



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Kathleen Chelling	Project Number J1904
Project Title How Does the Type of Media Help Quicken the Tunneling of Harvester Ants?	
Objectives/Goals My objective is to use different media to increase the tunneling speed of Harvester Ants. If agar gel is put in with Harvester Ants, then it will quicken the speed of building tunnels more than sand or common soil.	
Abstract	
Methods/Materials 1. Twenty to twenty-five Harvester Ants per habitat (about one hundred fifty ants total) 2. Three types of media: agar gel, sand, and soil 3. Six habitats, two for each media 4. Magnifying glass 5. Ant food: grass seeds or a tiny piece (one and a half centimeter to two centimeters) of moist bread 6. Fresh water 7. Measuring device: ruler (centimeters) and yarn 1. Get six habitats for the three different Medias: soil, sand, and agar gel. Two habitats per media. 2. Get three Medias for the habitats (equal amount in each habitat): soil, sand, and agar gel. The independent variable is the type of media and the dependent variable is the length of tunnels. The constant variable is the same type and number of ants. 3. Gather twenty-five Harvester Ants for each habitat. 4. Put the soil in the habitat poke two to four holes. Make two holes one inch deep and the other two holes one half of an inch deep. 5. Insert twenty-five Harvester Ants into each habitat. 6. Store habitats at room temperature and wait about twenty-four hours for the ants to start tunneling. 7. Record the tunnels length by measuring the tunnels with the yarn and then measuring the yarn with the ruler. Record the number of tunnels everyday. Record your results in centimeters	
Results The agar gel came out with the greatest total length in tunnels. The sand finished second and the common soil last. They were all very close in the length, but the agar gel clearly was the fastest speed. The total mean of the agar gel had twenty-six and thirty-five hundredths more centimeters in tunnels than the sand. The total mean of the agar gel had one hundred one and three tenths more centimeters in tunnels than the soil.	
Conclusions/Discussion In conclusion, my results supported my hypothesis. Agar gel will quicken the tunneling of Harvester Ants. Agar gel is a good media to use in scientific research of ants, because it is firm, so tunnels will not collapse; it supplies nutrients, to promote healthy growth; and it prevents fungus and mold growth, so ants live longer. Therefore, agar gel promotes ants to tunnel faster, than sand and common soil.	
Summary Statement I found that agar gel helps quicken the tunneling of Harvester Ants more than sand or soil, allowing scientific research on ants to be done easier and more accurately.	
Help Received My Mom helped take pictures of me with my project.	