

Measurement and Data

Enrichment Investigation #4

Common Core State Standard(s):
4.MD.2

Standard(s) for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.

Materials Needed:

- Blackline Masters:
 - *What Schedule??*

Instructions:

1. Students will determine the amount of sunlight using the given information.
2. They will calculate elapsed time between two given times to help a student determine the best track selection based on his extracurricular activities.

Sources:

- <http://www.timeanddate.com/worldclock/astronomy.html?n=207&month=8&year=2012&obj=sun&af=-11&day=1>
- www.esu.edu/~bsockman/Projects/ExampleFreeTime.doc
- Additional enrichment for elapsed time can be found at: <http://nrich.maths.org/5916>

What Schedule??

Mission: Wake County School System needs your help! A student has called to the office for help in determining the best track for him to be on next year. He is very involved in soccer and really needs as much sunlight as possible to practice playing when he is tracked out. Based on the schedules, he has narrowed down his choices to track 1 or track 3. To help in the decision process, he picked one day during each of the four breaks for the two tracks and found the amount of daylight for that time of the year.

Your job is to analyze the chart and determine which track would get the most daylight. Look at each of the four days and figure out how much day light each day contains.

Track 1:

Date	Sunrise	Sunset	Amount of Daylight
10-Sep-12	6:54 AM	7:28 PM	
6-Dec-12	7:11 AM	5:01 PM	
5-Mar-12	6:39 AM	6:14 PM	
6-Jun-12	5:58 AM	8:29 PM	

Track 3:

Date	Sunrise	Sunset	Amount of Daylight
4-Aug-12	6:25 AM	8:16 PM	
29-Oct-12	7:34 AM	6:22 PM	
30-Jan-12	7:17 AM	5:39 PM	
30-Apr-12	6:23 AM	8:01 PM	

Track 1 would have a total of _____ hours and _____ minutes of daylight for the four days.

Track 3 would have a total of _____ hours and _____ minutes of daylight for the four days.