



HOUSTON MUSEUM
of NATURAL SCIENCE

3rd–5th Grade Discovery Hunt: Matter & Motion

This exciting exploration will help you discover the building blocks of matter and the forces that make things move, from the tiniest particles to the largest galaxies. As you visit each part of the exhibit, observe closely, ask questions, and record your discoveries in the spaces provided.

Scientific Tools in Action

As you explore, look for scientific tools or equipment used in the exhibit.

- List three different scientific tools or pieces of equipment you find:

- What does each tool help scientists do?

Models: Making the Invisible Visible

The exhibit uses many models to show things that are too small or too large to see.

- Find one model in the exhibit. What does it represent?

- How does this model help you understand a scientific idea?

The Walk-In Brain: The Brain in Action

- Find the large walk-in brain exhibit. What color of light shows how fast neurons travel?
- Describe what this lighting effect looks like.
- Why do you think a walk-through brain model is helpful for learning?

Periodic Table: Elemental Wonders

- Find the periodic table of elements on the wall. Choose three elements and record:

Element Name	Symbol	Interesting Fact	State at Room Temperature (Solid/Liquid/Gas)

- What patterns do you notice in how the elements are organized?

Quarks to Quasars Immersive Theater

- In the 3D theater, what are the smallest building blocks of matter called?
 - Draw or describe what they look like:
 - Find an example of something:
 - Very small: _____
 - Very large: _____
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Force, Motion, and Energy: Interactive Physics

- Find an example of motion in the exhibit. Describe what is moving and what causes it to move.
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- Find a display that shows different forms of energy. List two forms of energy you observed and describe how they are different.
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Scientific Thinking Challenge

- Imagine you are a scientist studying a new element. What questions would you ask?
- What tools would you use to investigate it?
- The exhibit shows many scientific discoveries. Choose one that interests you and explain why.
- If you could design a new section for this exhibit, what would you create? Draw or describe your idea below.

Science Words to Know

- **Atom:** The smallest unit of an element, made of protons, neutrons, and electrons.
- **Element:** A pure substance made of only one kind of atom.
- **Energy:** The ability to make things move or change.
- **Force:** A push or pull that can change how something moves.
- **Model:** A representation that helps us understand something that's hard to observe.
- **Periodic Table:** A chart that organizes all the building blocks called elements.

- **System:** A group of parts that work together.
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TEKS Alignment

3rd Grade Science TEKS

- **3.4A:** Ask questions and define problems based on observations or information from text, phenomena, objects, or events.
- **3.4B:** Use safety equipment as appropriate, including safety goggles and gloves.
- **3.5A:** Measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float.
- **3.7B:** Plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons.
- **3.8A:** Use evidence to identify different examples of energy in systems.

4th Grade Science TEKS

- **4.5A:** Measure, compare, and contrast physical properties of matter, including mass, volume, states (solid, liquid, and gas), temperature, magnetism, and the ability to sink or float.
- **4.6A:** Differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal.
- **4.6C:** Demonstrate that electricity travels in a closed path, creating an electrical circuit.

5th Grade Science TEKS

- **5.8A:** Investigate and describe the transformation of energy in systems such as energy in a flashlight battery that changes from chemical energy to electrical energy to light energy.
 - **5.8B:** Demonstrate that electrical energy in complete circuits can be transformed into motion, light, sound, or thermal energy and identify the requirements for a functioning electrical circuit.
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