

Home and Away: Comparing Mars and Earth

Part One

Purpose

The purpose of this activity is to gain a greater understanding of both Mars and Earth, through comparison/contrast. Students will develop writing and computer skills, as well as creative arts skills.

Students will be able to

1. Recognize both Mars and Earth, and note specific, defining characteristics of each.

Important Vocabulary (key terms in bold)

Mars	Earth	weather	temperature
atmosphere	climate	humidity	wind speed
barometric pressure			

Brainstorming Exercise: KWL Chart

Students ‘brainstorm’ about each planet, Mars and Earth, noting as many facts as possible about each and writing them in the ‘K’ column of a KWL (Known/Want to Know/Learned) chart. Then students pose questions about both planets, to decide what they want to write in the ‘W’ column of their chart. At the end of the lesson, students can complete the chart, noting the new information learned in the ‘L’ column of the KWL chart. This activity can be completed individually or as a whole class.

(** See below for printable page for this activity.)

Stormy Weather: Meteorology on Mars and Earth

Some very good lessons regarding temperature, winds, humidity, and atmospheric pressure on Mars and Earth can be found online at the “CERES: Mars Data” site (<http://btc.montana.edu/ceres/html/mars1.htm>) and at “The Guardians” site (http://www.theguardians.com/space/orbitalmech/gm_em602.htm). Another good lesson is at the “Weather on the Planets” site (<http://lithops.as.arizona.edu/~jill/EPO/Solarsystem/weather.html>), and includes a comparison of weather on Mars and Earth to that on Venus. After completing this and/or other related lessons, you may want to expand on it using the following activities.

The Universe Channel: Weather

Students write weather reports for both Mars and Earth, presenting them to the class. Students use facts about the weather on both planets in order to write their reports. Students word process their reports, using a standard set forth by their teacher (e.g. double or single space, etc.). Further, students create a slide show/Power Point presentation to go along with their reports, using images gleaned from internet sources. (News Reports and Sports/Community/Health Features can also be included, however these most likely will develop creatively, rather than factually.)

Helpful Internet Resources

1. http://www.lpi.usra.edu/education/MarsMillennium/earth_mars.html
2. http://www-k12.atmos.washington.edu/k12/resources/mars_data-information/mars_overview.html#Meteorological%20highlights
3. <http://mars.sgi.com/ops/asimet.html>

Wish You Were Here

Individually or in pairs, students design images for and write sentiments onto postcards from Mars. They can use any medium to create their images—computer graphics, paint, sketching, etc. Either the image or the text (or both) must refer to the weather on Mars in some way. Each postcard should fill an entire 8 ½ x 11 sheet of paper, or larger (e.g. poster board), and can then be displayed.

Be the Weather...!

Students use dance/movement to music to express weather as it might be on Mars. Students can choose their own music, but there cannot be any lyrics! They can perform individually or in small groups. A tape/CD player will be necessary for this activity.

Variation: Students do the same activity, imagining they are astronauts, aliens, or a Mars Rover under the influence of Martian weather.

KWL CHART

<i>Know</i>	<i>Want to learn</i>	<i>Learned</i>