



Communication System

Brainstorm and write your answers on a separate sheet of paper.

1. What different ways do we have of communicating with each other on Earth? Do some methods work better short-distance than long-distance? What are the strong points of each of these methods? What limitations does each have?
2. Why do you think communication would be important in each of the following situations:
 - a. Between Mars **colony** inhabitants within their constructed **habitats**?
 - b. Between inhabitants in the Mars colony and those conducting missions elsewhere on the surface of Mars?
 - c. Between inhabitants in the Mars colony and Earth*
*(*Mars Fact: It takes 20 minutes for a radio signal to travel between Earth and Mars, as they are 200,000,000 miles apart.)*
3. Research Mars facts. Do you think any of our earthly communication methods (#1 above) would be impractical on Mars? Why or why not? Which earthly communication methods do you think would be particularly useful? What features of them might you have to modify?

Identify and write down four “Mars Facts” that impact the design of a Communications System.

- 1.
- 2.
- 3.
- 4.



4. Design a Communications System to be used by the Mars colony inhabitants that will have components to satisfy the different situations they could encounter (#2). You may want to sketch a blueprint showing how your design will look and how it will work.