

**Main Topic:** Cell vs. Organ System

**Learning Objectives/Outcomes:** Compare the functions of cell organelles to the functions of an organ system.

<b>Topic 1:</b> cytoskeleton	<b>Topic 2:</b> cell membrane	<b>Topic 3:</b> mitochondria	<b>Topic 4:</b> lysosome and vacuole	<b>Topic 5:</b> nucleus
<p><b>Ideas</b> What organ systems is cytoskeleton similar to?</p> <p>The cytoskeleton is similar to the skeletal and muscular system</p> <p>Explain the similar functions.</p> <p>It provides structure and allows for movement within the cell</p>	<p><b>Ideas</b> What organ system is the cell membrane similar to?</p> <p>The cell membrane is similar to the integumentary system</p> <p>Explain the similar functions.</p> <p>It separates and protects the internal structures from the external environment and it regulates water loss</p>	<p><b>Ideas</b> What organ system is mitochondria similar to?</p> <p>The mitochondria is similar to the digestive system</p> <p>Explain the similar functions.</p> <p>It breaks down nutrients to produce energy</p>	<p><b>Ideas</b> What organ system is similar to lysosomes and vacuoles?</p> <p>The lysosome and vacuole are similar to the excretory system</p> <p>Explain the similar functions.</p> <p>It stores waste and removes waste</p>	<p><b>Ideas</b> What organ system is the nucleus similar to?</p> <p>The nucleus is similar to the nervous system</p> <p>Explain the similar functions.</p> <p>It provides instructions for the functioning of the system</p>