

Rendezvous with a Comet

Isolation (ISO 1, 2, 3)

Laboratory inventory and crew safety are primary responsibilities of the ISO team

Standards	Space Station Systems and CLC Teams
<p>National Science Education Standard: <i>Organisms can survive only in environments in which their needs can be met.</i> <i>Objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances. Those properties can be measured using tools, such as rulers, balances, and thermometers.</i> <i>Objects can be described by the properties of the materials from which they are made, and those properties can be used to separate or sort a group of objects or materials.</i></p> <p>Mass Curriculum Framework: <i>Differentiate between properties of objects (e.g., size, shape, weight) and properties of materials (e.g., color, texture, and hardness).</i> <i>Recognize that the measurement of volume and mass requires understanding of the sensitivity of measurement tools (e.g., rulers, graduated cylinders, balances) and knowledge and appropriate use of significant digits.</i></p>	<p>Atmosphere management system – atmosphere composition control, contamination control, radiation detection.</p> <p>Navigation and guidance systems – monitor micrometeoroid shields</p> <p>Laboratory inventory systems – monitor trace gases, storage of liquids, safety engineering</p> <hr/> <p>During the CLC mission, students will apply what they have learned in the classroom to:</p> <ul style="list-style-type: none"> ○ ISO 1 - Monitor storage and inventory of liquid chemicals <ul style="list-style-type: none"> ▪ Mass chemical samples to detect leakage (LS and MED monitor health and safety of the crew) ▪ Disposal of hazardous materials ○ ISO 2 - Monitor micrometeoroid shields <ul style="list-style-type: none"> ▪ Frequency and size of micrometeoroid impacts (NAV needs this information) ▪ Assess micrometeoroid shower risk to solar power systems (LS determines if filters for solar array panels are needed) ○ ISO 3 - Test air filters <ul style="list-style-type: none"> ▪ Radiation detection in air filters (MED monitors radiation detection badges worn by the crew. LS monitors air flow and air filtration systems)