**Type Your Name:\_\_**

VOCABULARY

**Driver Gear**-

 **Follower Gear**-

**Idler Gear** –

**Clockwise**,

**Counterclockwise**,

**Gear teeth**

**tooth-steps**

**Axel**

**Rotation**

**Ratio**

**Commands**

 **Motor onfor**

**Tilt**

**Sensor**

**Gear Down, Gear Up**

**Build the Gearing Down model:**

1. In the “Gearing down” project how many “*teeth*” does the *driver* gear have?
2. How many teeth does the *follower* gear have?
3. Which gear moves faster the driver or the follower?
4. If the driver gear makes 1 rotation, how many “tooth Steps” does the follower gear turn?
5. Explain why you think this model is called “gearing down”?

**Build the Gearing Up model:**

6. Compare Gearing up to Gearing down. **Explain** how the “Gearing up” model is different from the “Gearing Down” model.

7. What does the “Motor On for Block 20 do? Can you program the motor to turn on for 3 seconds?

8. How much faster is the follower gear “geared-up”?