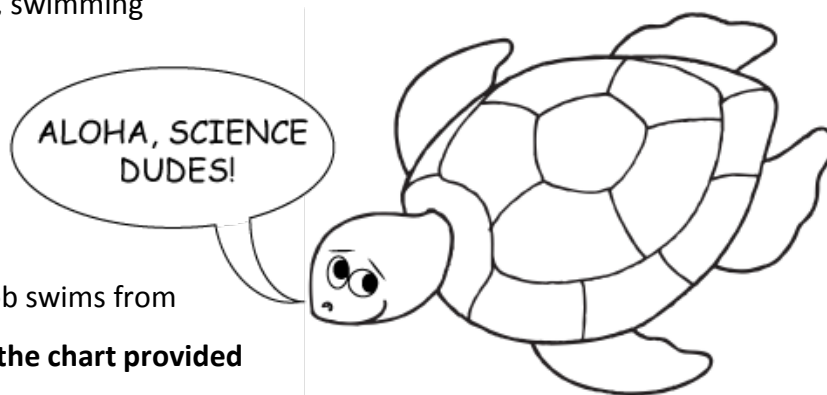# How Fast Does a Turtle Swim?

Meet Bob! Bob is just your typical honu, swimming around and snacking on limu. One day, he's minding his own business, swimming merrily about. He moves from point to point as shown in Table 1. Suddenly, he sees a tiger shark! Now Bob swims from place to place as shown in Table 2. **Use the chart provided to plot the points from both tables.**

Look at your points—are you able to fit a single line through all of them? What about using two lines? **Use a ruler to draw one line through the points from Table 1 and another line through the points from Table 2.**

**What was Bob's speed as he was escaping the shark? How about when he was just goofing around?** To figure it out, remember what speed is: the distance traveled divided by the time it took to travel that distance. If that's hard to remember, think of speed limit signs on the H1—**miles** (distance) **per** (divided by) **hour** (time). Hmm…It looks like we have distance on our Y axis and time on our X axis. And what is the change in Y divided by the change in X? If you said "the slope of a line," you are right! So now we know that the slope of a line is equal to speed, on any graph of distance versus time. But we have two lines, so you need to calculate the slope (speed) for each one separately. Then, compare! **Does a steeper slope mean a faster or slower speed?** *[Note: these speeds are in the real range of how fast a honu can swim! Try converting to feet or miles if it's hard for you to picture.]*

| Table 1. Bob's leisurely swim | | Table 2. Bob's shark evasion | |
|---|---|---|---|
| Distance (m) | Time (s) | Distance (m) | Time (s) |
| 0 | 0 | 14 | 7 |
| 3 | 1.5 | 35 | 10 |
| 10 | 5 | 45.5 | 11.5 |
| 14 | 7 | 59.5 | 13.5 |

Time (s)

Distance (m)