

Motion and Forces Learning Targets

Chapter 5, Sections 1 - 3

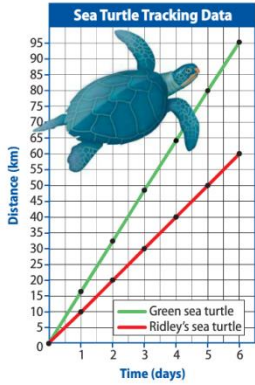


Target	Before we start	Still don't know	Know some of it	Can Teach it
1. I can calculate speed using the correct formula and give the correct answer with correct units.				
2. I can calculate velocity using the correct formula and give the correct answer with correct units and direction.				
3. I can place distance and time on the correct axes on a line graph, calculate the interval, and correctly plot time and distance.				
4. I can interpret and analyze a graph to be able to calculate speed at any given point or average speed.				
5. I can identify what constant speed, stopping, slowing down, and speeding up look like on a graph.				
6. I know the difference between a contact force and a noncontact force and can give examples of each.				
7. I know the difference between a balanced force and an unbalanced force and can give examples of each.				
8. I can calculate Net Force when given a set of balanced or unbalanced forces.				
9. I can demonstrate and explain how inclined planes can be used to change the amount of force to move an object.				

Make and study flashcards for these vocabulary terms.

1. **Reference point** – the starting point you choose to describe the location, or position, of an object
2. **Motion** – the process of changing position
3. **Speed** – the distance an object moves in a unit of time
4. **Average Speed** – total distance traveled divided by total time
5. **Velocity** – the speed AND direction of a moving object
6. **Distance/Time Graph** – a graph that shows how distance and time are related
7. **Force** – a push or a pull on an object
8. **Contact Force** – a push or a pull one object applies to another object that is touching it
9. **Noncontact Force** – a force that one object applies to another object without touching it
10. **Gravity** – an attractive force that exists between all objects that have mass
11. **Mass** – the amount of matter in an object
12. **Weight** – the measure of the gravitational force acting on an object's mass

Target 4



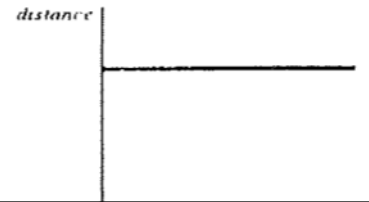
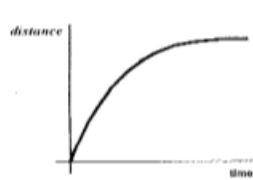
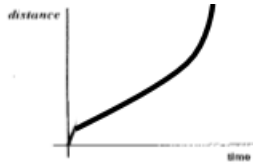
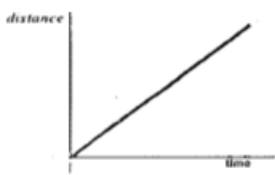
Which turtle traveled fastest? _____

What is the speed of each turtle at 4 days? _____

What is the average speed of each turtle? _____

Target 5

Under the graph, write if it is showing constant speed, stopping, increasing speed or decreasing speed.



Target 6

Contact Force - _____

Example: _____

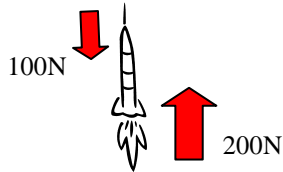
Noncontact Force - _____

Example: _____

Targets 7-8

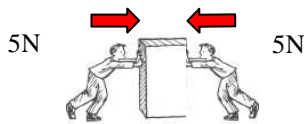
Balanced Force - _____

Unbalanced Force - _____



Is the picture to the left demonstrating a balanced force or an unbalanced force? _____

Calculate the net force: _____



Is the picture to the left demonstrating a balanced force or an unbalanced force? _____

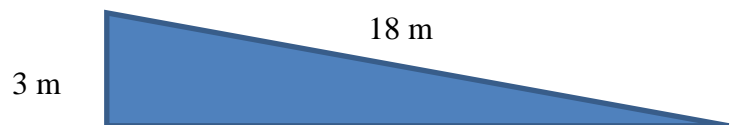
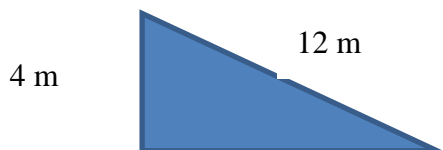
Calculate the net force: _____

Target 9

What are three ways a simple machine, like an inclined plane, can make work easier?

How do you find mechanical advantage of an inclined plane?

Circle the inclined planes has the greatest mechanical advantage.



Why? _____