

Model-Based Assessment: Colony on Mars

Instructions: Complete the model below using words and/or drawings. You can complete the model below in OneNote, or open up the Word document, print the model out or complete the model on some scratch paper and insert a picture of your work below!

Big question: “What would be needed in order to successfully provide electricity to a small colony on Mars?

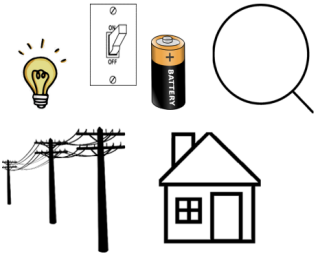
Goal: Create a model showing materials and set-up needed in order to successfully provide electricity to a colony on Mars. For purposes of your model, your colony will consist of a research station, a couple homes, and a greenhouse with lots of lights. Your model must show how they will generate electricity, how electricity gets to the places it needs to, and all materials needed and labeled. Then, you will describe what is needed, using our own electrical system as a model. You may use the 'possible model elements' shown, or google for other images, or free draw. Everything must be labeled and described.

This is an open-resource assessment, meaning you can use lesson materials and online sources to complete it. However, you must include links to your reference materials, and are NOT allowed to plagiarize from those sources- all descriptions must be in your own words and show your own understanding.

Model: (In each phase, *draw and label* with words what you can see and what you think might be happening that you can't see.)

Goals for Our Models	Mars Colony	Questions & Wonders
To earn full credit, your model must show: Energy Transformation ☐ Three forms of energy ☐ Transformations of energy Electricity ☐ Atomic-level representation of electricity ☐ Function of a switch ☐ At least one circuit diagram Electromagnetism ☐ How electricity is generated Structure ☐ Descriptive Current Labels ☐ Descriptive Voltage Labels <u>Possible Model Elements</u>		What do you wonder about?

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Explanation: Your answer to the big question. Should be at least 2 paragraphs.

Works Cited If you referenced outside sources (other than our class materials), please paste links here.