

# BIEC and Air Science Activity Day



On March 29, the teachers and tutors at the BIEC hosted the EMO Air Program, and we conducted 3 weather and science activities for the students. In the first activity, the younger kids observed the natural reaction of milk and soap in petri dishes— a spontaneous mixing caused by the opposing polar charges between the liquids breaking the surface tension. Adding color aided the reaction and made “planets” that we printed onto paper. The second activity also was for the younger students, who went outside to find and observe rainbows—on a clear sunny day! Aided by prisms, the tutors and kids discovered and observed that prisms disperse natural light into all parts of the visible light spectrum—i.e. colors of the rainbow. Third, the older students were challenged with an activity that summoned their powers of observation, as we attempted to grow (solid vinegar) crystals in petri dishes. Students observed crystal growth under a varying conditions, including solution cooling time, temperature of contact surfaces, and spontaneous formation with a solid nucleus in the solution. All hands were on deck,



with the tutors helping heat and prepare the solutions, critical for the experiment. Some crystals grew fast and covered the dishes, while others were much slower to form but showed more definition. Hand lenses were available to take a closer look. We concluded the activity with a discussion of how a super-saturated mineral solution and the right cooling conditions can grow crystals in nature, such as snowflakes, gems, and on dry lakes. [Article by Emma Ruppell, Pictures by Ian and/or Mary at BIEC](#)