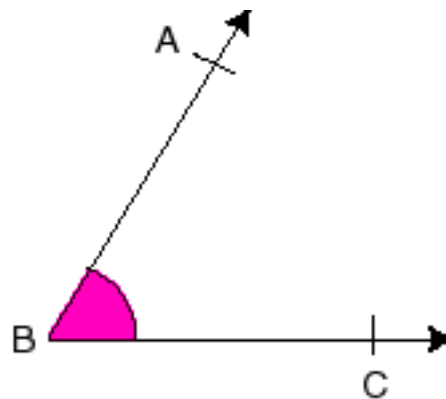# Unit 3.2 Drawing angles of given measures

1.What to Teach
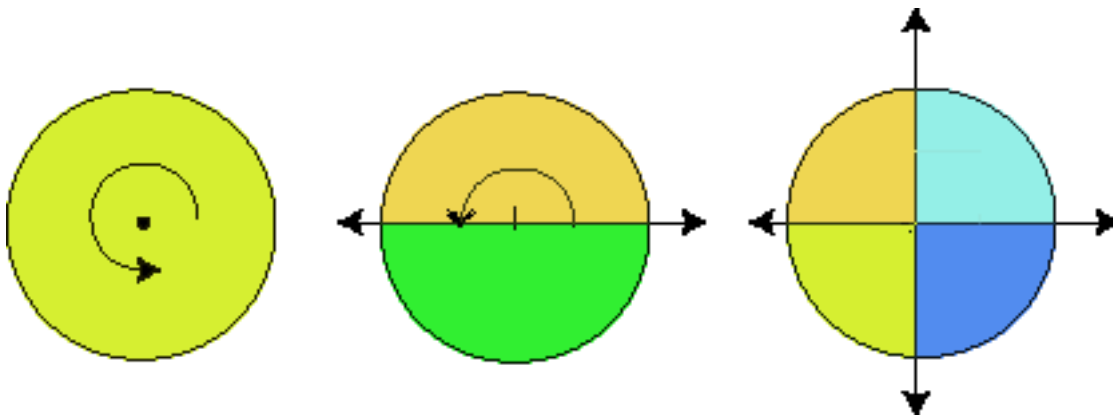
1.1 What are the subjects in the unit?

Meaning of angles

The angle is the union of two rays with the same starting point.
Each of the rays is called a side of the angle .The common point
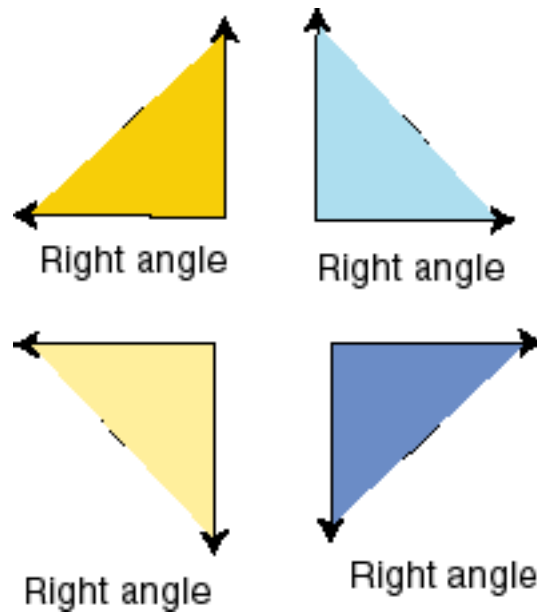of the two rays is called the vertex of the angle.

Meaning of "Right angle"
If we have a circle, and dividing like the figure.

Then: The flowing figure is called a right angle.

Right angle   Right angle

Right angle   Right angle

i.e. The right angle is the quarter of the circle.

Meaning of "degree".

We knew the circle equal 360 $^\circ$. what is obtained from circle (a round) by divided equally to 360 parts is called the angle of one degree.

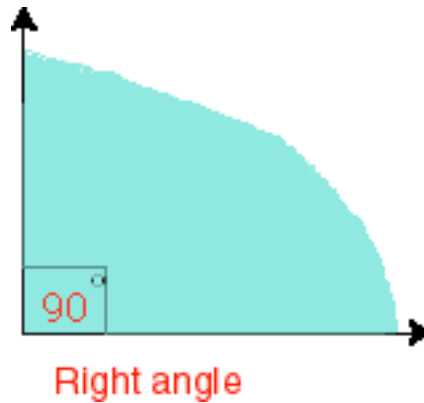-Then: The unit used in measuring angles is the degree which is written as (1 $^\circ$).

Measuring value of the right angle .

We knew the circle equal 360 $^\circ$,if dividing the circle like the figure
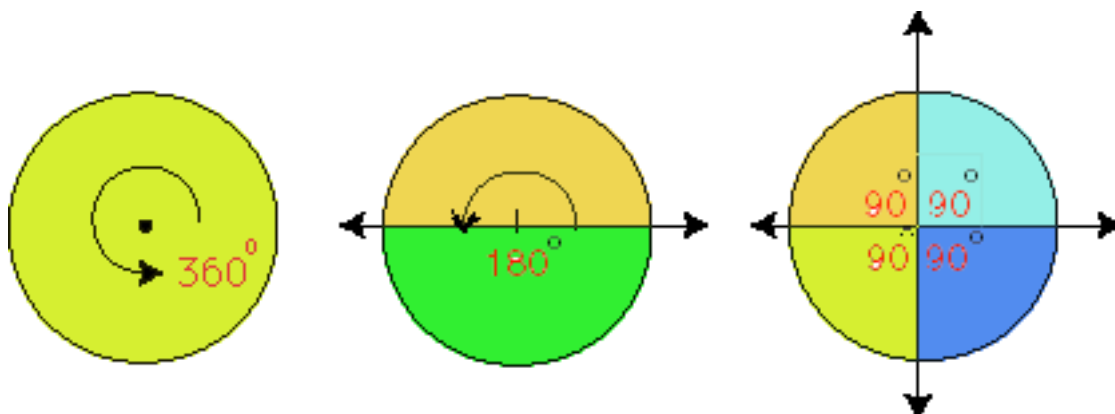
-Then: Notice the right angle is 90 ° .

Right angle
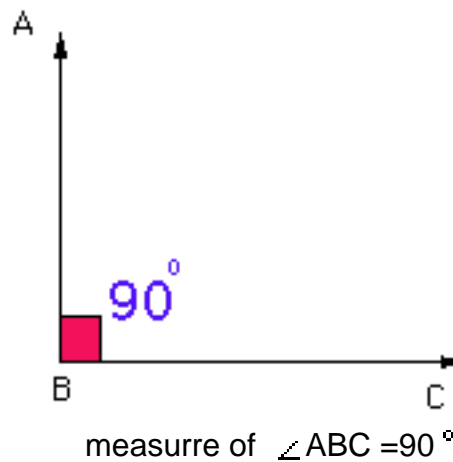
Types of angles.

   1-The right angle

     Definition of right angle
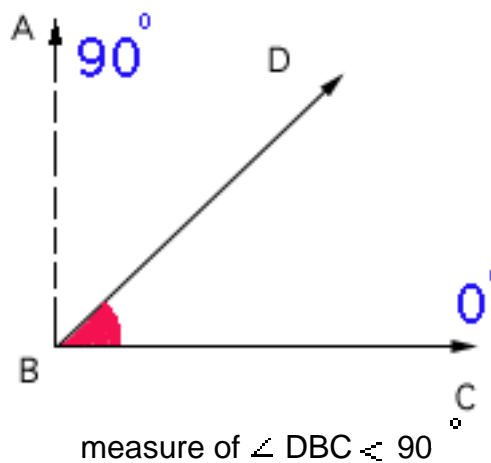
      -the right angle is an angle whose measure is **90 degree**

      -the figure opposite ABC is called a right angle

measurre of ∠ABC =90 °

  2-The acute angle

   Definition of acute angle

     -The acute angle is an angle whose measure is greater than **0 degree** and less than **90 degree**

    -The figuare opposite ∠DBC it called acute angle
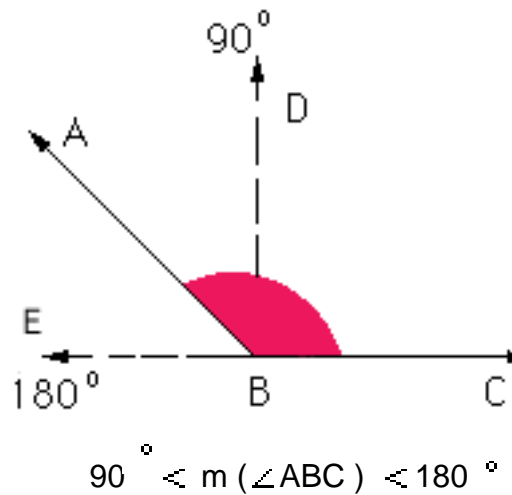

measure of ∠ DBC < 90 °

3-The obtuse angle

Definition of obtuse angle

-The obtuse angle is an angle whose measure is greater than **90 degree** and less than **180 degree.**
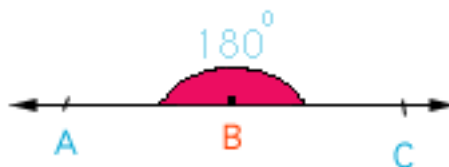
the figuare opposite ∠ABC it called obtuse angle

$$90^\circ < m(\angle ABC) < 180^\circ$$

4-The straight angle

Definition of Straight angle

the straight angle is an angle whose measure is 180 $^\circ$.
the figuare opposite ∠ABC it called straight angle
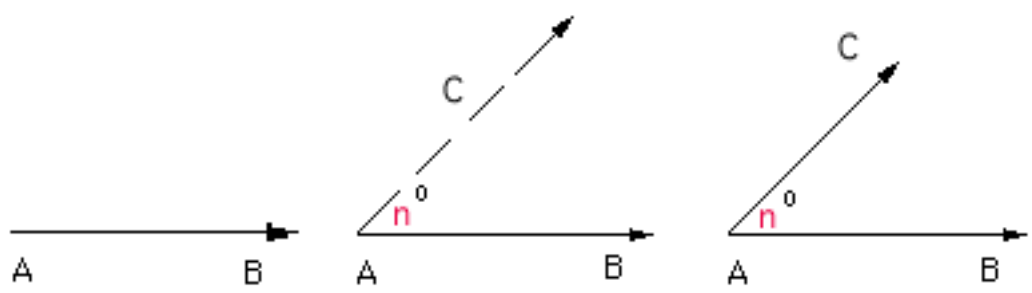
Drawing angles of given measures

Drawing angles of given measures, by using a ruler and protractor.

How to

1.Use the ruler to draw a ray $\overrightarrow{AB}$.

2.Place the center of the protractor at the point A and its base (zero line) along $\overrightarrow{AB}$ and mark the point **C** at **n** $^\circ$.

3.Draw the ray $\overrightarrow{AC}$.

Skill

1.2 Where is the unit placed in the primary school mathematics?

primary 3

3/3-3	3/3-4
Angles (Idenify the sheps of angle)	**Types of angles** (Identifying what types of angles)

primary 4

4/3-1

Measuring angles

4/3-2

Drawing angles of given measures

4/3-5

Drawing triangles

1.3 Where should learners reach ?

Able to do the followings

Define the vertex of the angle and the sides of the angle.
Define the name of angle.
Drawing angles of given measures ,by using a ruler and protractor
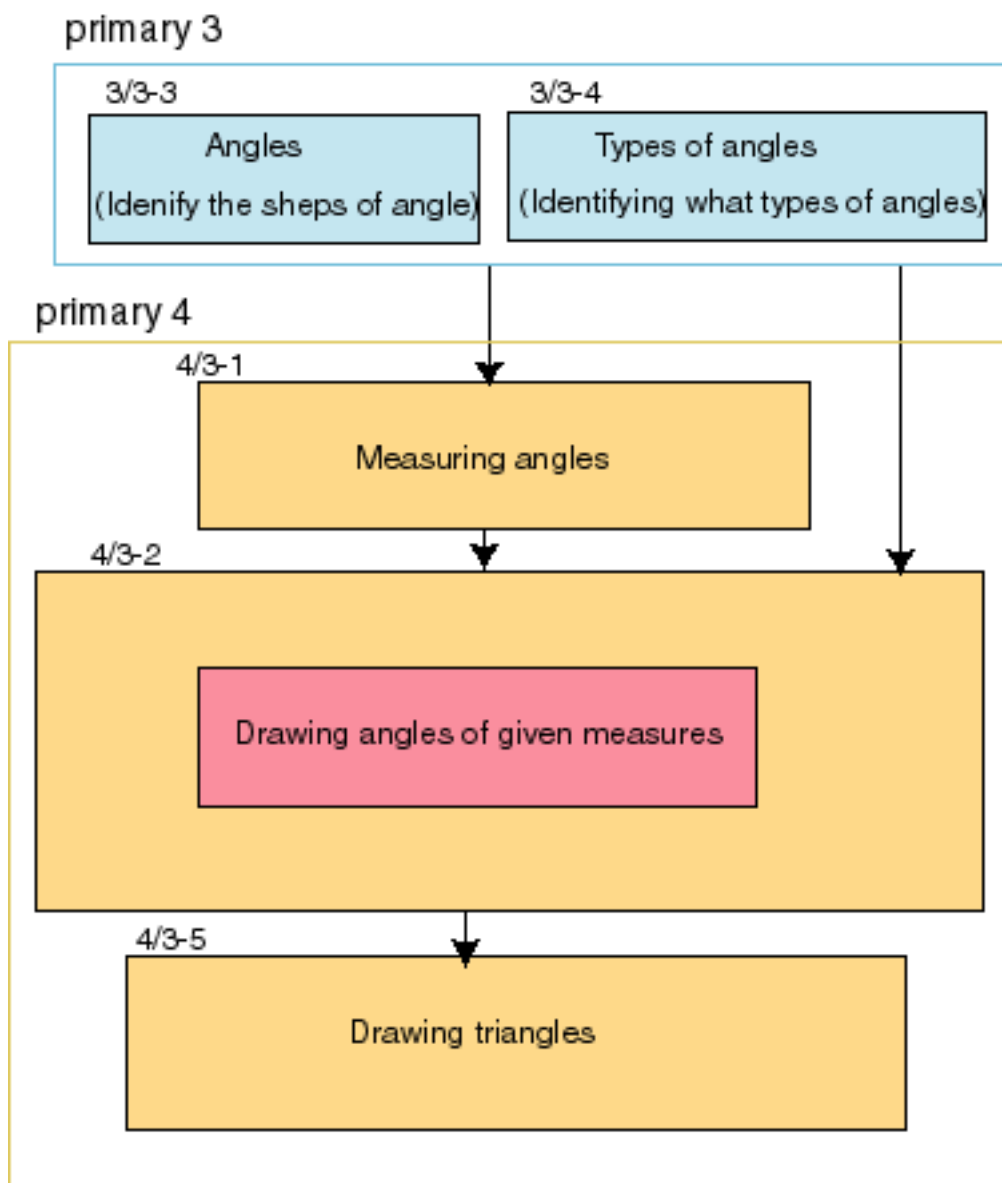
   1.Use the ruler to draw a ray $\vec{AB}$.
   2.Place the center of the protractor at the point A and its base (zero line) along

   $\vec{AB}$ and mark the point **C** at **n** ° .

   3.Draw the ray $\vec{AC}$.
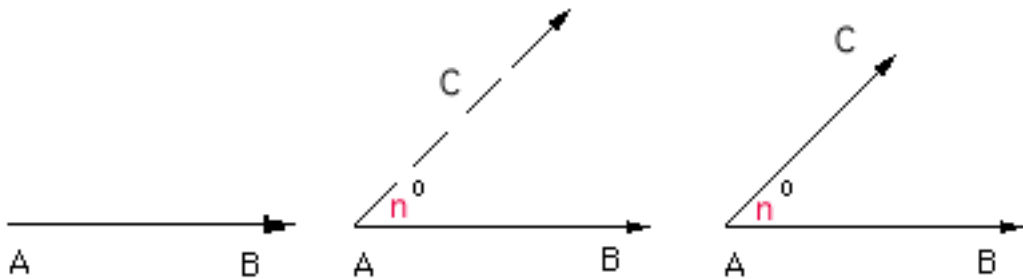
 Understanding the logic of the drawing.

2. Why to Teach
(Why children should learn the subjects in this unit?)

"Angle" is one of the most fundamental concepts in mathematics.
To understanding of "How to drawing angle "is very important for students tobe able to apply to drawing of some basic, pimitive figures, for example triangles and polygons.
Using "Drawing angle" in making sameactivity in life, and students using it in the study another subjects. (science,..........).

3. How to Teach
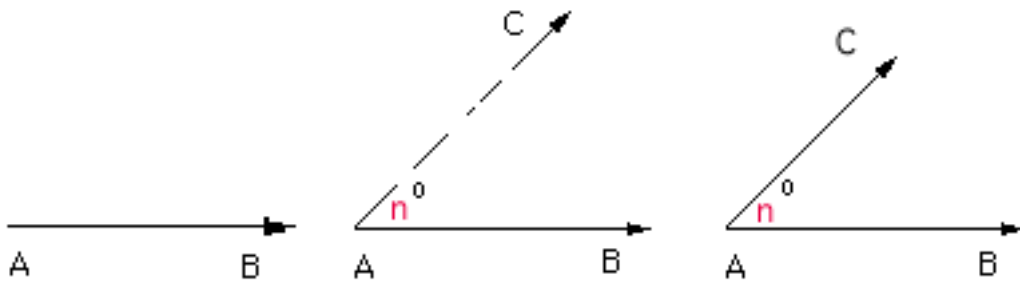
3.1 Deviding the unit into sub-units

Drawing angles of given measures, by using a ruler and protractor.

How to

1. Use the ruler to draw a ray $\overrightarrow{AB}$.

2. Place the center of the protractor at the point A and its base (zero line) along $\overrightarrow{AB}$ and mark the point **C** at **n** $^{\circ}$.

3. Draw the ray $\overrightarrow{AC}$.

Skill

3.2 Planning classes

Time allocation

Subunit	Hours	
1. Drawing angles of given measures	1	2
2. Exercise	1	

Making instruction scenario

See **Examples of Instruction Scenario.**

3.3 Practicing classes

Example of Instruction Scenario
"Drawing angles of given measures"

I. Opening

Letting pupils recall the place where they are standing now. (Starting line of this session)

T : Let us recall what we learned in the previous lessons.
P's : (Answers)
T : Do you remember what the protractor.
P's : (Answers)
T : Do you remember how we found measure of angles
P's : (Answers)
T : In the last lesson we learned how to find measure of angles ,then how to draw angle.

Announcing what should be studied in this lesson. (Goal of this session)

T : Today, you will learn how to draw angles of given measures.

II. Developing

T : What you should do is to draw angle ABC in which the measure equal 45 °.
    You are allowed to use a ruler and a protractor.
P's : (Practicing to find a way to draw the angle.)
T : You seem to have a way to draw the angle.
    Please show your solutions.
P's : (Demonstrating their a way to draw the angle.)
T : Can you tell me the reason how to draw the angle ABC. which the measure equal 45
P's : (Discussing and expressing opinions.)
T : Well you found a way to draw the angle.
    Let us confirm the way to draw the angle once again.
    Look: We are follow the following steps.

1. Use a ruler drawing the ray $\overrightarrow{BA}$.

2. Place the center of the protractor at the point B and its base (zero liner) along $\overrightarrow{BA}$,and
   mark the point C at 45 °.

3. Draw the ray $\overrightarrow{BC}$ therefore, ∠ABC has the measure 45 °.

$m (< ABC) = 45°$
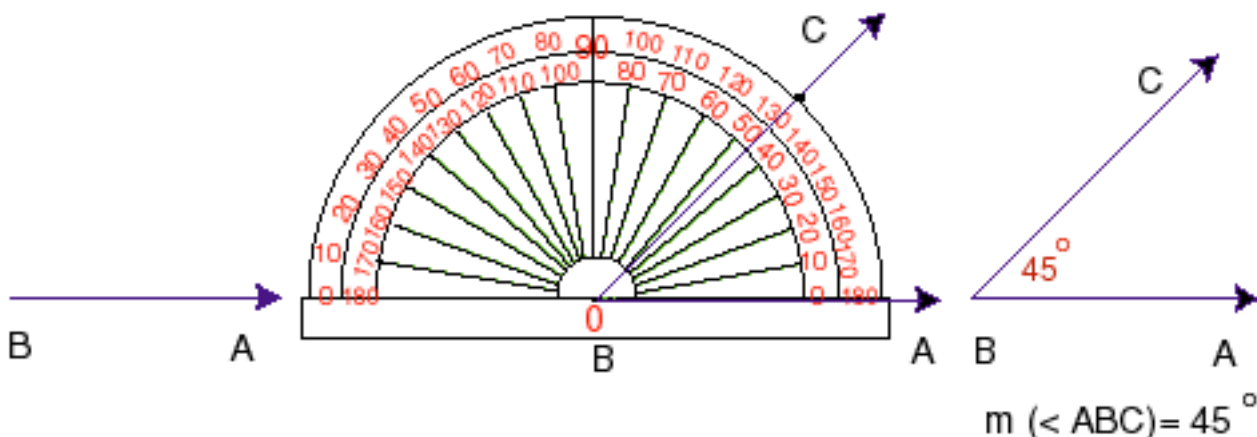
II. Closing

T : In this lesson, we have learned a way to draw angles of given measures.