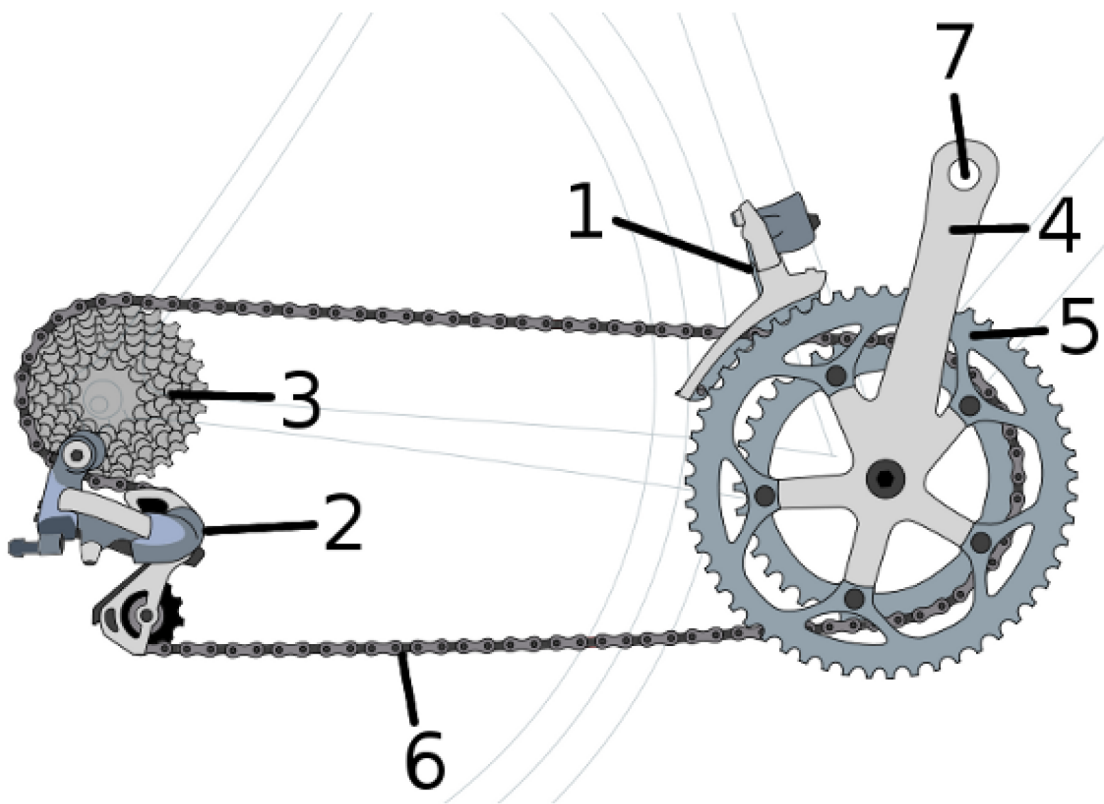


Technology

Gears and analysis of gear systems

Consider the diagram below representing each of these parts:

- | | |
|---------------------|--------------------|
| 1. Front derailleur | 2. Rear derailleur |
| 3. Driven gear | 4. Crank |
| 5. Driver gear | 6. Chain |
| 7. Pedal hole | |



A new word has been introduced, that being *derailleur*, what is a *derailleur*? Merriam-Webster defines this as a bicycle gear that works by lifting the chain from one set of exposed gears to another.

In order to work effectively, a bicycle's parts need to work together in order to propel forward on a flat surface, on an upward climb or whilst moving down a hill. Like with gears, there is a distinction between upshifting and downshifting.

How does upshifting take place? Moving to a higher gear, this is used to gain a higher speed, allowing the bicycle to propel forward.