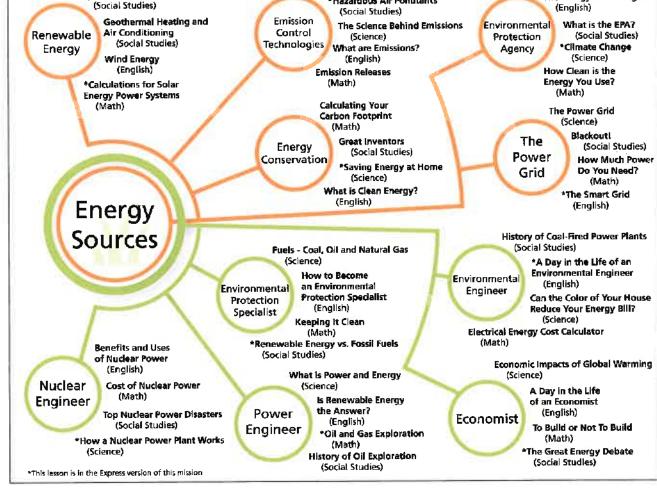
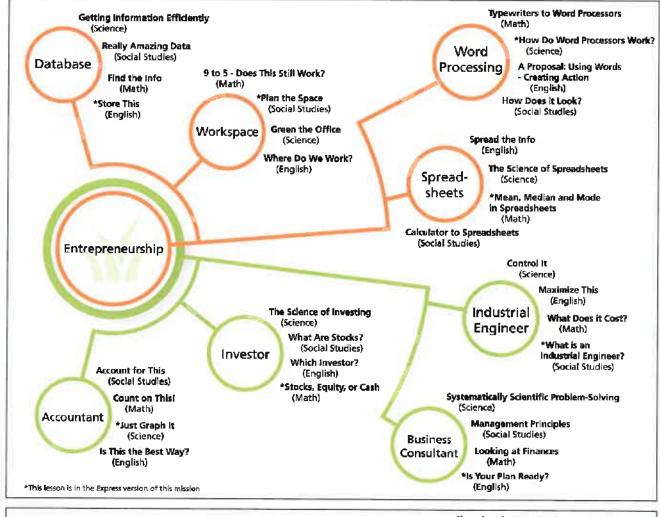


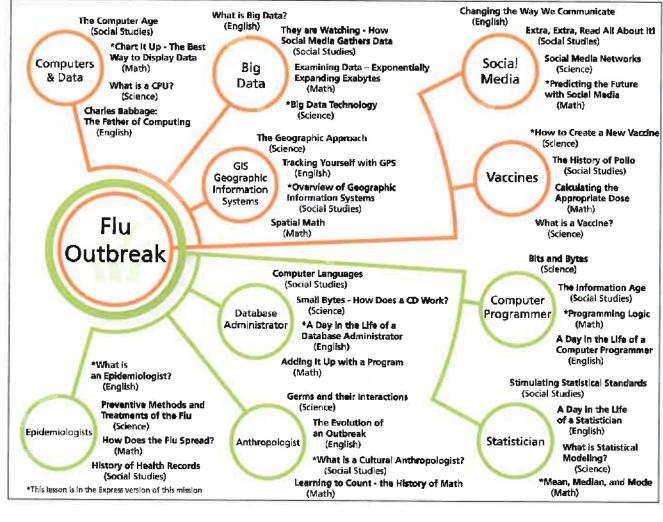
## MISSION OUTLINE DIAGRAMS

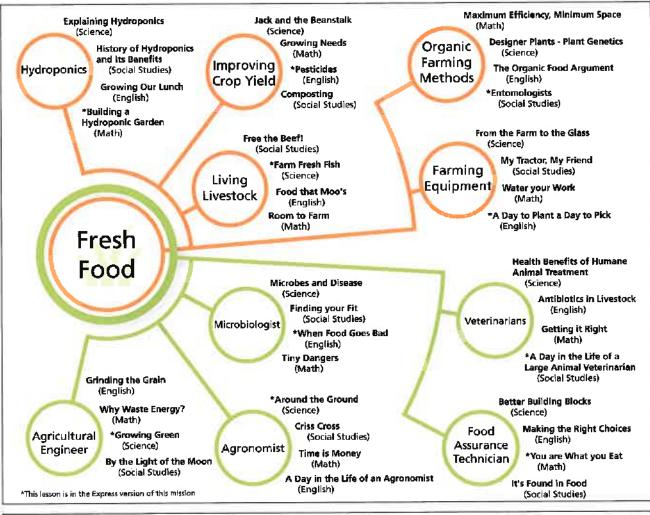
| Mission                      | Description  | Career Clusters                     |
|------------------------------|--|-------------------------------------|
| Dolphin Rescue               | Help rescue rehabilitate an injured dolphin, including creating an artificial prosthetic tail                                  | Biomedicine, Marine<br>Science      |
| Energy Sources               | Evaluate alternative or upgraded energy sources for a city that currently has an old coal-fired power plant                    | Energy Production,<br>Environment   |
| Entrepreneurship             | Set up a new business with a focus on entrepreneurship   | Finance, Business                   |
| Flu Outbreak                 | How health and IT professionals can use data warehousing and analysis to predict flu outbreaks using GIS and social media data | Information<br>Technology           |
| Fresh Food                   | Consider methods to increase production of local foods in a community  | Agriculture                         |
| Hack Attack                  | Learn about methods to create and protect website, apps and social media after a school's website and media are hacked         | Computer Science                    |
| Haiti Orphanage              | Design and build an environmentally-sound orphanage for children left homeless by an earthquake in Haiti                       | Construction,<br>Sustainability     |
| Heart Surgery                | Conduct heart surgery and therapy for a child with a heart defect; evaluate the use of artificial hearts or heart components   | Medicine                            |
| Lightweight<br>Aircraft      | Design a lightweight and easily maintained aircraft for distant missions   | Lightweight Metals<br>Manufacturing |
| Manufacturing<br>Concept     | Use modern manufacturing techniques to design and build a new concept car  | Advanced<br>Manufacturing           |
| Rescue Robot                 | Explore technology used for robotics design, such as sensors, electrical circuits, industrial design and computers             | Electronics,<br>Computer Science    |
| Transportation<br>Congestion | Evaluate new transportation methods for a city that has a traffic congestion problem   | Transportation                      |

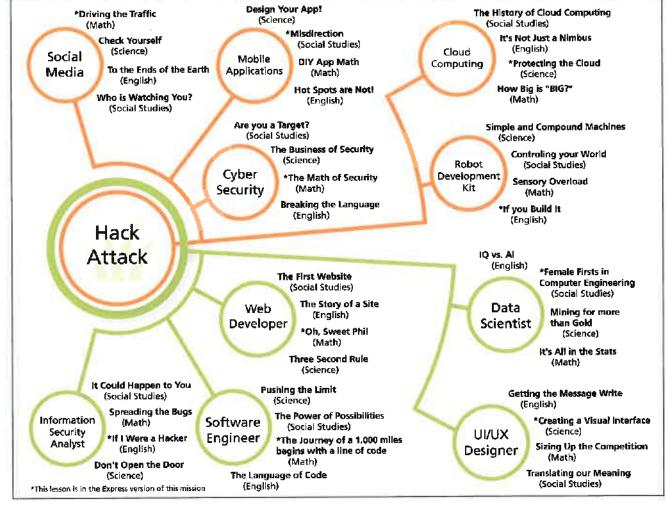
Antibiotics in Livestock Measuring Up Using Diving Decompression Tables (English) (Math) (Math) History of Antibiotics Diving in Warfare \*The Strength of Limbs Diving (Social Studies) (Science) (Social Studies) Artificial Antibiotics Gear **Breathing Under Pressure** \*How Antibiotics Work Prosthetics in Sports Limbs (Science) (Science) (English) Observing Sea Life Using Submarines History of Prosthetics The Right Dose (English) (Social Studies) (Math) Inside the Cell Phone \*Radio Tracking in Conservation (Science) (Science) **Effects of Cell Phones on Society** An Overview of GIS Systems Cell (Social Studies) (Social Studies) Radio Phone \*Designing A Cell Network Whale Tracking with GPS Tracking (Math) (Math) Privacy Issues of Radio Tracking Cell Phone Help When You Need It (English) (Enalish) Dolphin Rescue Modern Machining Technology \*A Day in the Life of a Marine Biologist (English) (English) A Day in the Life of a Machinist Lessons from Gulf Oil Spill (Math) (Social Studies) Machinist Marine 3-D Printing Technology Jacques Cousteau (Math) (Social Studies) Biologist Getting in Shape Whale Hunting (Science) (English) A Day in the Life of an Aquarium Diver Physics of Swimming The Perfect Habitat (Math) (English) \*Calculating a Diet for a Dolphin Students Driving Change \*An Underwater Laboratory Bio-(English) (Science) Medical Veterinarian (Math) **SCUBA** The Bionic Man Diving in Warfare Engineer Advanced Surgical Care in Pets (Science) (Social Studies) Diver (Social Studies) \*What is Biomedical Engineering Observing Sea Life in (Social Studies) Modern Advances in Veterinary Care a Submarine (English) (Science) \*This lesson is in the Express version of this mission Hydroelectric Power Plants The Energy STAR Program \*Hazardous Air Poliutants (Social Studies) (English) (Social Studies) Geothermal Heating and Emission What is the EPA? The Science Behind Emissions Environmental Air Conditioning Control



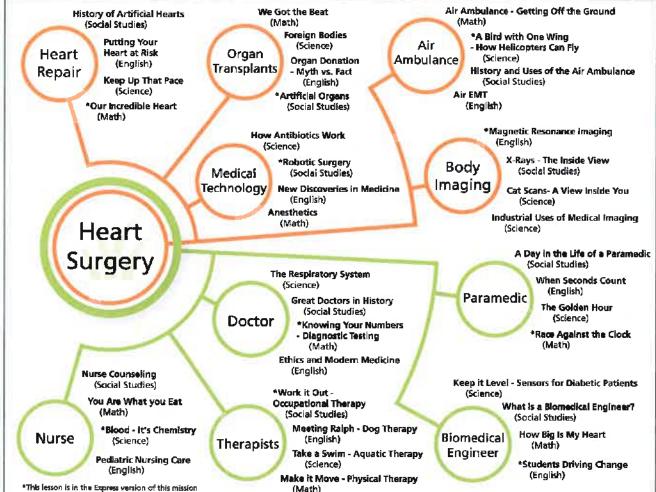


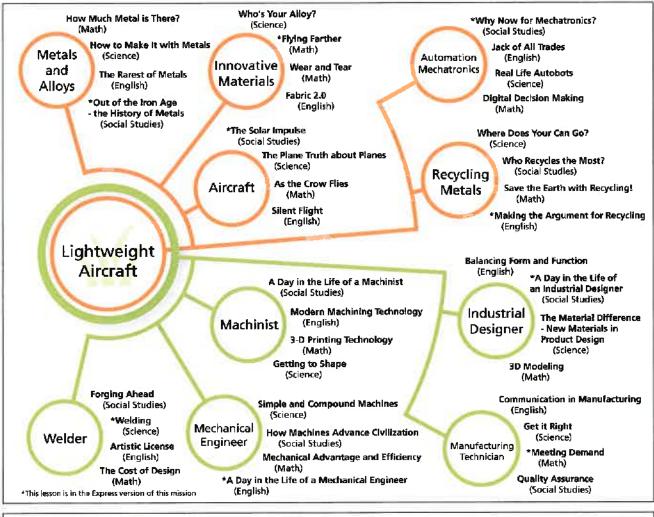


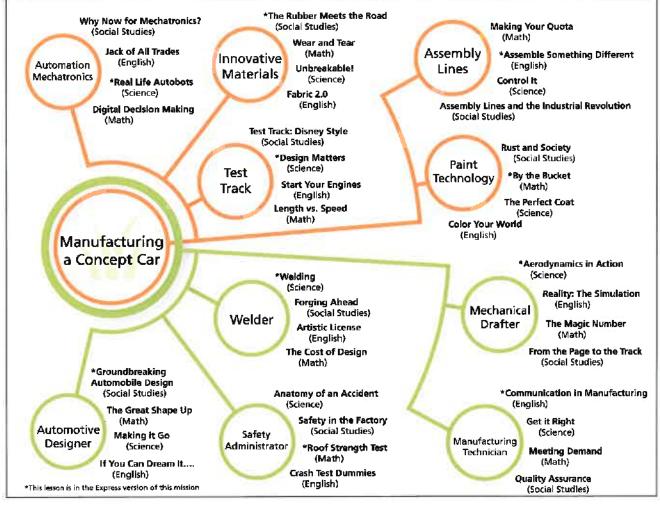


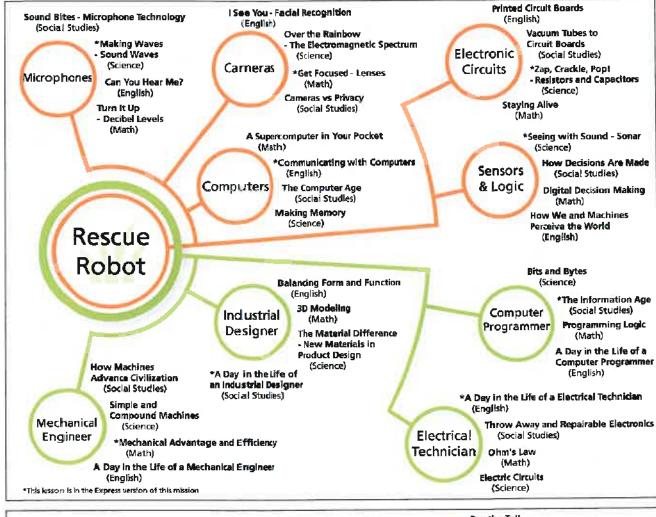


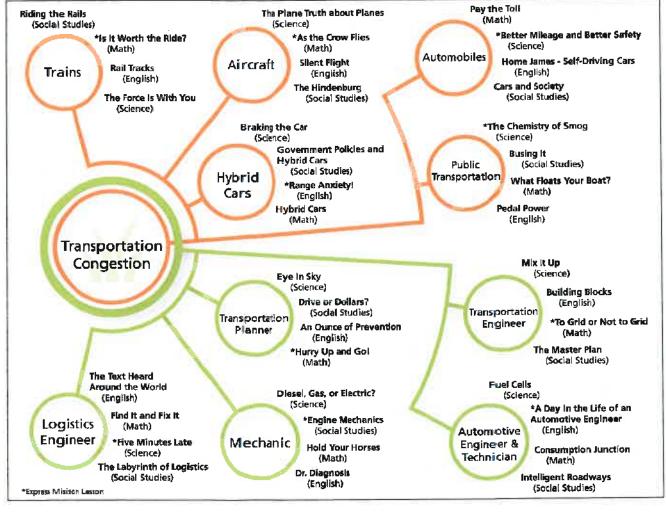
\*Determining Water Safety Energy Conversion Rates for Solar Panels Antibiotics in Livestock (Science) (English) Natural Disasters and Advancements in Green Disease in Haiti (Social Studies) History of Antibiotics **Building Technology** Green (Social Studies) Water (English) **Antibiotics** Buildings Making Clean Haw Antibiotics Work **Purification** \*Efficient Building Construction **Drinking Water** (Science) (Social Studies) (English) Geothermal Heating and Cooling \*Antibiotic Doses for Children The Water Cycle (Math) (Science) The Great Alaskan Earthouake Effects of Cell Phones on Society (Social Studies) (Social Studies) Measuring Earthquakes
- The Richter Scale Cell Inside the Cell Phone (Math) Earthquake (Science) Phone Earthquake Safe Buildings Science Designing A Cell Network (Science) (Math) \*An Earthquake Strikes Haiti (Social Studies) \*Cell Phone - Help When You Need It Haiti (English) Orphanage Amazing Architectural Art (Social Studies) The Best Type of Bridge \*What a Hurricane Can Do to a Building **Builder of a Civilized World** Civil (English) (English) Engineer \*Stand Your Ground Architect A Day in the Life with Surveying of an Architect (Math) (English) Modern Wonders of the World Designing an Orphanage (Social Studies) (Math) Calculating Antibiotic Doses for Children Trash Troubles \*Designing Electric Circuits in a Home (Math) (Social Studies) To Vaccinate or Not to Veccinate Monitoring Our Air A Day in the Life of (English) an Electrician (Science) Nurse (English) \*Preventative Medicine for Children Environmental Electrician A Day in the Life of an Energy Use in the Home Engineer Environmental Engineer (Social Studies) Providing Medical Care In the 3rd World (English) (Social Studies) Great inventors: Edison vs. Tesla Supplying Clean Water (Math) \*This lesson is in the Express version of this mission (Social Studies) Air Ambulance - Getting Off the Ground We Got the Beat History of Artificial Hearts (Math)











## **Mission Challenges**

The Mission Challenges provide simple, hands-on activities emphasizing problem solving, critical thinking, teamwork and communications. These mission capstone projects require simple, readily-available materials.

## Look for the Mission Challenges in the Resources section of your teacher account!





## **Papercraft Figures**

As students complete each tool or teammate in a mission, they can access collectable papercraft figures. These foldable, 3D figures include a summary of the career or technology and can help provide further rewards to students.

Teachers can access the papercraft figures in the Curriculum Preview in the Resources section of your teacher account.



