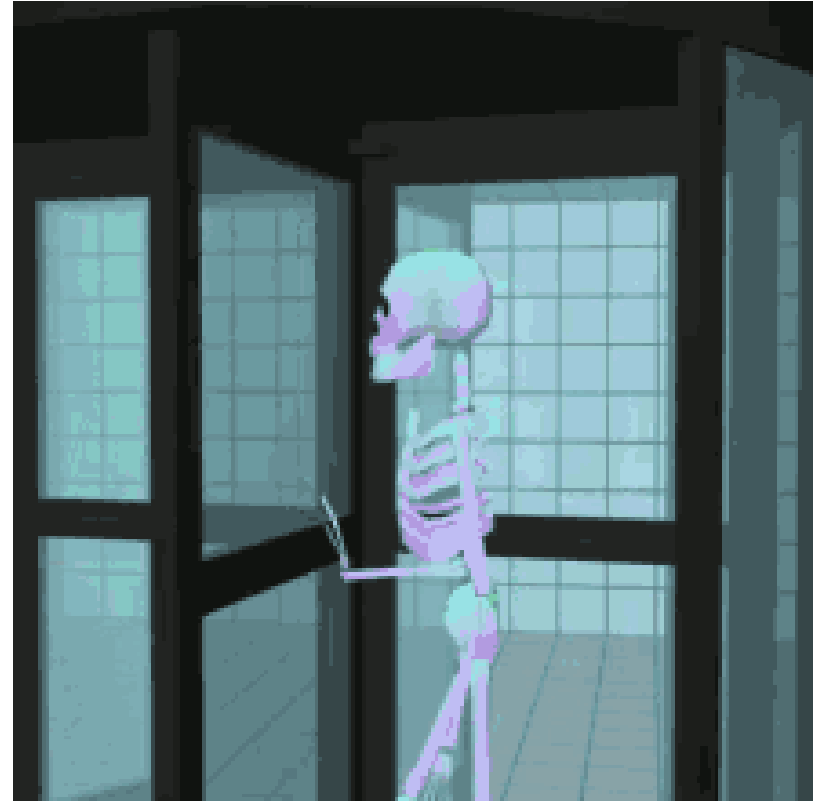
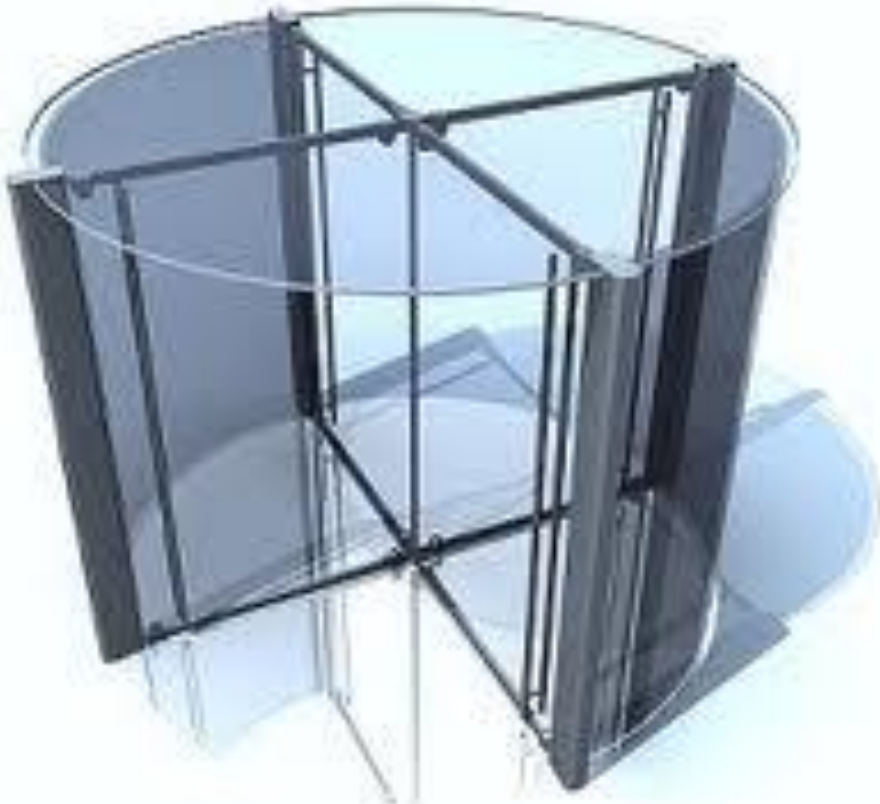


Fig 4. Darkroom Entry Maze
Two-way traffic - without doors

Revolving Doors

الابواب الدوارة التي تمنع دخول الضوء الى الغرفة المظلمة بشكل مستمر



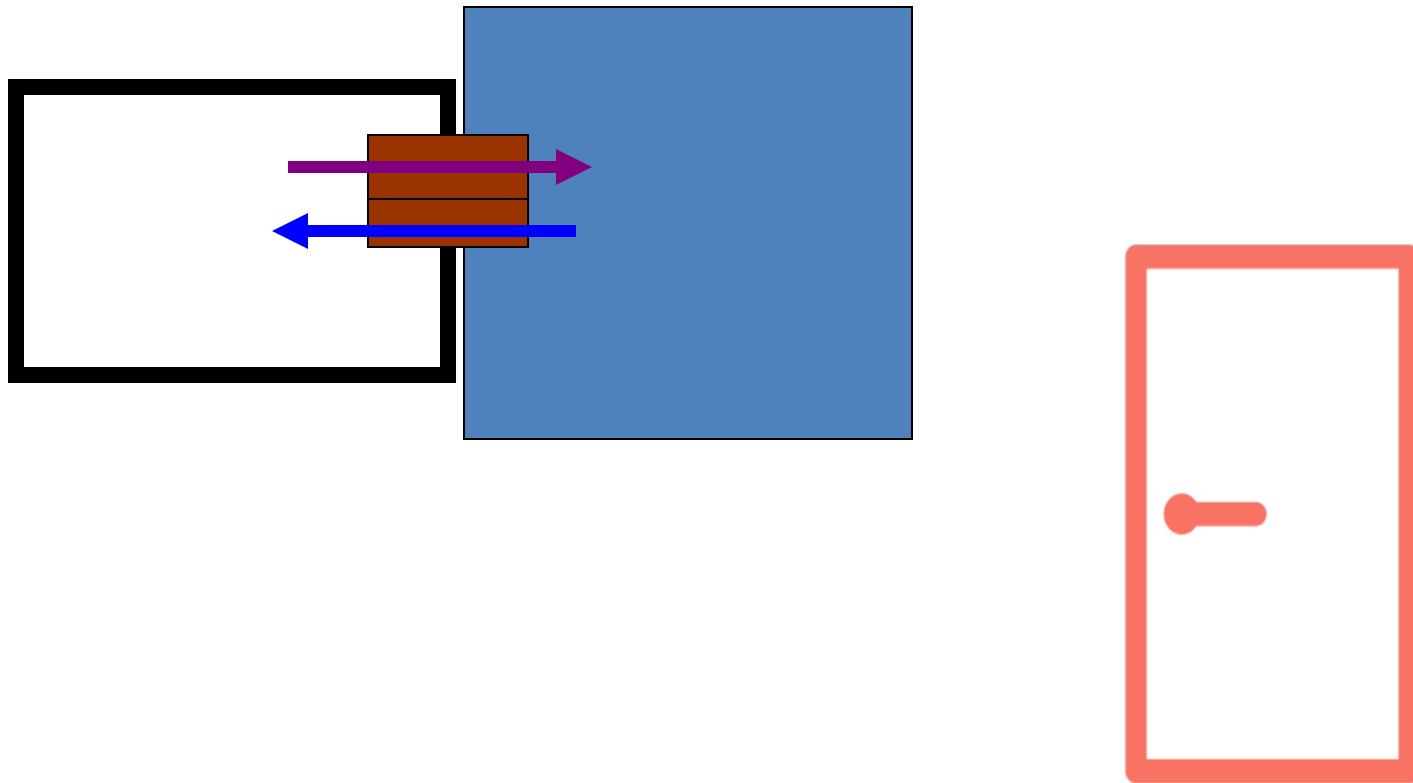
Role of these types of entrance ?

- Prevent light to enter the room all over the time
→ Avoid work failure by wrong light



Cassette Hatch

- cassette flow way to & from Dark room

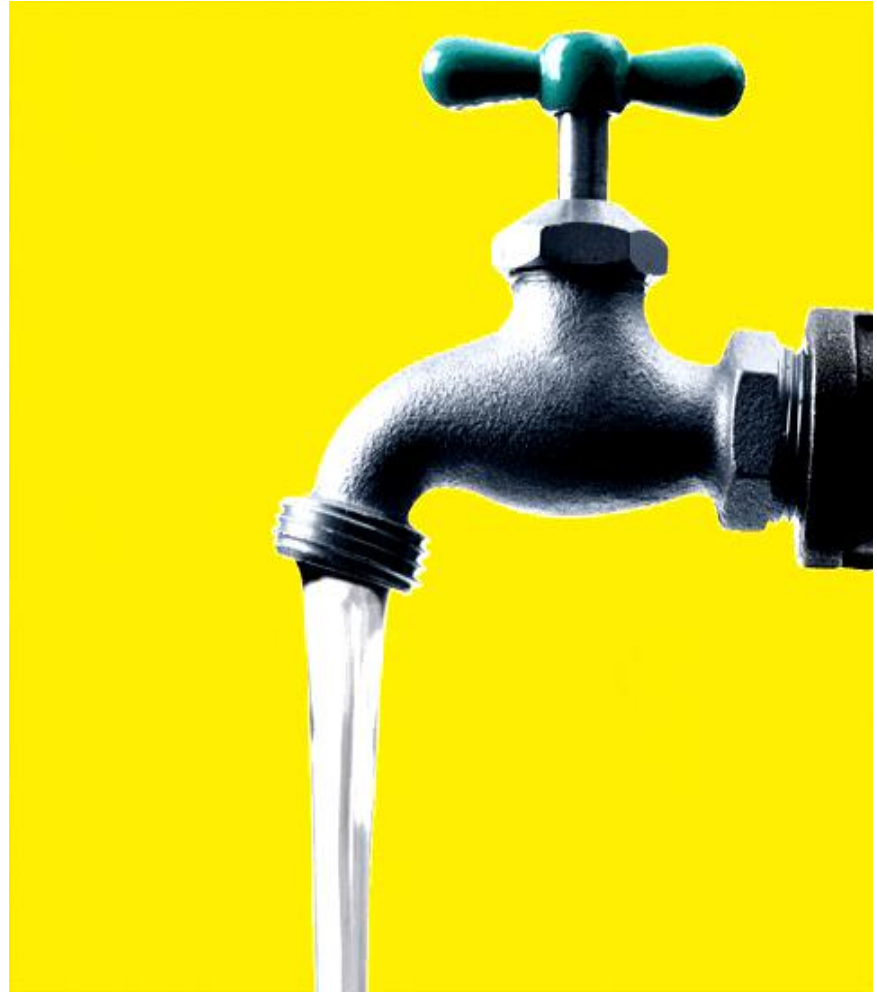




الغرفة المظلمة - الفصل الاول

Water source

- ✓ Enough
- ✓ In & out
- ✓ Hot & cold
- ✓ For cleaning
& Processing work



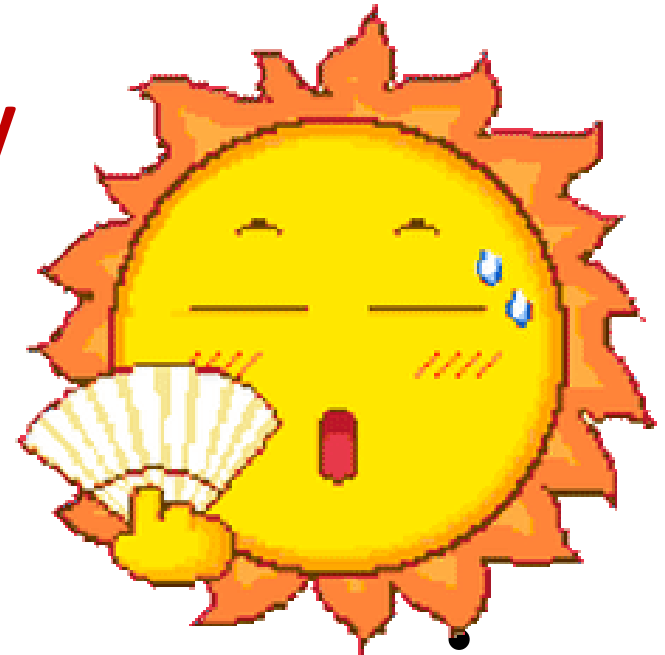
Electric sources



- **Enough sourced**
- **Uses**
 - Light
 - Aireation
 - Heating fluids
 - Automatic processing

Temperature & Airation

- Avoid **over heat & humidity**
- Temp 18 : 20 c
- Humidity 40 : 6- %



Dark room Design

- **Good separation** of Wet & Dry zone
- **Good arrangement** according to steps of use
- Enough equipments.

WASH
AREA

SINK
●

SINK
●

PRINT TRAYS

STANDING
STORAGE
CABINET

WET SIDE

PRINT TRAYS

ANGLED PRINT DRYING RACKS

DRY SIDE

SHELVES

DRY MOUNT
PRESS

FREE
WORK SPACE

ENLARGER

PAPER
CUTTER

PAPER
SAFE

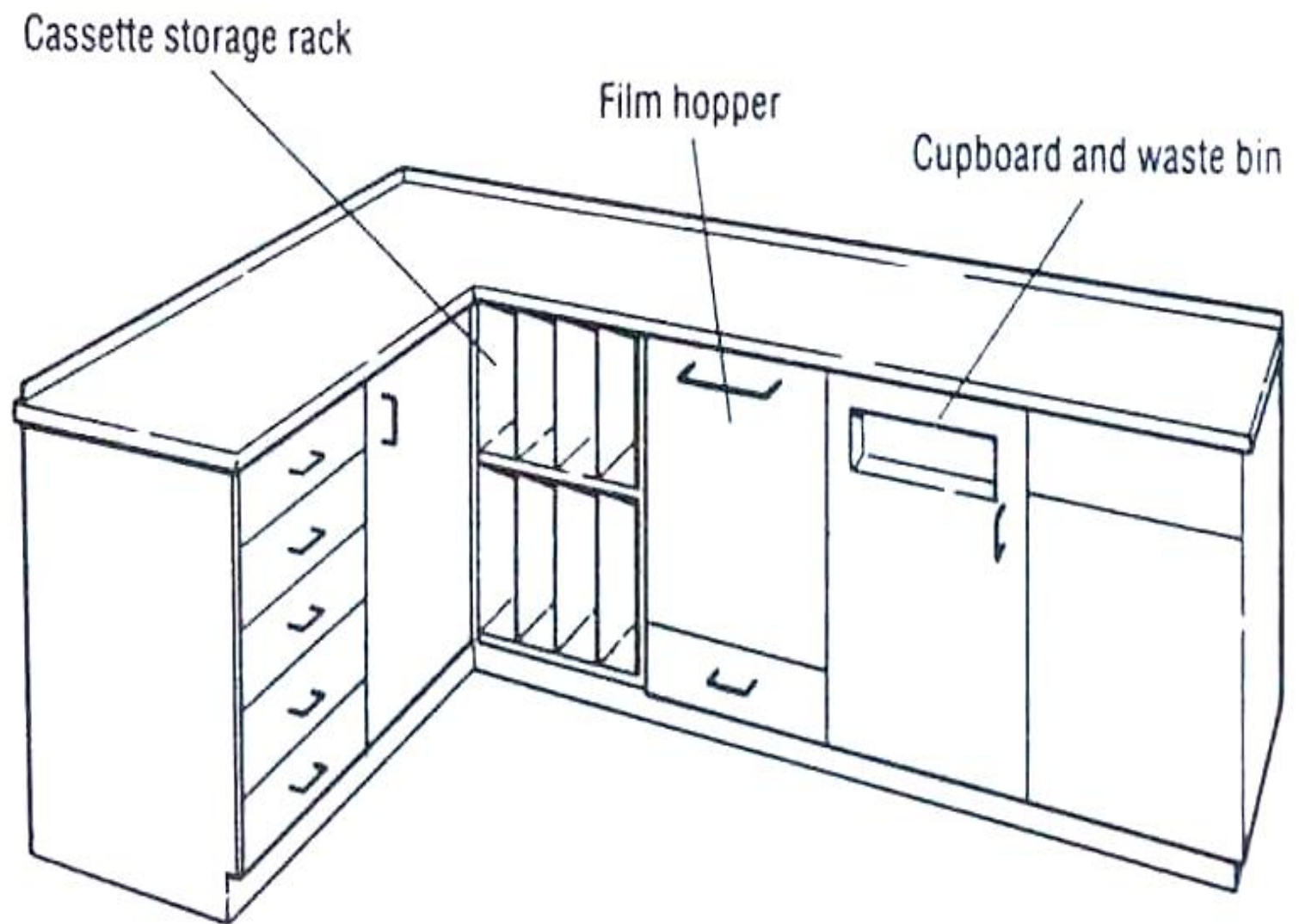


Fig. 12.17 A darkroom dry bench system. (Courtesy of Wardray Products Ltd.)



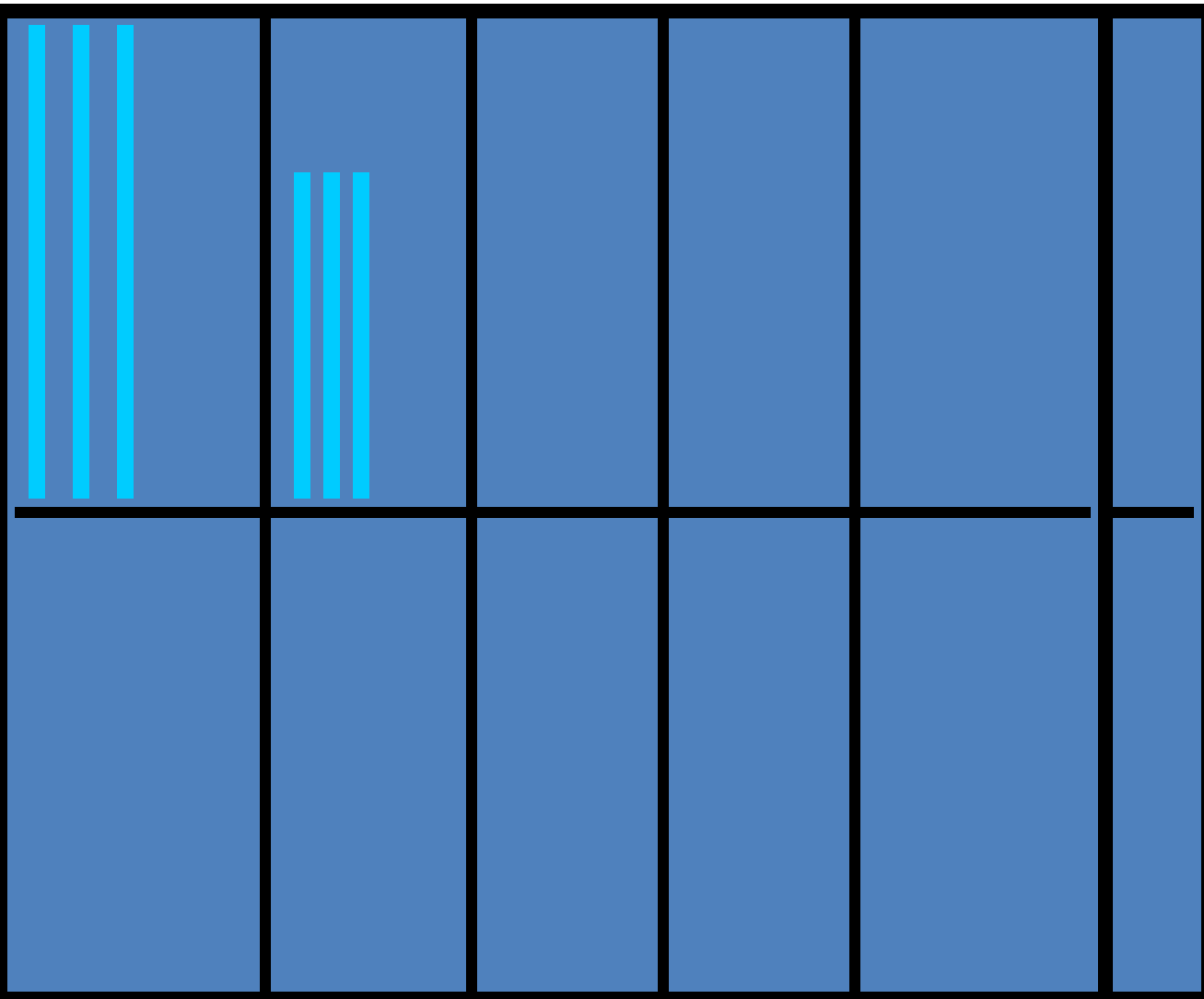
Dark room Equipments

دولاب تخزين الافلام Film Hopper





Cassettes rakes according to size



Manual Processing tanks

– التحميض اليدوى





الغرفة المظلمة - الفصل الاول

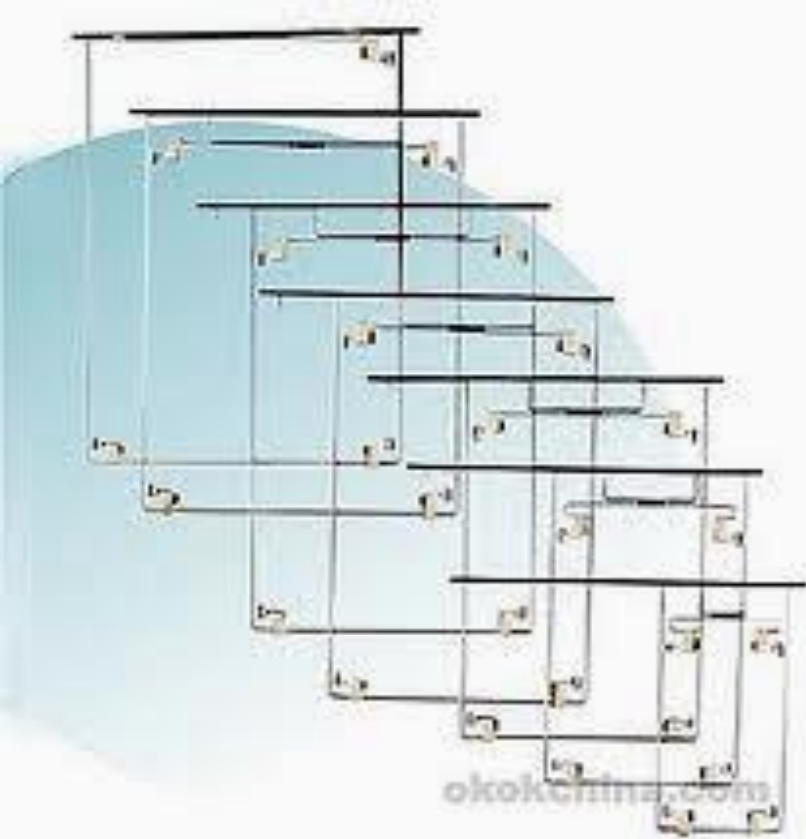




الغرفة المظلمة - الفصل الاول

→ *Film Hangers or Holding frames:*

1- Channel hanger	2- Tension Hanger or Clips Fastener
U shape	Squire with clips
-Difficullt to clean -Film bowing during use -Fracture of moving part .= Loss function -Borders of it covering film edges → non processed edges	-Need more experince -- Film injury by sharp clips



الغرفة المظلمة - الفصل الاول

Other equipments:

➔ Dental film Holders

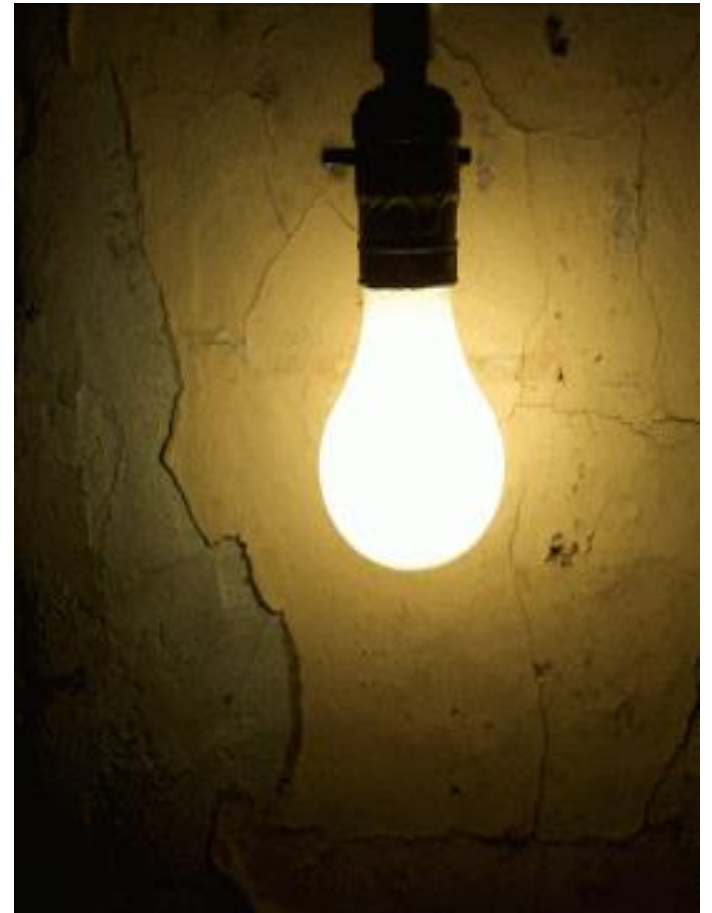
➔ Timer

➔ Thermometer

➔ Light system



Dark Room Light



الضوء العادى 1- Ordinary Light

- *For works other than dealing with films.*
- *Enough for area.*
- *Light On design,*
not to be accidentally





Safe Light



- *2 Types :*

1- Direct 2- Indirect

- *No absolute safe light*

- *Red or orange ...but not blue*



Direct Safe Light الضوء الامن المباشر

- On wall of ceiling
- > 15 watt
- > 1 m distance from films



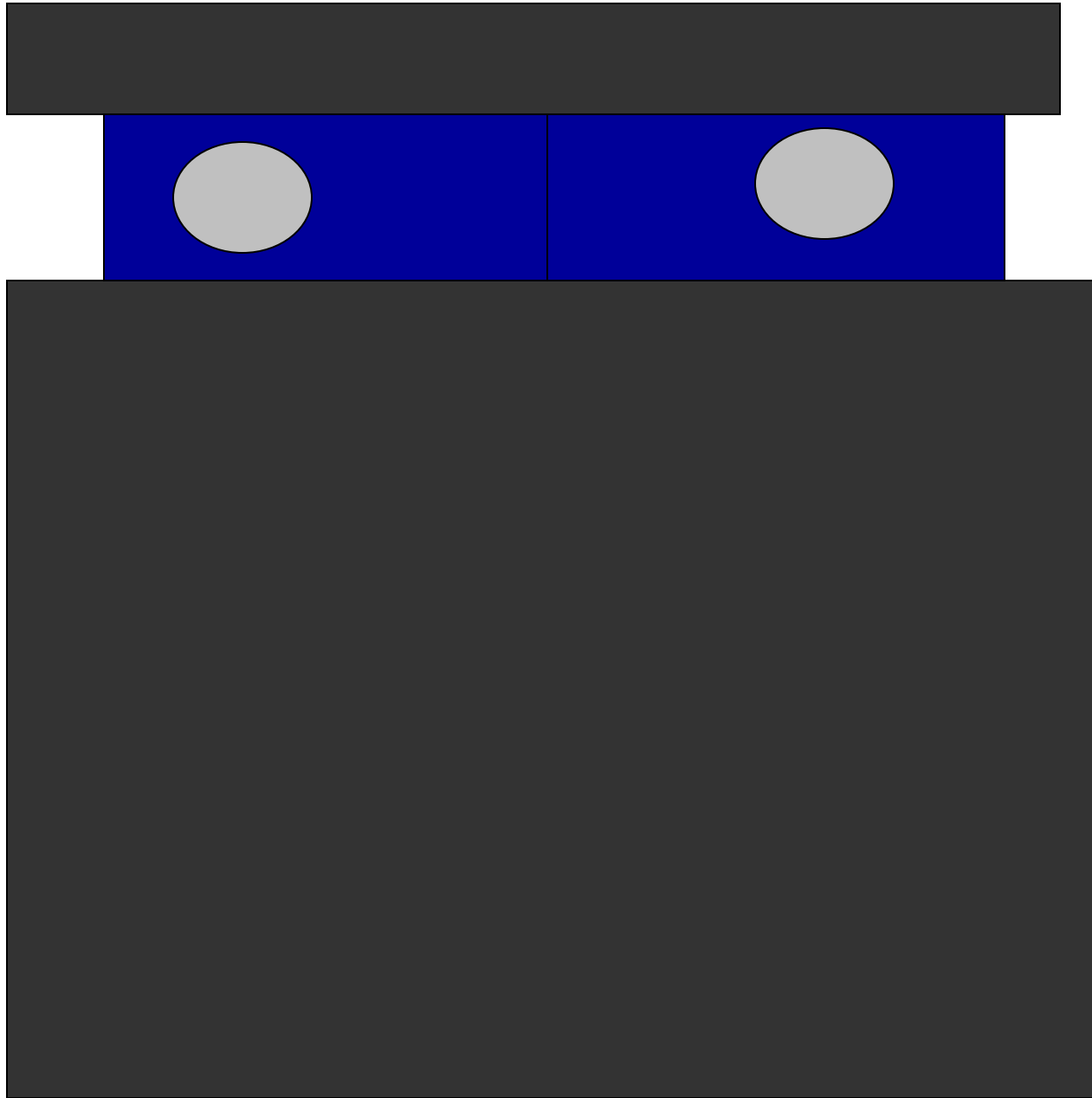
Indirect Safe Light الضوء الغير مباشر

- < 25 watt
- Directed upward & reflected
- Height 2.5 , 3.5 m



SAFE LIGHT NEED repeated safety test

اختبار الضوء الامن Testing Safelight



$2\text{ mA} - 50\text{ KV}$

$\text{Move} / 0.5\text{ min}$



Now you can enter It



GOOD LUCK

Dr. Ahmad Mokhtar Abodahab

Oct 2025