



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

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| Name(s) Kayla L. Snyder | Project Number 38597 |
| Project Title Which Type of Terrain Will Erode the Least? | |
| Objectives/Goals I put soil in 3 different containers and left one with just soil, another one with just pebbles, and the last one with weeds and grass because it had roots. I then poured water on it and watched the water flow out of the containers containing different amounts of soil being carried with it. I discovered which type of terrain helped prevent the greatest amount of erosion to the soil. Abstract Methods/Materials 3 large empty bottles, 3 medium sized empty bottles, soil, small rocks and pebbles, and grass/weeds. Procedure: Step 1: Get 3 of the 6 bottles and draw one large rectangular hole on each of them to use as an outline to cut on. Step 2: Cut out the rectangles in the bottle. Step 3: Use the other three Coke bottles and cut the top off horizontally and keep the bottom part. Step 4: Fill all three bottles with soil and press down firmly on the soil to make sure it's compact. Step 5: Leave one of the bottles filled with soil. With the second bottle, put a layer of rocks over the top of it. With the third bottle, plant some grass in the soil. Step 6: Get the bottoms of the bottles and twine and wrap the twine around the top and bottom so it looks like U-shape and tape it in place. Step 7: Tie the twine onto the tip of the large water bottle so it hangs from it. Step 8: start pouring equal amounts of water into the three water bottles and see how much of the soil is carried with the water and falls into the small bottle connected. Step 9: Record your data and decide which type of terrain helps soil erode the least. Results I discovered that pebbles on top of the surface of the soil is the best way to keep land from eroding. The water came out very clear so you could see through it and see the other side. I learned something new because I thought the water would go through the crevices and the soil would erode a lot. The pure soil did the worst because there was a lot of soil that traveled into the other water bottle and the water was very dark and almost looked black. Conclusions/Discussion In conclusion, the best way possible to keep your yard or some type of soil from eroding because of water, is to put a layer of rocks on top of the soil. There are many different types of erosion and water erosion is something we see very often because of heavy rainfalls. There have been many recent floods and landslides that were washing away homes, cars, plants, and much more. | |
| Summary Statement My project is about the experimenting with three different terrains and discovering which one will prevent the most erosion. | |
| Help Received | |