CWSF 2011 - Toronto, Ontario

Kate Berger, Jasveen Brar

Leaky Landfills: Liners vs. Leachate

Challenge: Environment
Category: Intermediate
Region: Kiwanis Southeast Alberta
City: Medicine Hat, AB
School: Medicine Hat High School

Abstract: Commonly used landfill liners were tested for resistancy to acetic acid, which is produced as a by-product of decomposition. Alternative substances were also tested. 'Leachate' was poured into miniature landfill models with liner samples. Clay, used in 66% of landfills, was found to be permeable and may have environmental consequences. Geomembranes, used in 6% of landfills, were found to be acid resistant.

Biographies

Kate - My name is Kate Berger and me and my partner Jasveen Brar are in grade 10 at Medicine Hat High School. Besides science fair, we are also involved in band and volunteering at the hospital. I am also in grade 6 piano. At our local science fair we won the best overall for our age group, as well as the Grassland's Naturalist Award for our project Leaky Landfills. We tested different types of landfill liners for resistance to acidic leachate generated during decomposition. This is my second CWSF, I also attended in 2009 with a project also centered on the environment. I plan to pursue a career in biology.

Jasveen - My name is Jasveen Brar and me and my partner Kate Berger are in grade 10 at Medicine Hat High School. Besides science fair, we are also involved in band and volunteering at the hospital. I am currently taking an art course and I love to read. At our local science fair we won the best overall for our age group, as well as the Grassland's Naturalist Award for our project Leaky Landfills. We tested different types of landfill liners for resistance to acidic leachate generated during decomposition. This is my first CWSF and I am very excited to represent our school and city. I plan to pursue a career in dentistry.