

CALIFORNIA STATE SCIENCE FAIR 2006 PROJECT SUMMARY

Project Number

J1125

Name(s)

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Project Title

Does Turning a Light Bulb On and Off Affect Its Lifespan?

Objectives/Goals

Does turning a light bulb on and off every couple of seconds affect its life positively or negatively? My objective is to find out the answer to this question.

Abstract

Methods/Materials

15 low life 75 watt light bulbs (all same brand), 3 a/c cords, 15 light bulb sockets, 5 "button flashers," 1 Electrical Timer.

Results

Constant On

Bulb No. Elapsed Hours On Hours Off Notes:

1 1724 1724 0 Went off around 8:30am on 4/02/06.

2 1598 1598 0 Went off around 4:41pm on 3/27/06.

3 1665 1665 0 Went off around 5:35pm on 3/31/06.

4 1727 1727 0 Went off around 11:30am on 4/02/06.

5 1406 1406 0 Went off around 4:30pm on 3/19/06.

Average 1748 1748 0

On 1 Hour, Off 1 Hour

Bulb No. Elapsed Hours On Hours Off Notes: 6 2065 1033 1033 Lightbulb still on as of 12:00 noon on 4/16/06. 7 2065 1033 1033 Lightbulb still on as of 12:00 noon on 4/16/06. 8 2065 1033 1033 Lightbulb still on as of 12:00 noon on 4/16/06. 9 2065 1033 1033 Lightbulb still on as of 12:00 noon on 4/16/06. 10 2065 1033 1033 Lightbulb still on as of 12:00 noon on 4/16/06. Average: 2065 1033 1033

2 Second On/Off Bulb No. Elapsed Hours On Hours Off Notes: 11 1714 1500 214 Went off around 6:00pm on 4/6/06 12 1627 1424 203 Went off around 3:30pm on 4/2/06. 13 1600 1400 200 Went off around 7:00am on 4/2/06. 14 964 844 121 Light bulb still on as off 11:30am 4/16/06

Summary Statement

My project is about finding the answer to the age old myth that turning a light bulb on and off does affect its life span.

Help Received

Dad helped in paying for electricity bill