

NAME: OMIDIJI E. S

CLASS: JSS2

SUBJECT: BASIC TECHNOLOGY

WEEK: 6

PHONE: 08062345878

TOPIC: GEARS

GEAR DRIVE

Gear drive is a mechanical energy transmission system of transmitting power with the use of toothed-edgesbwheel that mesh with one another.

The larger gear is called the **Gear**. Gear or wheel is called the larger of interacting gears or a gear on it'd own.

The smaller gear is called the **Opinion**.

Pinion is the smaller of two interacting gears.

GEARING:

This is the arrangement of gears such that power can be power can be transmitted.

PURPOSE OF USING GEARS

- * To reverse the direction of rotation
- * To increase or decrease the speed of rotation.

TYPES OF GEAR

*** INTERNAL GEAR**

This is toothed internally.

*** EXTERNAL GEAR**

This is toothed externally

*** BEVEL GEAR**

This is toothed in avwsyvthst it can bring about speed reduction and transmit speed at 90 degree.

USES OF GEAR

- * It is used for transmitting power.
- * It can be used to change speed
- * It can be used to change the direction of travel.
- * Back movement with the selection of reverse gear is possible.

THE APPLICATION OF GEAR IS FOUND IN THE FOLLOWING:

Gear box of motor vehicles

- * Rear axle of motor vehicles
- * Bicycle with gear
- * Machinery e.g palm oil extractor

GEAR SPEED AND RATIO

Gear ratio is the relationship between two gears in which it shows how much larger the speed of one gear is to the other.

Gear ratio = $\text{driving gear} \div \text{driven gear}$

Driving gear: this is the gear that transmits speed to the other gear.

Driven gear: This is the gear that receives the impulse of the speed from the other gear.

Meshing of gear simply means the engagement of the teeth of the gears i.e. the teeth enter into the other gear.

Ratio 2:1 = $\frac{2}{1}$ Enlargement of speed

Ratio 1:2 = $\frac{1}{2}$ Reduction of speed.