

MERCURY MINE ELEMENTARY MSIP FINAL REPORT 2011

Introduction

1. Our science question was - "Does the diameter of the volcanic caldera affect the width of lava tubes?"
2. This question is important because it helps us better understand lava tubes and calderas. We also chose this because not many people have researched lava tubes in the past.

Background

3. We found articles on several discoveries and research from past MSIP groups. An article that interested us was when we read about a 7th grade MSIP team that found a cave inside of a lava tube.
4. Some questions that remained unstudied were, "Is there something else that affects the width of the lava tubes?" and "Can different occurrences affect a caldera?"
5. Our project relates and builds upon past studies because our question refers to lava tubes and volcanoes.

Experimental Description

6. The coordinates of our primary image are 8.70 N. Longitude and 254.30 E. Latitude
7. The images we found are in the Tharsis Province region of Mars
8. We chose the area because there were volcanoes that were close together but not so close that they could of messed with our data.
9. We used the image to find our answer to our question by measuring the width of the lava tubes in it.
10. We didn't use a control for our question.

Results

11. We found lava tubes that we measured to help us answer our question.
12. The lava tubes we found led to our answer because when we measured the width of them and it gave us more data. The data helped us tell whether lava tubes were affected by the diameter of the caldera.
13. Other supporting evidence that helped us answer our question was the diameter of the caldera.

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14. We did not use any other images to compare to our primary image.

Discussion

15. Our results show that the volcanoes may have not erupted for some time because many of the lava tubes were partially or completely collapsed. Also, our results showed that the diameter of the volcanic caldera does not affect the width of the lava tube.

16. Our results are important because it gave us the information that we needed to help us answer our focus question.

Conclusion

17. Does the diameter of the volcanic caldera affect the width of the lava tube.

18. Our research showed that the diameter of the volcanic caldera does not affect the width of lava tubes.

19. Our data showed that there was no pattern between the widths of different lava tubes, even in the same area. We know this because of our comparisons between the four volcanoes and lava tubes.

20. A group could research to find out if there is something that does affect the width of lava tubes

21. References that we used were:

<http://themis-data.asu.edu>, <http://www.newscientist.com/article/dn9220-lava-tubes-snapped-snaking-across-mars.html>, *Living on Mars* by Michael D. Cole

Volcanoes of Northern Arizona by Wendell A. Collier

People that provided information:

Steve Ruff

Jonathon Hill

Jessica Swann

Meg Hufford

Mr.Collins

Chris Edwards

The rest of the staff at the Moeur Building