

Science Goals

The focus for third grade students is on identifying systems and patterns in systems. Systems are the units of investigations. A system is an interrelated group of objects or components that form a functioning unit. Students learn to identify portions of a system to facilitate investigation. Systems have boundaries, components, resources, flow and feedback. Guide student learning to continue to emphasize the unifying concepts previously introduced including evidence, explanation, measurement, order, organization, and change as well as the introduction at grade three of systems. The strands provide a context for teaching the content goals. Strands: Nature of Science, Science as Inquiry, Science and Technology, Science in Personal and Social Perspectives

Goal 1: The learner will conduct investigations and build an understanding of plant and growth adaptations.

- 1.1 Observe and measure how the quantities and qualities of nutrients, light, and water in the environment affect plant growth.
- 1.2 Observe and describe how environmental conditions determine how well plants survive and grow in a particular environment.
- 1.3 Investigate and describe how plants pass through distinct stages in their life cycle including: growth, survival, reproduction.
- 1.4 Explain why the number of seeds a plant produces depends on variables such as light, water, nutrients, and pollination.
- 1.5 Observe and discuss how bees pollinate flowers.
- 1.6 Observe, describe and record properties of germinating seeds.

Goal 2: The learner will conduct investigations to build an understanding of soil properties.

- 2.1 Observe and describe the properties of soil: color, texture, capacity to hold water.
- 2.2 Investigate and observe that different soils absorb water at different rates.
- 2.3 Determine the ability of soil to support the growth of many plants, including those important to our food supply.
- 2.4 Identify the basic components of soil: sand, clay, humus.
- 2.5 Determine how composting can be used to recycle discarded plant and animal material.
- 2.6 Determine the relationship between heat and decaying plant matter in a composting pile.

Goal 3: The learner will make observations and use appropriate technology to build an understanding of earth/moon/sun system.

- 3.1 Observe that light travels in a straight line until it strikes an object and is reflected and/or absorbed.
- 3.2 Observe that objects in the sky have patterns of movement including: sun, moon, stars.
- 3.3 Using shadows, follow and record the apparent movement of the sun in the sky during the day.
- 3.4 Use appropriate tools to make observations of the moon.
- 3.5 Observe and record the change in the apparent shape of the moon from day to day over several months and describe the pattern of changes.
- 3.6 Observe that patterns of stars in the sky stay the same, although they appear to move across the sky nightly.

Goal 4: The learner will conduct investigations and use appropriate technology to build an understanding of the form and function of the skeletal and muscle systems of the human body.

- 4.1 Identify the skeleton as a system of the human body.
- 4.2 Describe several functions of bones: support, protection, locomotion.
- 4.3 Describe the function of different types of joints: hinge, ball and socket, gliding.
- 4.4 Describe how different kinds of joints allow movement and compare this to the movement of mechanical devices.
- 4.5 Observe and describe how muscles cause the body to move.