**Dead reckoning:** is the process of navigation by moving from a known position (e.g. City, port, etc.) using course (where you intend on going), speed, time, distance traveled, and direction traveled. In other words, figuring out where you will be at a certain time if you hold the speed, time and course you plan to travel.

**Distanced Traveled:** How did they know their speed in ancient times? In Columbus’ day, the ship's speed was measured by throwing a log over the side of the ship and counting how long it took to pass from the front to the back of the boat.

*Speed x Time = Distance*

**Direction Traveled:** Sailors also needed to know their direction of travel. This was done using a compass. They knew their distance and direction, so they could determine their current location based on their previous location.

**Wind and Ocean Currents:** Wind and Ocean currents could either push the boat in the desired direction or completely throw it off course. This made travel either faster or longer than planned. The course is the direction the sailor intends to steer a vessel and does not take into account the current and drift. Course Made Good is the course that the sailor actually travels, taking into account the wind and ocean currents.

**Vectors:** Are arrows used to show both the distance and direction the boat has traveled. The arrow points in the direction that the ship moved and the length of the arrow represents the distance traveled.

