**Creatures of speed**

**A time/distance graphing activity**

A team of scientists has been sent off to a land far far away to make observations. The creatures of this place are reported to travel at amazing speeds. Armed with the latest in radar speed detecting technology…and a couple of stopwatches and meter sticks, the scientists set off to make their observations. After weeks of intense work the scientists came back with the following data. Your part of this project is to graph this data on one time vs. distance graph for comparison. Use the key below for your lines for each creature. Answer the questions that follow.

Creatures

Five-toed whoozits

Yellow-bellied snizzels

Long-haired frumps

Twisty-tailed hillapops

Criss-crossed moops

The Scientists’ Data:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name | 0 sec. | 1 sec. | 2 sec. | 3 sec. | 4 sec. | 5 sec. | 6 sec. | 7 sec. | 8 sec. |
| Five-Toed Whoozits | 0 m | 15 m | 31 m | 47 m | 59 m | 74 m | 95 m | 100 m | 112 m |
| Yellow-bellied Snizzels | 0 m | 30 m | 60 m | 90 m | 120 m | 150 m | 180 m | 210 m | 240 m |
| Long-haired Frumps | 0 m | 5 m | 11 m | 14 m | 22 m | 25 m | 30 m | 36 m | 41 m |
| Twisty-tailed Hillapops | 0 m | 42 m | 83 m | 120 m | 166 m | 201 m | 244 m | 280 m | 315 m |
| Criss-crossed Moops | 0 m | 50 m | 101 m | 135 m | 177 m | 211 m | 242 m | 277 m | 301 m |

Creatures of speed questions Name:

Show your work and include all units

1. Which creature is the slowest? Why?

2. If you were to try and catch one of the creatures on this island, based on speed which would be the hardest to catch? Why?

3. Yellow-bellied snizzels are known to feed on Long-haired frumps. What is a likely defense mechanism for the Long-haired frumps?

4. What does a steeper line represent on the graph?

5. What does a flat line mean on a time/distance graph?

6. Is it possible for a line to angle down on a time/distance graph? What would that mean?

7. If a criss-crossed moop and a twisty-tailed hillapop were in a two second race who would win? What if the race lasted for eight seconds?

8. What is the speed of the yellow-bellied snizzel during the 3 to 5 second interval?

9. What is the average speed for teh five-toed whoozits?

10. What is the speed during the 4-8 second interval for the five-toed whoozit?

11.. What is the average speed for yellow-bellied snizzels?

12. What is the speed during the 1-5 second interval for the yellow-bellied snizzels?

13. What is the average speed for the long-haired frumps?

14. What is the speed during the 3-5 second interval for the long-haired frump?

15. What is the average speed for the twisty-tailed hillapops?

16. What is the speed during the 2-4 second interval for the twisty-tailed hillapops?

17. What is the average speed for the criss-crossed moops?

18. What is the speed during the 4-7 interval for the criss-crossed moops?