LOG 5: Mission to Mars: Mars Resources

Remember that each resident of Mars requires food, water, and 1-100 kilowatts of electricity. What can we find? What can we use? What can we bring from Earth? What resources are on or below the surface.

Energy Sources on Earth	Energy Sources on Mars
Solar Energy	60% of the amount of Earth's Solar Energy
Wind Energy	Global Dust storms could drive a wind turbine
Wind speed of 10 meters/sec for power	Wind speed of 30 meters/sec for power
Fossil Fuels (coal, oil, natural gas)	_____
Hydroelectric Energy	_____
Biofuels (such as wood)	_____
Geothermal Energy	Possible_____
Nuclear Energy	_____
_____	_____

Geology of Earth	Geology of Mars
Water covers 71% of Earth's surface (96.5% of water in oceans)	There is no surface liquid water on Mars
Ice covers 10% of Earth's surface	Above 60°N/S is 50% ice, rest: 20% ice
Core is mostly iron with a little nickel	Core is nickel, iron, and Sulphur
Mantle and crust of silica rich rocks	Mantle and crust of silica rich rocks
Crust much thinner in oceans:	Crust much thicker than Earth's 50-125km deep
Average crust depth: 40 km	Average crust depth: 50-125 km.
Energy from radioactive decay	Smaller planet cooled down faster than Earth
Active volcanoes	No evidence of recent volcanic activity