Mummies of the World: The Exhibition at Carnegie Science gives your students a chance to examine real mummies and articles from around the world while exploring standards from a variety of subject areas.

To make this experience even more meaningful and educational, you can find background information, as well as activities for before and after your visit, in the accompanying Learner Guide.

To further enhance your students’ learning experiences, help them find connections as they explore the rest of the museum.

H2Oh!

- **Water Weight:** Stand on the scale to see an estimation of how much the water in your body weighs.
  - Based on what you have learned about mummies, what can you surmise about the weight of mummies?
  - Consider the different ways bodies were mummified (e.g. compare an ice mummy that was not freeze-dried and a Paracas mummy that dried in the desert).

- **Virtual Watershed:** Rearrange the land pieces. Think about what you have learned about bogs and bog mummies.
  - Since bogs form from precipitation, not groundwater, where might bogs develop in the landscape you created?

- **What’s in the Box?:** Examine the specimens preserved in formaldehyde.
  - What similarities or differences do you see to the mummification processes in Mummies of the World: The Exhibition?

**Miniature Railroad & Village®**

By observing mummies and the artifacts buried with them we can learn about the culture and time period in which they lived. The miniature railroad shows us scenes from the 1880s to 1940s in Pittsburgh.

- What can you learn about the culture and history of Pittsburgh by examining these replicas?
BodyWorks

- **Fluid Flasks:** Think about the many types of mummification you have learned about.
  - *What happens to all the fluids in animals and humans when they are mummified?*
  - Possible answers: Some bodies mummified on purpose, like the Chinchorro mummies, had their organs and fluids removed to help the body dry out. Salt pulled moisture from the Salt Mummies’ bodies. The Paracas mummified bodies by putting them in sand, which drew out and dried the fluids.

- **What Technologies Can See Inside Me?:** Scientists use machines, like Computer Tomography, commonly known as CT Scans, to examine the inside of mummies without damaging them. Doctors use this, and other types of medical imaging, to diagnose and treat their patients.
  - *Experiment with CT, MRI, X-Ray, and Gama technologies by sliding the monitor over the outline of the human body.*
  - *Think about the “X-ray of lungs showing calcifications caused by tuberculosis” in Mummies of the World: The Exhibition and compare to the X-Ray of healthy lungs.*

- **“What Do My Guts Look Like?”:** Plastination is a modern form of mummification, generally used for educational purposes.
  - *Examine these real specimens from donors and read about how plastination occurs.*
  - *Compare these to the mummified organs you have already seen, especially the “Human Heart” and “Head and Chest” in Mummies of the World: The Exhibition.*

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<thead>
<tr>
<th>NGSS STANDARDS</th>
<th>COMMON CORE STANDARDS</th>
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<tbody>
<tr>
<td><strong>MS-LS2-3</strong></td>
<td><strong>CCSS.ELA-LITERACY.RI.6.7</strong></td>
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<td>Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.</td>
<td>Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</td>
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<td><strong>MS-PS1-2</strong></td>
<td><strong>CCSS.ELA-LITERACY.RH.9-10.10</strong></td>
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<td>Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.</td>
<td>By the end of grade 10, read and comprehend history/social studies texts in the grades 9-10 text complexity band independently and proficiently.</td>
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<tr>
<td><strong>HS-LS2-3</strong></td>
<td><strong>CCSS.ELA-LITERACY.RST.11-12.9</strong></td>
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<td>Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</td>
<td>Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</td>
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<td><strong>HS-PS1-2</strong></td>
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<td>Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</td>
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Carnegie Science Center

One of the four Carnegie Museums of Pittsburgh