

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.