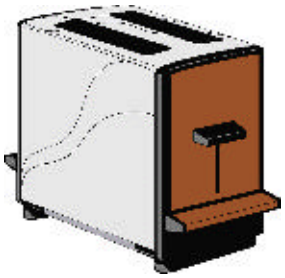
Power



Power, like the word "work," has many meanings to different people. You need electric power to run electronic devices. In science though, power tells you how fast work is happening or being done.

To calculate how much power is being used, you must divide the work done by the time it takes to do it.

Power = Work / Time

The unit for power is the Watt (W). We have learned that the unit for work is the Joule (J). Time would be measured in seconds (sec). Therefore, one watt is equal to 1 joule per second (1 J/sec)

It maybe obvious now to see that a motorcycle has more power than a bicycle. The motorcycle can do work faster than a bicycle. The motorcycle would get you to your destination in a shorter amount of time.

Complete the following work problems. The first one has been done as an example for you. Remember: Power (W) = Work (J) / Time (sec.)

1) 200W = 2000J / 10sec

2) 200 W = 2000 J / Time ?

3) 15 W = Work? / 10 sec

4) Power? = 56 J / 2 sec

5) Power? = 324 J / 18 sec

6) Power? = 500 J / 50 sec

7) Power? = 3256 J / 123 sec

back next

Print this page in Adobe Acrobat format. Get Acrobat Reader

Copyright © by the Utah State Office of Education.