Unit Overview – Motion, Balanced & Unbalanced Forces

Essential Questions

- How can the position of an object, the direction of the motion and speed be used to describe the motion of an object?
- How do balanced and unbalanced forces affect an object's motion?
- What happens to an object's motion if no forces are acting on it?

■ I totally get it
☒ I kinda get it
❑ I don't get it

What came first: (5th Grade)

- Compare the relative speeds (faster or slower) of objects that travel the same distance in different amounts of time.
- Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel.

What comes next: High school phsisce

- Explain motion in terms of frame of reference, distance, and displacement.
- Analyze motion in one dimension using time, distance, displacement, velocity and acceleration
- Analyze motion in two dimensions using angle of trajectory, time, distance, displacement, velocity and acceleration.

Enduring understanding	Important to know and do	Worth being familiar with
❑ Understand force, motion and the relationship between them. ❑ Understand how forces (pushes or pulls) affect the motion of an object. ❑ Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel.	❑ Describe the position of the object, the direction of the motion, and its speed as it relates to another object. ❑ Describe and predict how push/pull forces acting on an object produce motion ❑ Explain how factors such as gravity, friction, and change in mass affect the motion of objects. ❑ Illustrate the motion of an object using a graph to show a change in position over a period of time. ❑ Explain the effect of balanced and unbalanced forces on moving and stationary objects.	❑ Provide evidence that gravity and friction influence the movement of objects.

Vocabulary to master

❑ Direction	❑ Motion	❑ Position	❑ Speed
❑ Balanced	❑ Force	❑ Friction	❑ Gravity
❑ Inertia	❑ Unbalanced	❑ Velocity	❑ Distance
❑ Frame of Reference	❑ Reference Point	❑ Relative Motion	❑
❑	❑	❑	❑
❑	❑	❑	❑