



SNS COLLEGE OF TECHNOLOGY

**An Autonomous Institution
Coimbatore - 35**

Accredited by NBA – AICTE and Accredited by NACC – UGC with 'A+ Grade
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

DEPARTMENT OF AGRICULTURE ENGINEERING

19AGT201 – SURVEYING AND LEVELING

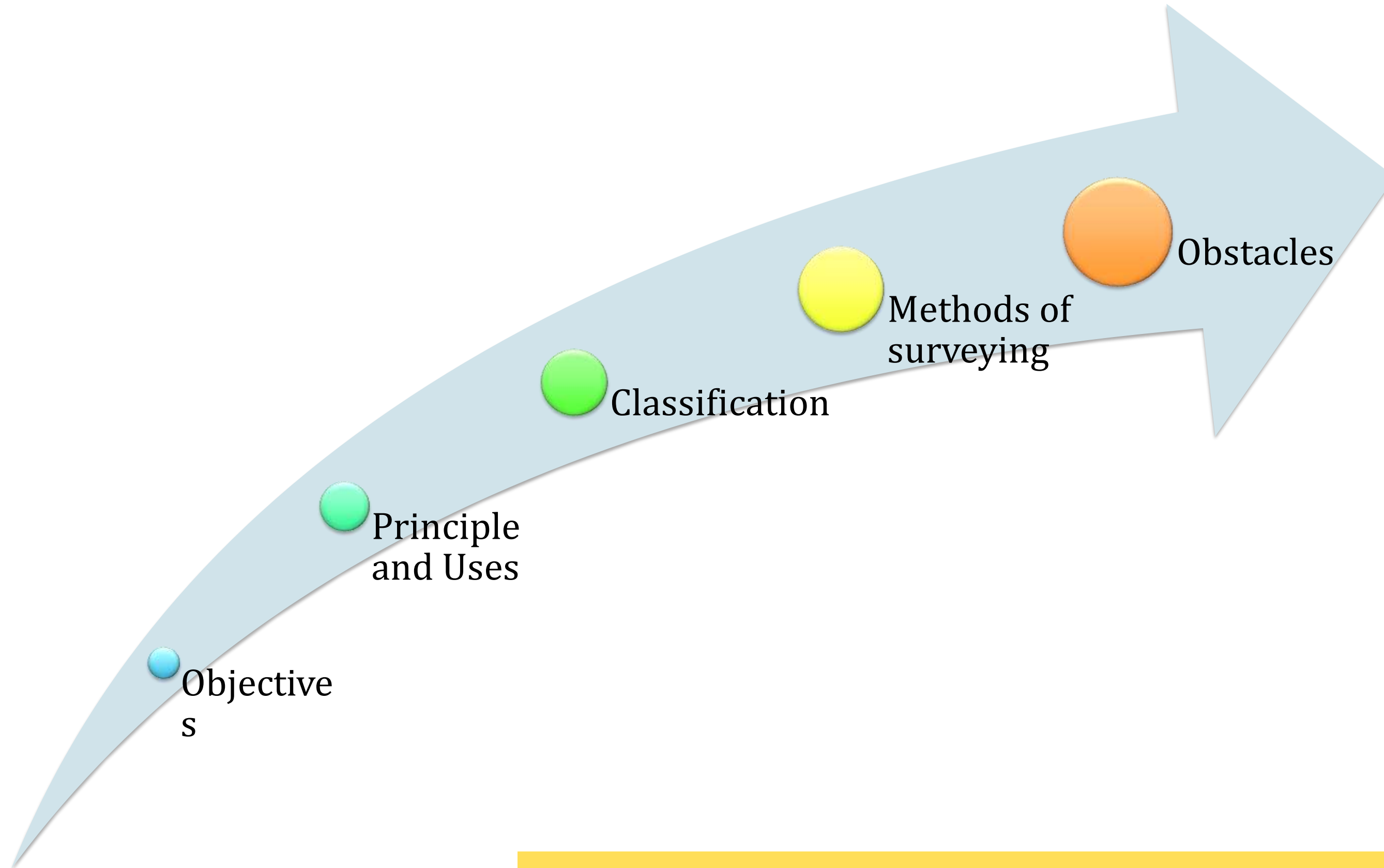
II – YEAR III SEMESTER

UNIT 2 – CHAIN SURVEYING

TOPIC 1 – INTRODUCTION AND PRINCIPLES OF CHAIN SURVEYING

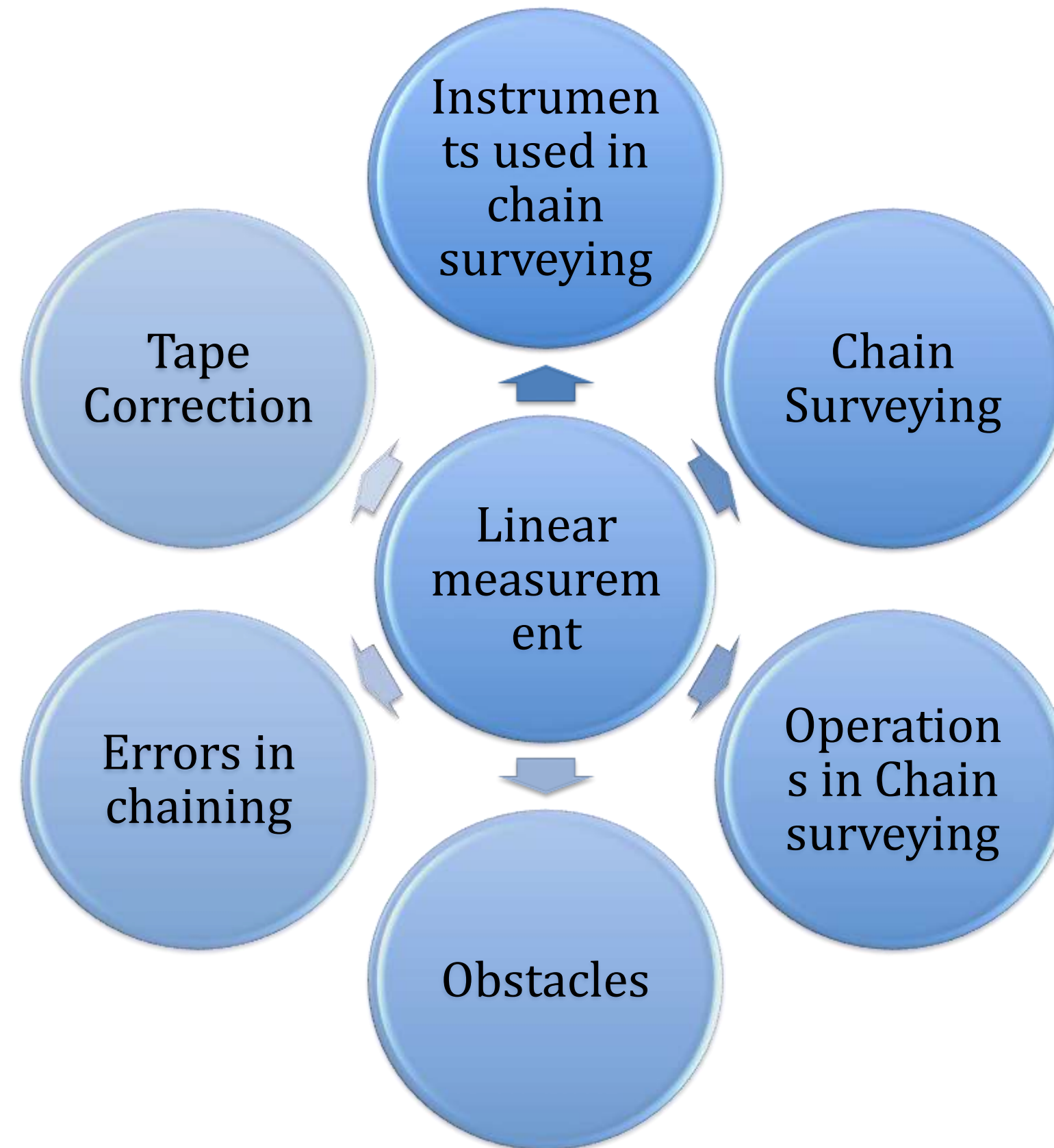


Last Class Review





Linear Measurement





Introduction

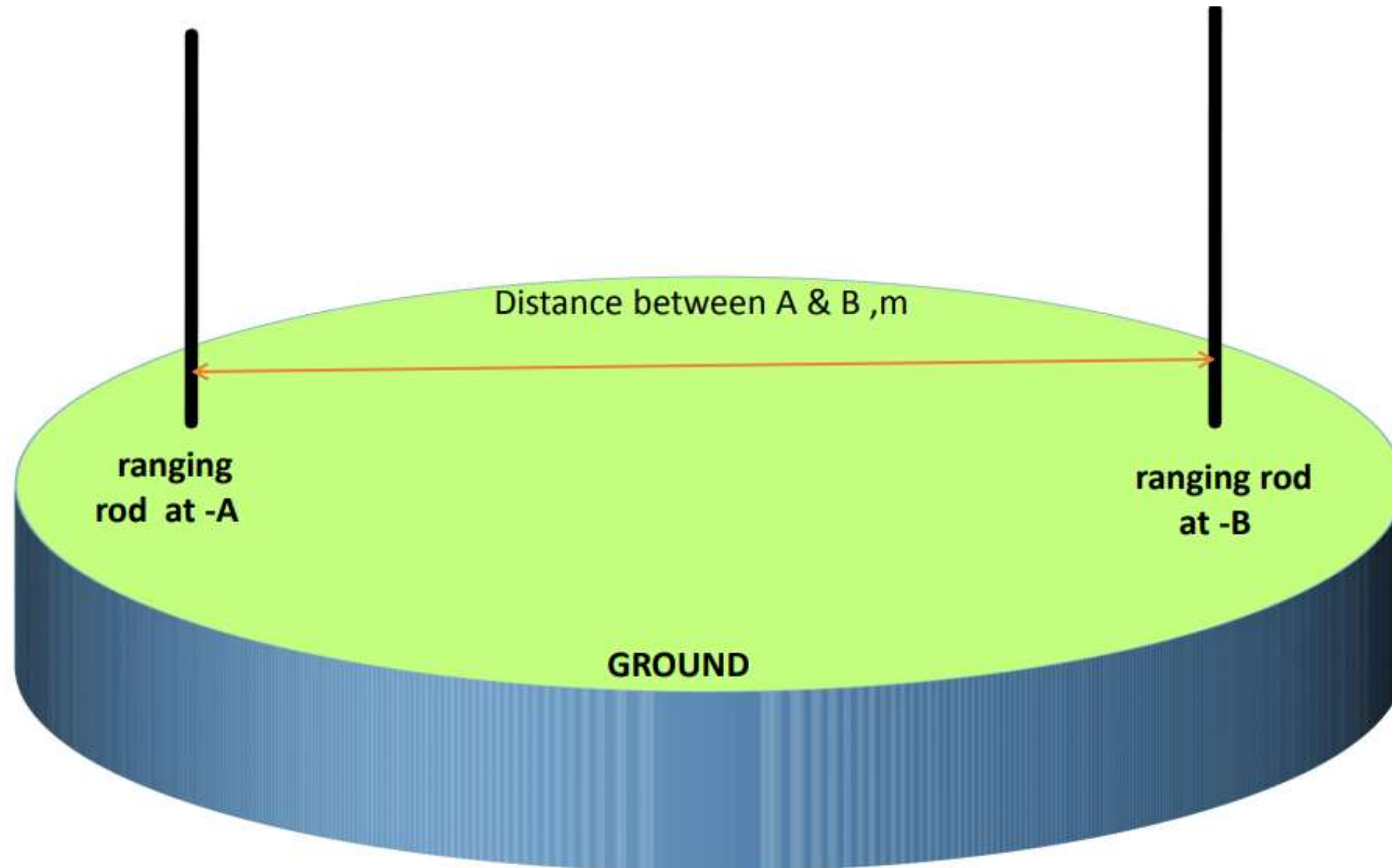
What is Linear measurement?

Measurement of horizontal distance between two points on the surface of the earth.





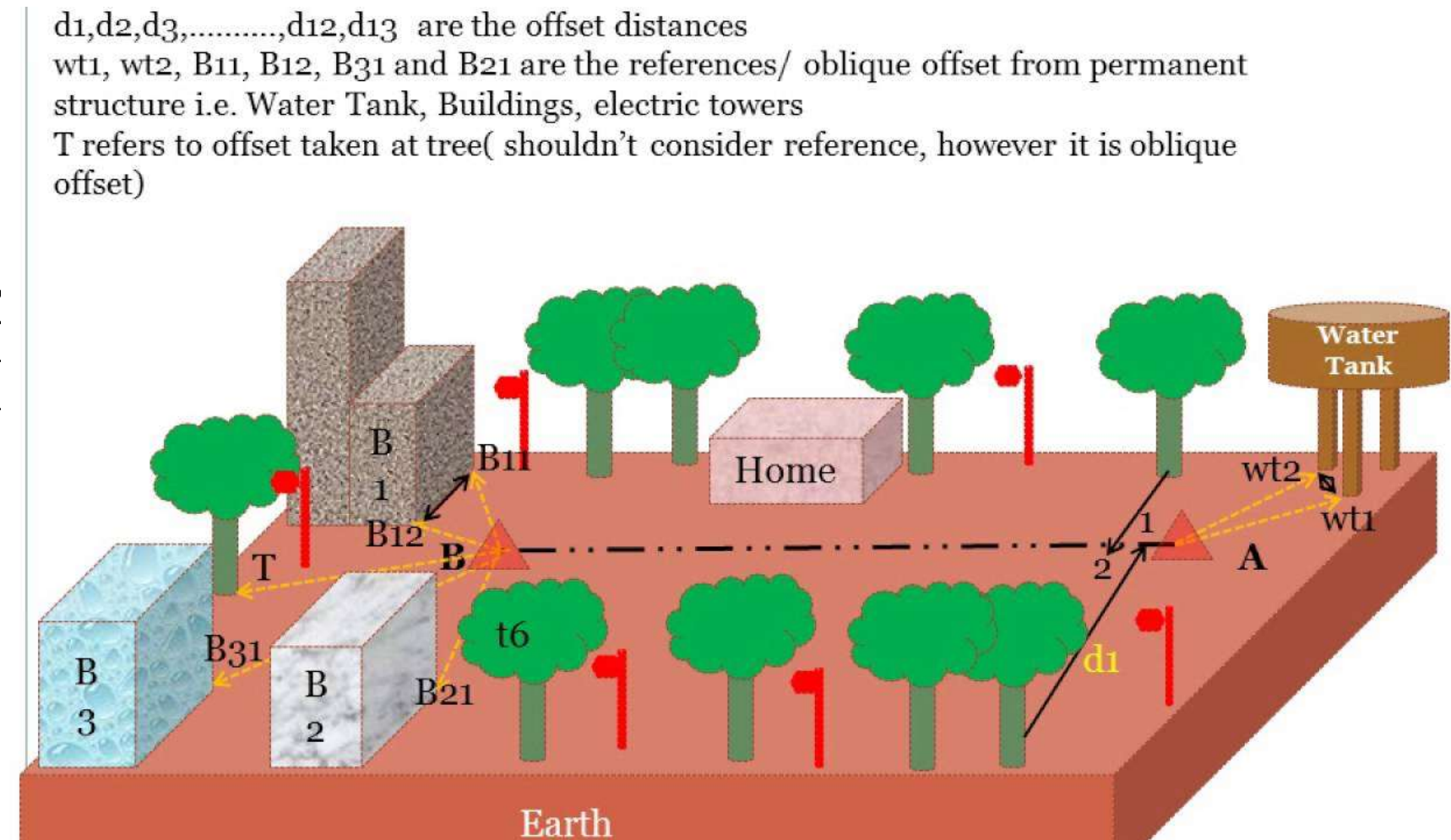
Linear Measurement





Chain Surveying

- ❖ In chain surveying - only linear measurement is taken in the field – no angular measurement are taken.
- ❖ Done for small area and work.
 1. Locate boundary of plot / land
 2. Locate existing features
- ❖ Area is divided in to network of triangles and sides of triangles are measured directly with chain or tape.





Assessment



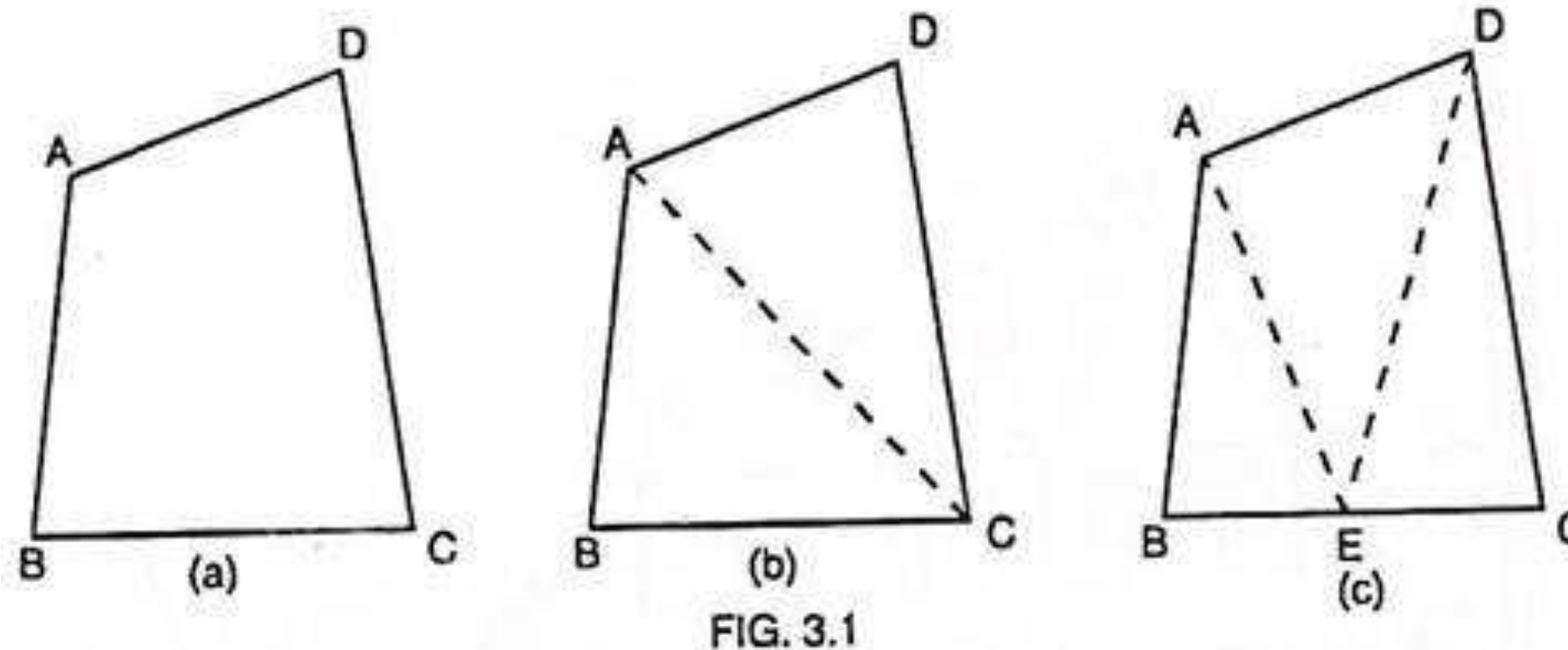
- **Mention the types of chain**
- **How to eradicate obstacles in chaining**





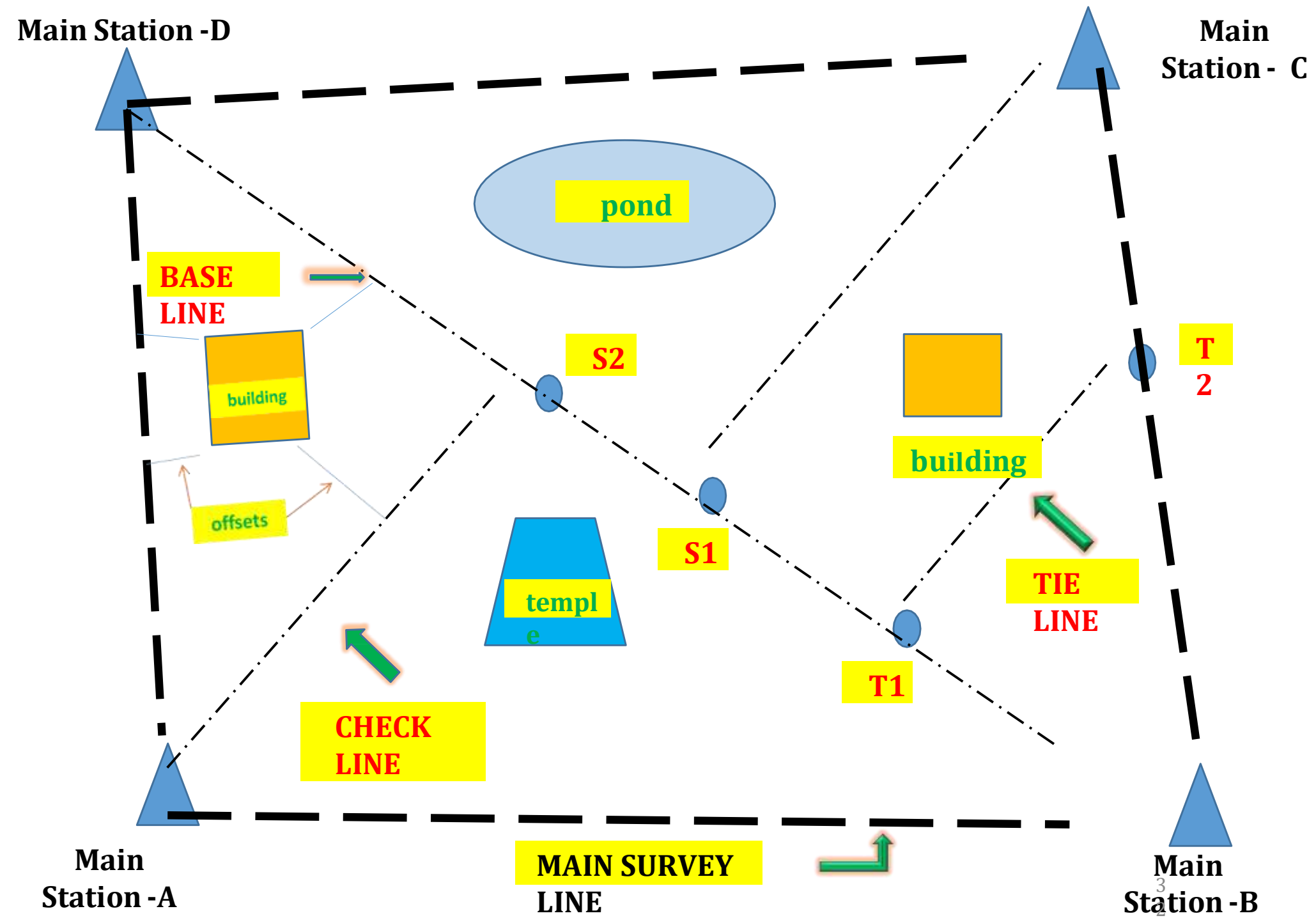
Principles of Chain surveying

- ❖ Triangulation is the principle of chain surveying.
- ❖ Triangulation means - To divide area in to network of well conditional triangles (angles $> 30^\circ$ and $< 120^\circ$) of suitable sides.



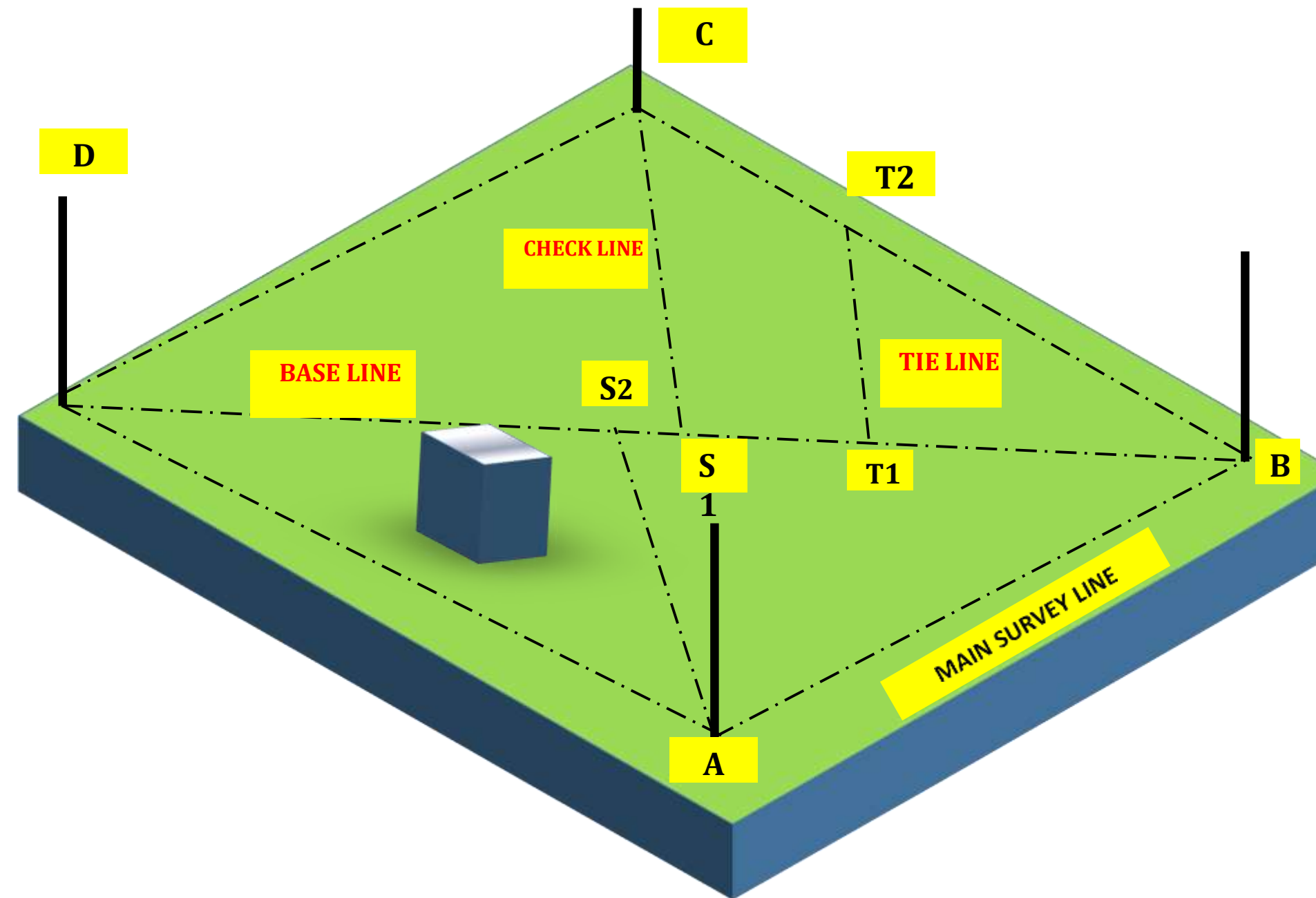


Chain Surveying





Chain Surveying





Terms

(1) Survey station :- means points at the beginning and at the end of a main survey line or chain line

❖ Types

1. Main station :-

- Taken along boundary of an area as control points
- Line joining main station – main survey line
- main survey line – should cover whole survey area
- Denoted by ▲, with letter A,B, C,D, etc.

2. Subsidiary station :-

- Station on the – main survey line or any other survey lines
- Line joining subsidiary station – subsidiary survey line
- Taken to
- 1. divide area in to triangles.
- 2. Checking accuracy of triangles
- 3. Locating internal details
- Denoted by ●, with letter S1, S2, S3 etc.



Terms



3. Tie station :-

- Taken on main survey line
- Line joining tie station tie line
- 1. Locating internal details
- Denoted by ●, with letter T1, T2, T3 etc.

2. Main survey line :-

- Line joining main station – called main survey line or chain line.
- AB ,BC ,CD and DA -main survey line

3. Base line:-

- It creates frame work of survey is built
- Most imp line
- longest of main survey line is considered as base line
- Taken through level ground & measure accurately.



Instruments

Chain with set of ten arrows

Metallic tape

One dozen ranging rod

Offset rod

Cross staff

Plumb bob

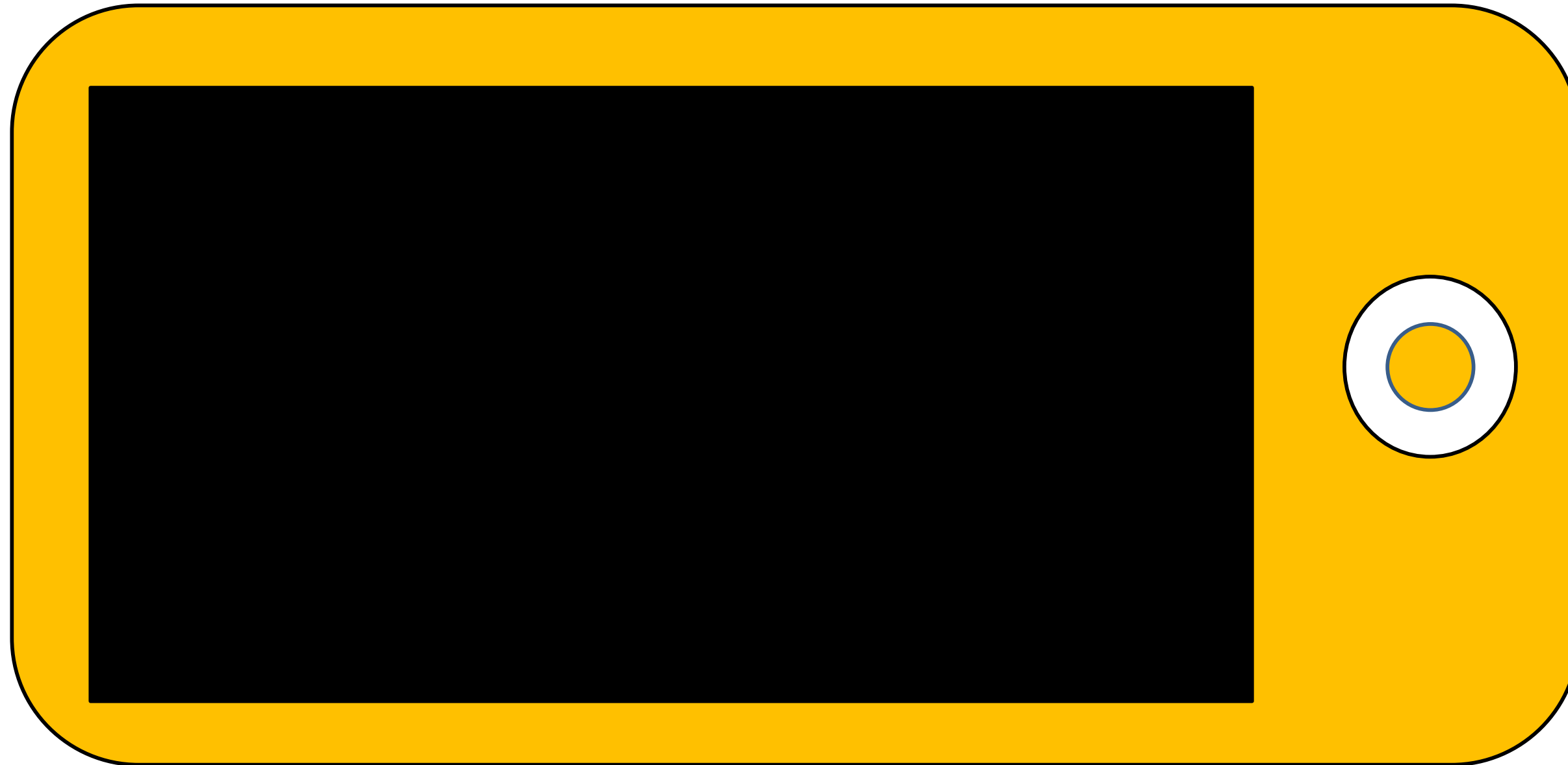
2 dozen pegs

Hammer

Sun- dries



Reference Videos





See You at Next Class!!!!