



Measure of Mission Readiness

Astronauts go through rigorous training to be qualified for an expedition. They must understand the dangers they might encounter and how to avoid danger. They keep track of their “mission readiness” and what they need to master before they start a mission.

Have you mastered all the information you may need to fly a successful Space Station Alpha mission? Look at the following lists of topics for each team. Follow the direction provided and circle the appropriate number of topics that are most important to your team job. Discuss the ones you selected with your team and with the class. If you know the important information about these topics, you will have a very successful mission!

Life Support

Circle the 6 most important things an astronaut needs to know about in order to avoid a life support emergency.

- odor
- space station altitude
- solar cells
- manual air pumps
- radioactive particles
- carbon dioxide removal
- gravity
- oxygen and carbon dioxide exchange in the lungs
- air pressure in the station
- equipment that regulates atmospheric composition in the station
- electricity
- solar flares
- extravehicular activities

Radiation Health

Circle the 6 most important things an astronaut needs to know about in order to avoid a radiation emergency.

- magnetism
- DNA mutations
- shielding choices
- how to remove radiation from the Earth’s atmosphere
- how nuclear reactions occur
- solar events

- proper use of microwave tools in space
- radioactive materials in soil found on the moon
- proton counts
- limits on exposure to radiation
- effects of radiation on the human body
- how much power is used on the space station

Crisis Management

Circle the 6 most important things an astronaut needs to know about in order to manage the solar event and its consequences.

- location of resources in the Space Station
- amount of oxygen needed by the astronauts
- shielding options
- the amount of water on the station
- how much power is required to run the station
- which team has information on power supplies
- which team monitors oxygen levels
- how to give information to Mission Control
- how to rank situations in the space station
- events on the sun
- the health of the crew

Communication Team

Circle the 4 most important things an astronaut needs to know about in order to manage the solar event and its consequences.

- communication protocol
- the name of the Flight Director at Mission Control
- the jobs of each team
- radiation levels
- how to use the Chat options for communication
- how to prioritize the reports to Mission Control
- which messages should be read verbally and which should be typed and sent
- the amount of power used on the station daily