**Underlying Theme – I can visualize objects in motion and I can describe them using the language of motion (displacement, time, velocity, and acceleration). I can measure, do simple calculations, and create graphs to analyze the motion of objects such as cars.**

DISPLACEMENT, TIME, VELOCITY

1. I know that displacement ( d ) is a change in position and not distance
2. I know that a time interval is change in time ( t)
3. I know what average velocity ( vav ) is and what speed is
4. I know what uniform motion is
5. I know that scalars have a magnitude (amount) without a direction
6. I know that vectors have a magnitude with a direction
7. I know that speed, time and distance are scalar quantities
8. I know that velocity, displacement, position, and acceleration are vector quantities
9. I can use a displacement(or position)-time graph, for an object travelling in UNIFORM (constant) motion, to figure out what the average velocity is and in which direction an object is moving
10. I can use the formula vav = d / t, and the two other forms of the formula on the Grade 10 data sheets, to solve for the unknown
11. I know how to convert between m and km, between hours and seconds, and I can convert km/h into m/s
12. I can use experiments (egs. with moving cars, balls, skateboards, people) to find the average velocity of an object in UNIFORM MOTION

ACCELERATION, TIME, VELOCITY

1. I can define acceleration as positive, negative, and zero by observing moving objects such as falling objects, accelerating from rest, slowing down or stopping, and uniform motion
2. I know that v = vf -vi (Change in velocity = final velocity – initial velocity) and can use this formula for moving objects such as cars and balls
3. I can use the acceleration formula a = v / t and the two other forms on the Grade 10 Data Sheet, to solve for the unknown
4. I can use a velocity-time graph to figure out the acceleration of an object and to determine if the acceleration is positive, negative, or zero

VOCABULARY

􀈱acceleration

􀈱displacement

􀈱distance

􀈱interval

􀈱position

􀈱scalar

􀈱speed

􀈱slope

􀈱time

􀈱uniform motion

􀈱vector

􀈱velocity