## TEKS/Prerequisites

7.12b--identify the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous and endocrine systems. **(Supporting Standard)**

## Guiding Questions/Specificity

What are the primary functions of the human body systems?

**Teacher Note**
From this unit students should gain an understanding of what type of work each system performs, not just the anatomical names of the systems, organs, and parts.

## Sample Assessment

Two systems that work closely to maintain overall homeostasis in the body are the

- A. circulatory and endocrine
- B. respiratory and excretory
- C. excretory and endocrine
- D. nervous and endocrine

## Vocabulary

- Function
- System
- Human organism
- Human Body
- System:
  - Circulatory
  - Digestive
  - Endocrine
  - Excretory
  - Integumentary
- Muscular
- Nervous
- Reproductive
- Respiratory
- Skeletal

## Instructional Strategies

**Lab**
Earth worm dissection

**Exemplar Lesson**

TEK7.12B --- Dissection; Human Body Systems Stations

**Cooperative Learning Strategy**
Quiz, Quiz, Trade

## Resources/Weblinks

- **STEMscopes**
  [https://n11052d40706.acceleratelearning.com/login](https://n11052d40706.acceleratelearning.com/login)

- **Google Drive**
  - C & I: Middle School Science Resources

- **Virtual Worm Dissection**
<table>
<thead>
<tr>
<th>TEKS/Prerequisites</th>
<th>Guiding Questions/Specificity</th>
<th>Sample Assessment</th>
<th>Vocabulary</th>
<th>Instructional Strategies</th>
<th>Resources/Weblinks</th>
</tr>
</thead>
</table>
| 7.13a-- investigate how organisms respond to external stimuli found in the environment such as phototropism and fight or flight | Emphasize response to stimuli when teaching the nervous system. | Sweat drips down a student’s neck while the student hikes up a rocky trail on a field trip. What is the student’s body trying to control by sweating? | Fight or flight | **Lab Activities**  
*Human Body Regulation*  
Muscles, Muscles, Everywhere Lab  
[https://www.teachengineering.org/activities/view/cub_human_lesson02_activity2](https://www.teachengineering.org/activities/view/cub_human_lesson02_activity2)  
Reaction Time Lab (Explore StemScopes) **ELPS Strategies:**  
[http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html](http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html)  
2E: Writing Process  
3J: Manipulatives  
4C: Word Knowledge  
4F: Visuals | STEMscopes  
[https://n11052d40706.acceleratelearning.com/login](https://n11052d40706.acceleratelearning.com/login)  
Google Drive – C & I: Middle School Science Resources |
### Course: Seventh Grade  
**Designated Grading Period: 6th Grading Period**  
**Unit: Body Systems, Earth and Space**  
**Days to teach: 28 Days**

<table>
<thead>
<tr>
<th>TEKS/Prerequisites</th>
<th>Guiding Questions/Specificity</th>
<th>Sample Assessment</th>
<th>Vocabulary</th>
<th>Instructional Strategies</th>
<th>Resources/Weblinks</th>
</tr>
</thead>
</table>
| 7.9a-- Analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere | What conditions allow Earth to support and maintain life? **Teacher Notes** Also includes temperate weather, chemical composition of our atmosphere, (SPONCH): Sulfur, Phosphorus, Oxygen, Nitrogen, Carbon and Hydrogen, proximity to the Sun, and presence of water as characteristics of Earth that enable life. | Ozone molecules protect Earth from the harmful effects of the sun by ___.  
A. insulating the temperature at the poles  
B. condensing water particles in clouds  
C. regulating the heat from the sun  
**D. absorbing ultraviolet radiation** | Characteristic  
Solar System  
Proximity  
Composition  
Atmosphere  
Exploration  
Ozone Layer  
Ultra Violet Radiation  
Solar Winds  
Earth’s Magnetic Field  
Magnetosphere | **Exemplary Lesson** Characteristics of Solar System to Allow Life TEKS 7.9A  
**ELPS Strategies:** [http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html](http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html)  
2E: Writing Process  
4C: Word Knowledge | STEMscopes [https://n11052d40706.acceleratelearning.com/login](https://n11052d40706.acceleratelearning.com/login)  
Google Drive – C & I: Middle School Science Resources  
Astronomy [www.nasa.gov](http://www.nasa.gov) |
### Course: Seventh Grade

#### Unit: Body Systems, Earth and Space

<table>
<thead>
<tr>
<th>TEKS/Prerequisites</th>
<th>Guiding Questions/ Specificity</th>
<th>Sample Assessment</th>
<th>Vocabulary</th>
<th>Instructional Strategies</th>
<th>Resources/ Weblinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.9b</td>
<td>What conditions are necessary to support life outside of Earth? What is necessary for life in space; air supply, fresh water supply, food supply, waste management, insulation from heat and UV radiation, antigravity adaptations and communication.</td>
<td>Which of the following features of the solar system helped humans to master the process of landing on a solid object in outer space and then returning safely to Earth? A. The distant existence of a large gaseous planet B. The nearby existence of a large, terrestrial moon C. The nearby existence of a small, terrestrial planet D. The nearby existence of large, rock asteroids.</td>
<td>Accommodation Characteristic Solar System Enable Manned space exploration Terrestrial Astronaut Space Walk Space Suit Micrometeoroids Microgravity Vacum</td>
<td><strong>Cooperative Learning Strategy</strong> Talking Chips – Topic: Space accommodations. <strong>Exemplar Lesson</strong> Space Exploration TEKS 7.9B. Meeting Basic Needs in Space. <strong>ELPS Strategies:</strong> <a href="http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html">http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html</a> 2E: Writing Process 3J: Manipulatives 4C: Word Knowledge 4E: Graphic Organizer</td>
<td>STEMscopes: <a href="https://n11052d40706.acceleratelearning.com/login">https://n11052d40706.acceleratelearning.com/login</a> Google Drive – C &amp; I: Middle School Science Resources</td>
</tr>
<tr>
<td>TEKS/Prerequisites</td>
<td>Guiding Questions/ Specificity</td>
<td>Sample Assessment</td>
<td>Vocabulary</td>
<td>Instructional Strategies</td>
<td>Resources/ Weblinks</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------</td>
<td>------------------</td>
<td>------------</td>
<td>--------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>7.3d Relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content.</td>
<td>The video, <em>Humanity from Space</em>, should be used to spark discussion, assignments, or projects on scientific changes that have happened through history and their impact on the human population. Students should also focus on the careers that might be created to meet the demand.</td>
<td>Elaborate on how food will be produced as our population continues to grow. Write the job description for a job that will be available in the future.</td>
<td>View Instructional Video: Humanity from Space - <a href="https://www.youtube.com/watch?v=8UCmCs7hc1g">https://www.youtube.com/watch?v=8UCmCs7hc1g</a></td>
<td>Cooperative Learning Strategy Corners – career choice activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Humanity from Space: The Population Clock [<a href="https://www.youtube.com/watch?v=d5CxKa">https://www.youtube.com/watch?v=d5CxKa</a> wSHAw](<a href="https://www.youtube.com/watch?v=d5CxKa">https://www.youtube.com/watch?v=d5CxKa</a> wSHAw)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Humanity from Space: The Black Marble <a href="https://www.youtube.com/watch?v=N-1VpzbIHgY">https://www.youtube.com/watch?v=N-1VpzbIHgY</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Humanity from Space: The Earth Seen From Space <a href="https://www.youtube.com/watch?v=jcShYFojz0">https://www.youtube.com/watch?v=jcShYFojz0</a></td>
<td></td>
</tr>
</tbody>
</table>

**ELPS Strategies:**
- [http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html](http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html)
- 2E: Writing Process
- 4C: Word Knowledge
- 4F: Visuals
### Science

<table>
<thead>
<tr>
<th>Course: Seventh Grade</th>
<th>Designated Grading Period: 6th Grading Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit: Body Systems, Earth and Space</td>
<td>Days to teach: 28 Days</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEKS/Prerequisites</th>
<th>Guiding Questions/Specificity</th>
<th>Sample Assessment</th>
<th>Vocabulary</th>
<th>Instructional Strategies</th>
<th>Resources/Weblinks</th>
</tr>
</thead>
</table>

**Differentiation**

**Enrichment:** [www.Lead4ward.com](http://www.Lead4ward.com) think it up activities, [www.byrdseed.com/differentiator](http://www.byrdseed.com/differentiator), Book - *Differentiating Instruction with Menus: Science* by Laurie E. Westphal

**Scaffolding:**

*View embedded STEMscopes ELPS activities within each unit’s Explore activity*

- 7.12B - Acting Out Words
- 7.13A - K-W-L (within Engage Activity)
- 7.9A - Question, Signal, Stem, Share, Assess
- 7.9B - Find Your Selection