



Communications Expert Instructions

Overview

Communications experts assist all communications between mission control and your team. You make sure there is a steady flow of information to mission control, and from mission control back to each expert. You should relay written and oral reports every 5 - 6 minutes.

- One person types report form information from the navigation and science/ operations experts and other messages into a chat/ data window. This person should be able to type without looking at the keys. This task is very important because technical difficulties during major weather disturbances can disrupt communication.
- The other person uses the videoconferencing/ computer software and a microphone to talk to mission control. This person asks and answers questions to and from mission control. Mission control provides feedback and guidance as needed. This person may be asked to compute the total fuel usage and to communicate with other teams as needed.

Flow of Communications

Review the communication flow before the mission starts:

- Mission control sends a message.
- You make sure the correct people either hear or read the message. Do not assume they have heard or read the message unless they tell you they received it.
- You read and type reports to mission control.
- Make sure you read any urgent messages first before you read less important ones.
- Ask team members to write legibly, and be sure you know the meaning of all abbreviations before the mission starts.

Communications Protocol

Become familiar with the communications system between you and mission control. This procedure is called a protocol.

It is important to relay the information in an appropriate manner. It ensures that we know on both ends that messages have been received. All communications sent to mission control should include the proper protocol as explained here:

- Mission control needs to know when your message is complete. At the end of your message, always say, "Over," as in, "The message is over."
- Mission control needs to know if you have understood the complete message. After they say, "Over," you should say one of these:
 - o "We understand."
 - o "We read you."
 - o "We copy that."
 - o "Roger."
- Mission control should be addressed as "mission control" or "Commander (Name)."

- Every message you send to mission control should end with "Over." For example, "Mission control, this is Operation Luna. I have a message from the alpha team. The message is, "Site G is rated 1. Over."
- Mission control may also send messages that need to be read to various team members. Make sure mission control knows that messages have been received and understood. When you get a message and it has been given to the correct people, type, "We copy that."
- When you are pausing to receive a message, you can say, "Ready to receive," or, "Standing by." While you are waiting to receive a message, there should be no extra communication.

Technical Tips

- All communication should be spoken first over the microphone. Then type it into the chat window.
- Depending on your equipment, you may need to be a certain distance from the microphone so the communication is clear.
- The quality of communication varies. Speak slowly and clearly.

Preparing for Mission Day

- Complete some math practice problems similar to the ones you'll see on mission day.
- Complete a mini-mission with your class. A mini-mission is a smaller version of the real mission. It gives you some practice for the real mission. For your role you need to follow the tutorial that teaches you to use the communications tool. You'll use the same tool on mission day. The tool is shown below.
- To access this tool on mission day, go to this web site:

<http://www.e-missions.net/flashcom/mars>

Select your team name and "Communications" from the dropdown menu. The mission commander will give you the password to log in.

