

Summary & Activity: Mining for Minerals on Mars

Summary

Vernon Kramer, a mining engineer and geologist, shares his experiences, and discusses how they relate to what future engineers and geologists might face on Mars. He goes on to explain that in order to build a settlement on Mars, iron is necessary. Since iron is too heavy to bring from Earth in large quantities, geologists must find a source of iron on the Martian surface. Lucky for us, the Opportunity rover did just that! It found an iron-bearing mineral called hematite. Hematite appears on Mars as tiny round marbles called spherules and there is enough there to produce all the iron necessary for the building of a Martian settlement. Hematite spherules have been found lying on the top of rocks and in loose sand, in varying concentrations on the surface of Mars. However, there are also rock fragments mixed in these areas. Vernon challenges the students to “mine” for these hematite spherules, asking them to design a method to collect the most spherules as possible, as quickly as possible, without collecting the rock fragments and sand in the process.

Video Run Time: 12 minutes

Mining Hematite Spherules - Classroom Activity

Activity not included in web preview.