

The Winds of Change

Student Version

Adapted from the Athena Mars Exploration Rovers web site located at athena.cornell.edu/kids/home_07.html

Why should your team do this activity?

The Martian surface can be very windy and often experiences huge dust storms. These Martian winds and dust storms alter how Mars appears to observers here on Earth. This experiment will show you how the weather affects the way Mars appears, and how wind and weather can change the surface of the planet.

The Necessities

- ★ Red, brown, or orange modeling clay
- ★ A tray or cookie sheet
- ★ Sugar
- ★ Pen or pencil
- ★ Idaho TECH Lab Notebook



Directions:

1. Use a spoon to spread a thin layer of modeling clay over the surface of the tray, making bumps to represent the surface of Mars.
2. Evenly sprinkle some sugar over the clay.
3. In the next step, you will blow across the landscape. What do you think will happen? How much sugar will move? What will it look like while it's in the air, and after it has settled? Write down some of your ideas in your Lab Notebook.
4. Experiment with blowing across your Martian landscape and watching the effect of the moving sugar and the patterns that are formed when the sugar is allowed to settle.

What did you find?

The winds on Mars are fast and furious enough to keep the dusty sand forever suspended in the air – turning the sky a pinkish-peach color. All that wind not only moves the sand and soil from place to place, but also reveals and hides features on the surface of the planet that astronomers try to spot. How do you think Martian winds might affect the exploration of Mars?

