

ABC Mars Fact Sheet Student Page	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Equatorial diameter</u>	12,756 km (7,926 miles)	6,786 km (4,217 miles)	At 50 mph, how long would it take to drive around the equator
<u>ABC Fact</u> <u>Length of Year</u>	<u>Earth ABC's</u> 365 ¼ days (24 hr length of day)	<u>Mars ABC's</u> 687 Earth Days (24 hr, 37 minutes length of day)	<u>ABC's Learning Tips</u> When would you celebrate your birthday on Mars? Would you mark the months by Earth time? The seasons?
<u>ABC Fact</u> <u>Distance from Sun</u> (in millions)	<u>Earth ABC's</u> 147.1-152.1 km (91.4-94.5 mi)	<u>Mars ABC's</u> 206.6-249.2 km (128.4-154.8 mi)	<u>ABC's Learning Tips</u> How big would the Sun look in the sky? The Earth?
<u>ABC Fact</u> <u>Axis Tilt</u>	<u>Earth ABC's</u> 23.5 degrees	<u>Mars ABC's</u> 25.2 degrees	<u>ABC's Learning Tips</u> Would there be shadows at noon?
<u>ABC Fact</u> <u>Crust</u>	<u>Earth ABC's</u> Silicates	<u>Mars ABC's</u> Silicates	<u>ABC's Learning Tips</u> What are silicates?
<u>ABC Fact</u> <u>Mantle</u>	<u>Earth ABC's</u> Iron, Nickle, silicates	<u>Mars ABC's</u> Silicates	<u>ABC's Learning Tips</u>

<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Core</u>	Iron and Nickle	Iron sulfidesI	
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Gravity</u>	100%	38% of Earth's Gravity	How much would you weigh on Mars?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Soil</u>	Silicon (Si) and Oxygen (O2) bound up with metallic elements such as iron and magnesium plus organic particles.	Silicon (Si) and Oxygen (O2) bound up with metallic elements such as iron and magnesium.	What difference do the organic particles make?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Atmosphere</u>	78% nitrogen, 21% oxygen 1% Argon, 0.03% carbon dioxide	95% carbon dioxide, 3% nitrogen, 1.5% Argon, and trace amounts of water vapor	Could you breathe on Mars? See long distances?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Moons</u>	1 Moon	2 Moons—Phobos and Deimos	
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Surface Pressure</u>	1,013 millibars	6 millibars	Where would you have to go on Earth to find such a slight atmospheric pressure?

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<u>Water Ice Clouds</u>	2 to 11 km high (1 to 7 miles)	10 to 25 km high (6 to 15 miles)	Would you expect them to produce rain?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Southern Polar Cap</u>	Frozen water	Frozen carbon dioxide (dry ice) over a significant water ice cap	What would you do with dry ice on Mars?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Northern Polar Cap</u>	Frozen water	Frozen water	What would you do with the frozen water on Mars?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Temperature Range</u>	-127 degrees F (winter, polar) to 136 degrees F (summer, tropical or desert) (-88 to 58 C)	-194 degrees F to 72 degrees F (-125 to 25 C) average -81 degrees F	What protection would you need from the extreme temperature?

<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Surface Features</u>	25% land (7 continents) with varied terrain; mountains, deserts, plains, river valley, beaches, 75% water (salt)	Four types of regions 1.)old regions with heavy craters; 2.) windblown volcanic plains; 3.) huge volcanoes (some 93 miles wide) and tallest in solar system-Olympus Mons 17 miles high; and 4.) channels and canyons from erosion—Largest canyon in solar system, Valles Marineris, 2500 miles long and up to 7 miles deep—No liquid surface water is known to exist	How would these extreme surface features affect travel and communications?
<u>ABC Fact</u>	<u>Earth ABC's</u>	<u>Mars ABC's</u>	<u>ABC's Learning Tips</u>
<u>Major Colors</u>	Blue water, white clouds, green vegetation	Red, from rust-like coating on surface soil much like lava rock	Would you miss the spectrum of colors in the earth environment?
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<u>Weather</u>	Different weather patterns exist for polar, temperate, or tropical climates in each season (fall, winter, spring, summer)	Cold and Dry. No precipitation. Dust storms which can grow to envelop the whole planet. Dust Storm can last up to three weeks with high winds.	How would this affect travel and communication?

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<u>Life Forms</u>	Species of life forms number over a million major types: bacteria, fungi, green plants, animals and humans.	Evidence for the existence of life in inconclusive. We just don't know for sure yet if Mars ever supported any type of life, either extremely simply bacteria or fungi or other forms.	