

Scientific report essay



**ASSIGN
BUSTER**

The Rolling Choice A pillbug also known as a roly-poly is a small land creature that is often found in many areas around the world.

They prefer moist areas often living in soil, under rocks, and dead logs. The pillbug which is an isopod begins its life as a tiny egg and as it grows it sheds its old exoskeleton 4 to 5 times. A pillbug consists of three basic body parts, the head, thorax, and the abdomen. Pillbugs eat decaying plants and animals as well as some living plants. The purpose of this experiment was to learn how to demonstrate the scientific method and to learn if pillbugs are attracted to cornstarch. In this experiment I hypothesize that if a pillbug is exposed to cornstarch and sand then the pillbug will spend more time near the cornstarch and repel from the sand.

The equipment used in the experiment consists of... •A wooden crate that was 2inches high, 8 inches long and 5 inches wide. The wooden crate was used to hold the pillbug and the substances being tested. •Two 5×2 cardboard pieces. The cardboard was used as a divider to separate the pillbug and substances.

•One scoop of cornstarch •One scoop of sand The experiment was conducted in five trials. The pillbugs attraction to the substance was measured by the amount of time within one minute the pillbug was in the substance. Inside the crate the sand was placed on the left side followed by a cardboard divider and the cornstarch was placed on the right side followed by a divider, leaving a neutral spot in the middle where the pillbug was placed for one minute after each trial. In the first trial the pillbug was exposed to cornstarch.

The second trial the pillbug was exposed to sand. The third trial the pillbug was exposed to both substances. The fourth trial the substances were switched to opposite sides and the pillbug was exposed to both. The final trial the pillbug was exposed to cornstarch.

Trial One 8: 46am-8: 47am The pillbug was exposed to cornstarch. The pillbug walked through the cornstarch and spent 15 seconds in the cornstarch and the remainder of the time away from the cornstarch. Trial Two 8: 50am-8: 51am The pillbug was exposed to sand. The pillbug went to the sand and spent 30 seconds on the sand. The pillbug had sand on the two large antennas. The pillbug spent the remainder of the time away from the sand.

Trial Three 8: 53am-8: 54am The pillbug was exposed to both substances. Initially the pillbug went to the cornstarch and stayed in the cornstarch for 10 seconds. After leaving the cornstarch the pillbug stayed in a neutral position for 15 seconds. Finally, the pillbug spent the remainder of the time in the sand. (35 seconds) Trial Four 8: 57am-8: 58am Substances were placed on opposite sides; the sand was on the right and the cornstarch on the left.

The pillbug was exposed to both substances; the pillbug went immediately to the right spending 45 seconds on the sand. The rest of the time the pillbug was walking within the crate trying to crawl up the sides of the crate, not recognizing either substance. Trial Five 9: 00am-9: 01am In the final trial the pillbug was exposed to cornstarch. The pillbug spent 6 seconds on the cornstarch and for the remainder of the time the pillbug was trying to climb out of the crate. The pillbug spent a total five minutes (not including neutral

times) within the crate. Within the five minutes the pillbug spent a total of thirty one seconds in cornstarch and one minute fifty five seconds in sand.

The remainder of the time the pillbug was in a neutral location away from either substance. The experiment did not support our hypothesis. The data collected showed that the pillbug did not repel from the sand, it actually preferred the sand in comparison to the cornstarch. There could be numerous reasons why they pillbug was more attracted to the sand vs. he cornstarch.

The background information stated that pillbugs prefer moist areas, and the cornstarch was a very thick dry substance. Although, the sand was also dry the texture was more similar to a decaying plant or animal. The sand also had bits of stones, very similar to the pillbugs habitat. During this experiment I learned that the variables being tested have an effect on the outcome of the experiment, I learned how to effectively demonstrate the scientific method; I also learned that pillbugs prefer a substance to have a texture that it is accustomed to.