



All Geared UP



Today's bicycles have many gear configurations available. You can ride up very steep hills, pedal easily over rough terrain, or go fast on straight stretches and down hills.

Knowing how your gears work will help you to understand how to use them. Try this experiment on your own multi-geared bike.

Experiment 1:

1. Gently place your bike so the wheels are up in the air.
2. Turning the cranks by hand and shift gears so the chain is on the smallest gear in the back of the bike.
3. Write down what number you clicked on your shifter to get to this gear here _____
4. If you have gears in the front of your bike, repeat step two and shift the gears so that the chain is on the largest gear in the front of the bike.
5. Write down what number you clicked on your shifter to get to this gear here _____
6. Rotate the rear wheel so that the valve stem is at the top.
7. Rotate the cranks so that one pedal is at the lowest position and one is at the highest position.
8. While loosely gripping the tire to stop the wheel from coasting, very slowly turn the cranks one complete revolution.

Answer the following:

1. One turn of the pedal produced how many turns of the wheel? _____
2. Would this gear combination make it easier to pedal or harder? Why? _____

3. When would be best to shift to this gear combination? (circle one)

a. When approaching a hill.	c. While riding on flat ground.
b. When descending downhill.	d. While riding on a hill

Experiment 2:

1. Keep your bicycle upside-down.
2. Turn the cranks by hand and shift gears so the chain is on the largest gear in the back of the bike.
3. Write down what number you clicked on your shifter to get to this gear here _____
4. If you have gears in the front of your bike, repeat step two and shift gears so that the chain is on the smallest gear in the front of the bike.
5. Write down what number you clicked on your shifter to get to this gear here _____
6. Repeat steps 6-8 above.

Answer the following:

1. One turn of the pedal produced how many turns of the wheel? _____
2. Would this gear combination make it easier to pedal or harder? Why? _____

3. When would be best to shift to this gear combination? (circle one)

a. When approaching a hill.	c. While riding on flat ground.
b. When descending downhill.	d. While riding on a hill

Field Test:

1. Turn your bicycle right side up.
2. Perform the ABC Quick Check and put your helmet on in the correct manner.
3. Go for a ride and shift to the gears you recorded in steps 3 and 5 of both experiments.
4. After testing both gear combinations from experiment 1 & 2, review your answers to questions 2-3.