[](http://www.google.com/url?sa=i&rct=j&q=motion&source=images&cd=&cad=rja&uact=8&docid=Osk_POATePGcFM&tbnid=JG7auU2a60VZCM:&ved=0CAUQjRw&url=http://www.forum.gotaweb.com.br/viewtopic.php?f=48&t=1624&ei=iuEYU-fDD4WcrgHVo4C4BA&psig=AFQjCNHtJyyd0d3Rzg5ID5u88c42WhHfJg&ust=1394225906264711)

Motion Notes

1. Motion
   1. An object is in \_\_\_\_\_\_\_\_\_\_\_ if its \_\_\_\_\_\_\_\_\_\_\_ changes relative to another object.
   2. To decide if you are moving, you need a \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.
   3. A reference point is a \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_ used for comparison to determine if something is in motion.
   4. Examples of reference points relative to Earth
      1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
      2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
      3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Relative Motion
   1. Whether something is in motion or not is all based on \_\_\_\_\_\_\_\_\_\_\_\_!
   2. An object is in motion when it \_\_\_\_\_\_\_\_\_\_ moves in relation to a \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ or person observing it.
   3. Examples:
      1. If the \_\_\_\_\_ is the reference point, all rose buses are \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_, since the Earth revolves around the sun.
      2. If a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is the reference point, then the rose buses are \_\_\_\_ \_\_\_\_\_\_\_\_\_\_ at all.
      3. Because rose bushes move \_\_\_\_ the Earth, it does not look like they are moving.
3. Measuring Distance
   1. Scientist use a system of measurement called The International \_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_. Abbreviated, called \_\_\_\_\_.
   2. \_\_\_\_\_\_\_\_\_\_ is the length of the path between two points.
   3. The SI unit for length is the \_\_\_\_\_\_\_.
   4. Conversions every 6th grader should know.
      1. 1 kilometer= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      2. 1 meter= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      3. 1 meter= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Speed
   1. \_\_\_\_\_\_\_\_\_ is the distance an object \_\_\_\_\_\_\_\_ per unit of time. It is a type of rate.
   2. A \_\_\_\_\_\_\_ tells you the amount of something that occurs or \_\_\_\_\_\_\_ in one unit of time.
   3. An airplane may travel at a \_\_\_\_\_\_\_\_\_ speed of 260 m/s. This means the plane travels 260 \_\_\_\_\_\_\_ in 1 second.
   4. The speed of a snail is 1 mm/s. This means the snail travels 1 \_\_\_\_\_\_\_\_\_\_\_ in one second.
   5. Speed = Distance M/S = Meter per

Time Second

1. Constant and Average Speed
   1. Going the exact same speed for prolonged time is called \_\_\_\_\_\_\_\_\_ speed.
   2. Most moving objects do \_\_\_\_\_ travel at a constant speed.
   3. Instead, you calculate their \_\_\_\_\_\_\_\_\_\_\_ speed. Add the total \_\_\_\_\_\_\_\_\_\_ traveled. Add the total \_\_\_\_\_\_\_\_ the activity took. \_\_\_\_\_\_\_\_\_\_\_!
   4. AVERAGE SPEED: TOTAL DISTANCE

TOTAL TIME

1. Instantaneous Speed
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Speed is the speed at which an object is moving at a given instant in time.
   2. NOT the same as average speed!
   3. Athletes with the greatest \_\_\_\_\_\_\_\_\_ speed win a cross country race, not the greatest instantaneous speed.
2. Velocity
   1. To describe an objects motion, you need to know more than just the speed. You need to know its \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is speed in a given direction.
   3. When you know a storms \_\_\_\_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it’s moving in, you know its velocity.
   4. Velocity is important to many careers, such as
      1. airplane \_\_\_\_\_\_\_\_\_\_
      2. \_\_\_\_\_\_ traffic controllers.