



1. **Solar System and Planets:** Questions about the planets in our solar system, their characteristics, and their orbits.

Phet Links:

[My Solar System](#)
[Gravity and Orbits](#)

LabXchange Links:

[The Origin of Stars and Planets](#)
[Where Did the Sun Go?](#)
[Moon Observation and Orbit](#)
[Galaxy Formation and Evolution](#)

2. **States of Matter:** Understanding the different states of matter (solid, liquid, gas) and how they change under various conditions.

Phet Links:

[States of Matter](#)
[States of Matter: Basics](#)
[Gases Intro](#)

LabXchange Links:

[Energy and Phase Changes](#)

3. **Ecosystems and Food Chains:** Exploring different ecosystems, food chains, and the interdependence of organisms.

LabXchange Links:

[Ecology](#)
[Population and Community Ecology](#)
[Ecosystems](#)
[Ecosystems and the Biosphere](#)
[Conservation and Biodiversity](#)

4. **Human Body Systems:** Basic knowledge about the major systems of the human body, such as the circulatory, respiratory, digestive, and nervous systems.

LabXchange Links:

[The Circulatory System](#)
[The Immune System and Disease](#)
[The Reproductive System](#)
[The Respiratory System I](#)
[The Respiratory System II](#)
[The Respiratory System III](#)
[The Cardiovascular System: Blood](#)
[The Cardiovascular System: Blood Vessels and Circulation](#)
[The Cardiovascular System: The Heart](#)
[The Musculoskeletal System](#)
[Animal Nutrition and the Digestive System](#)
[Anatomy of the Nervous System](#)
[The Muscular System](#)
[The Nervous System](#)
[The Sensory System](#)

5. **Forces and Motion:** Concepts related to forces, motion, and simple machines.

Phet Links:

[Forces and Motion: Basics](#)
[Energy Skate Park: Basics](#)
[Projectile Motion](#)
[Pendulum Lab](#)
[Balancing Act](#)

LabXchange Links:

[Dynamics: Force and Newton's Laws of Motion](#)
[Forces and Vectors](#)
[Work, Energy and Simple Machines](#)
[Kinematics](#)

6. **Electricity and Circuits:** Understanding the basic principles of electricity and simple circuits.

Phet Links:

[Circuit Construction Kit: DC-Virtual Lab](#)
[Circuit Construction Kit: DC](#)
[John Travoltage](#)

LabXchange Links:

[Electric Circuits](#)
[Electric Current, Resistance, and Ohm's Law](#)
[Electromagnetic Induction, AC Circuits, and Electrical Technologies](#)

7. **Magnets and Magnetism:** Exploring the properties of magnets and how they interact with other materials.

Phet Links:

[John Travoltage](#)

LabXchange Links:

[Magnetic Fields](#)
[Magnetism](#)

8. **Sound and Light:** Understanding the properties of sound and light, how they travel, and how they interact with objects.

Phet Links:

[Waves Intro](#)
[Bending Light](#)
[Geometric Optics](#)
[Geometric Optics: Basics](#)
[Wave Interference](#)

LabXchange Links:

[Sound](#)
[Light](#)
[Waves and Energy Transfer](#)

9. **Rocks and Minerals:** Learning about different types of rocks, their formation, and their uses.

10. **Life Cycles:** Understanding the life cycles of plants and animals, including metamorphosis and reproduction.

LabXchange Links:

[The Cellular Basis of Inheritance](#)
[Cell Reproduction](#)
[Plant Reproduction](#)
[Animal Reproduction and Development](#)
[Diversity of Animals](#)
[Diversity of Plants](#)

11. **Weather and Climate:** Questions about weather patterns, climate zones, and climate change.

Phet Links:

[Greenhouse Effect](#)

LabXchange Links:

[Climate and Climate Change](#)
[Our Climate, Our Future](#)
[Deciphering Earth's Complex Climate and Human Influence](#)

12. **Environmental Conservation:** Raising awareness about the importance of environmental conservation and sustainable practices.

Phet Links:

[Greenhouse Effect](#)

LabXchange Links:

[Conservation and Biodiversity](#)
[Conservation Biology and Biodiversity](#)

13. **Scientific Method and Inquiry:** Introducing the scientific method and the process of conducting scientific investigations.

LabXchange Links:

[Experimental Thinking](#)
[The Scientific Method](#)
[Reasoning, Planning and Solving Problems](#)

14. **Adaptations and Survival:** Understanding how animals and plants adapt to their environments for survival.

Phet Links:

[Natural Selection](#)

LabXchange Links:

[Evolution](#)
[The Study of Life I](#)
[The Study of Life II](#)
[Biodiversity & Relationship](#)
[Why Is Biodiversity Important?](#)

15. **Simple Chemical Reactions:** Introducing basic chemical reactions and their applications.

Phet Links:

[Concentration](#)

LabXchange Links:

[Chemistry of Life](#)