

Calculating Stellar Travel Times. How Long Would It Take to Travel to the Stars?

BIKE YEARS! PAGE ONE

Name: _____ Date: _____

Table 4.1 Blank Bike Years Chart. NOTE: Distance to Sirius = 8.17×10^{13} km

Mode of Travel, Slowest to Fastest	Average Speed	Distance Covered In One Year	Time To Get To Sirius
1.			
2.			
3.			
4.			
5.			
6.			

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BIKE YEARS! PAGE TWO

Name: _____ Date: _____

SCRAMBLED DATA INSTRUCTIONS:

1. Cut out these scrambled pieces of data.
2. Put all of the modes of travel in the first column of your Worksheet starting with the slowest mode of travel (#1) moving to the fastest mode of travel (#6).
3. Once you are confident that this order is correct, glue, tape or write the data for the next three columns; average speed in km/hr, distance covered in one year in km/yr, and finally the time that it would take to get to Sirius using that particular mode of travel.

Table 4.2 Bike Years Scrambled Data

7 Million km each yr.	233,000 years	Voyager Space Craft	Supersonic Jet Plane
Space Shuttle	490 Million km each yr.	56,000 km/hr	61,320 km each yr.
1.33 Billion Years	Bike	350 Million km each yr.	40,000 km/hr
219,000 km each yr.	25 km/hr	11.7 Million Years	373 Million Years
117 Million Years	7 km/hr	167,000 Years	80 km/hr
Car	800 km/hr	Walking	700,800 km each yr.

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BIKE YEARS! QUESTIONS: PAGE ONE

Name: _____ Date: _____

1. Would it be practical to travel to Sirius by any of the modes of travel listed on the Bike Years Activity chart? Why or why not?
2. Do you think that it is possible that one of the Voyager spacecraft would ever be intercepted by a civilization around another star, even if such a civilization exists?
3. What travels at the speed of light that is capable of carrying information?
4. What would be the most practical way to get information from Earth to Sirius if we knew that a civilization existed around this star?
5. If perhaps the simulated message that had been received by a radio telescope here on Earth in Activity 1 had come from Sirius, how long ago would it have been sent? Why?
6. SETI scientists are listening to stars that are within 100 light-years of Earth. Why do you think they have chosen this limited distance?
7. Proxima Centauri is the closest star to Earth at a distance of 4.3 light years away. If you stand outside on a clear night and see the light coming from it, how long ago did the light leave that star? Explain your answer.
8. "Star Trek" is a TV show in which a starship goes to other star systems in our Galaxy. Can you think of any practical problems with this idea?