KEY SHIFTING TIPS

- Moving the chain closer to your bike, makes the pedaling easier.
  - This equals a LOWER NUMBER or using the LARGER SHIFT LEVER on your right shifter to move the chain
- Moving the chain farther away from your bike, makes the pedaling harder
  - This equals a HIGHER NUMBER or using the SMALLER SHIFT LEVER on your right shifter to move the chain
- SHIFT TO AN EASIER GEAR WHEN . . .
  - Going up an incline or hill
  - When riding in a group and you need to slow your speed but want to keep your same cadence
  - When riding into a headwind

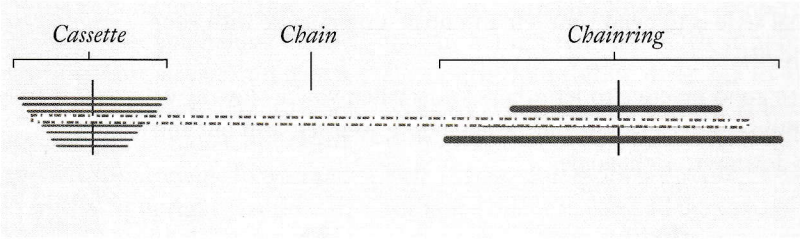
SHIFTING GEARS

- SHIFT TO A HARDER GEAR WHEN . . .
  - Going down an incline or hill
  - When you want to go faster keeping the same cadence
  - When you feel like your feet/pedals are spinning too fast. It's better to shift to a harder gear than to pedal, pedal, pedal, coast, pedal, pedal, pedal coast or to pedal like crazy all the time

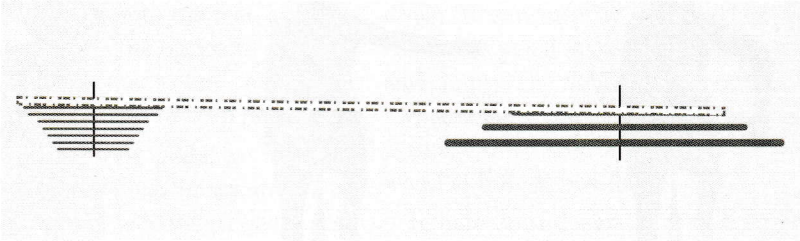
MOST BIKES HAVE GEARS, WHICH HELP THE RIDER TO EXERT NEARLY THE SAME AMOUNT OF PEDALING EFFORT ACROSS A VARIETY OF TERRAIN.

HERE'S WHAT YOU NEED TO KNOW ABOUT GEARS:

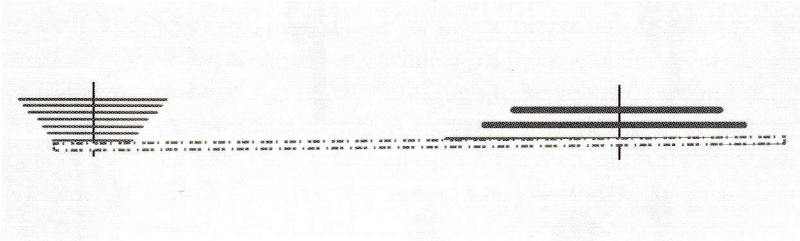
On flat/level ground, you'll want to be in the middle of your range of gears.



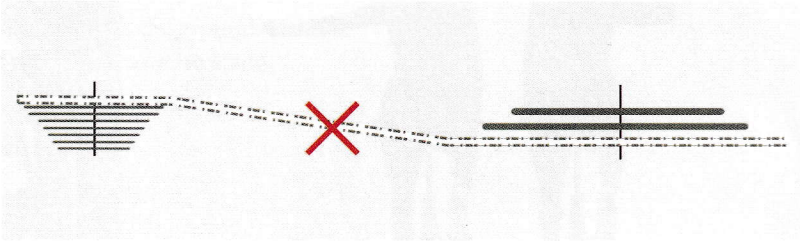
When it's getting harder to pedal (i.e. riding uphill), shift into an easier, lower gear. Each revolution will propel the bike a short distance, but it will take less effort to push the pedals.



When it's getting easier to pedal (i.e. riding downhill), you'll want to be in a harder, higher gear. Each revolution will propel the bike a long distance.



For best results, the chain needs to be in a generally straight line from the front chainring to the rear gears. If the chain isn't in a straight line you might be able to hear it complaining. If so, shift the rear gears to realign the chain.



AS THE CHAIN MOVES FURTHER AWAY FROM THE FRAME, THE EFFORT INCREASES.

GEAR SELECTION

Most road and mountain bikes have between 12 and 27 gears, and you may wonder how and when to use them all. Use those gears to maintain a steady, comfortable pedaling speed regardless of whether you're going uphill, downhill, or are riding on level terrain.

The number of times per minute that you turn your pedals one full rotation is known as cadence. Use gears to maintain a steady cadence, which for most people is between 70-90 revolutions per minute (rpm). When you're riding on a straight, flat stretch of road with your gears in the middle of the range (see graphic on page 18), you should be pedaling at a comfortable speed (rpm) with a moderate amount of resistance or effort required to pedal.

When in a higher gear, it's harder to pedal but the bike travels further for each turn of the pedals. In a lower gear, it's much easier to pedal but the bike travels a much shorter distance with each pedal revolution. Riding in too high of a gear will tire you out quickly as you push hard against the pedals; riding in too low of a gear will mean your legs are spinning too fast. In both cases, controlling your bike is harder than if you're pedaling at a smooth cadence.

CHANGING GEARS

Smoothly changing gears, or shifting, takes some practice. Most of your shifting is likely to be done with your right hand, which moves the derailleur across the back or rear gears. Your left hand changes which of the front chainrings you are using, and the change in gears is much more noticeable. The smaller chainring gives you a lower gear (easier to pedal) and the larger the front chainring the higher the gears (harder to pedal). Remember that moving the chain closer to the bike makes it easier to pedal; moving the chain away from the bike makes it harder to pedal.

WHEN TO USE LOWER GEARS

Going uphill is easier if you use lower gears to maintain a steady pedaling cadence. As you approach a hill, shift to a lower gear before it gets more difficult to pedal. If you leave it too late, you'll find it's more difficult to shift gears when you are pushing hard on the pedals. As you continue to climb, shift to lower gears.

If you're riding into a headwind, shift to a slightly lower gear to maintain cadence. Pushing a high gear into the wind will deplete your energy and hurt your knees. Remember, your goal is to keep pedaling at a comfortable, steady rate.

When you're carrying extra weight in your bags or pulling a trailer with a child behind, you will want to use a lower gear to find that comfortable pedaling speed.

Changing into a lower gear just before you stop or slow down will make it much easier to restart or get back up to speed again.

WHEN TO USE HIGHER GEARS

Shifting to a higher gear means you can maintain your cadence as you pick up speed going downhill. Even if you end up coasting downhill, shifting to a higher gear as you start to descend will make it easier to start pedaling at a comfortable speed once you reach the bottom and start to slow down.

Riding with the wind behind you can make a big enough difference that a slightly higher gear is needed to maintain your pedaling speed.

IN THE WRONG GEAR?

If you find yourself in the wrong gear going uphill, try standing up for a few pedal strokes to gain momentum. Then quickly sit down, ease up on the pedals for a second and shift to a lower gear. If that doesn't work, stop, dismount and change gears by hand with your back wheel off the ground.

If you're in the wrong gear going downhill and your legs are spinning uncontrollably, all you can do is wait until you slow down enough (or you can use your brakes) for your legs to catch up and then shift to a higher gear.

TIPS FOR SMOOTH SHIFTING

- *Shift gears while you're pedaling—but not when you're pushing hard on the pedals.*
- *Ease up slightly just as you shift, especially when changing the front gears.*
- *Anticipate the need to change gears and try to change just before you start to push too hard or spin too fast.*