Fruit or Vegetable?

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This lesson focuses on building understanding of scientific classification and plant structures.

Integrations: Plant watching, Photo, Journaling

Grade Level: 6-7

Duration: 1-2 class periods – 10 minutes addressing students' prior knowledge; 25 minutes for discussion, class fruits and vegetables, and introduction of experimental challenge; 20 minutes for experimentation, research, and making; 20 minutes for discussion and wrap-up

Standards:
Cross-cut Fundamental Concepts: Form & Function

[illegible]

Content Standard A: Science as Inquiry

- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

Content Standard C: Life Science

- Structure and function in living systems
  - Specialized cells perform specialized functions in multicellular organisms. Groups of organizations with comparable functions form specialized tissues, and different tissues are integrated into organs with a specialized function. Different organs are integrated into organ systems, each with a specialized function. Cells, organs, and organ systems are integrated to produce a healthy organism. All these systems have their own ways of growth and control, and their own ways of malfunctioning and being damaged.
- Diversity and Unity of Organisms
  - Biologists have identified about 1.5 million different kinds of living organisms. Biologists organize this diversity into a hierarchy of groups and subgroups based on their common characteristics. The ability to organize and communicate about the diversity of organisms is dependent on the use of a common language or system of classification. Scientific knowledge is a human enterprise. Scientific knowledge is a body of facts and concepts that are subject to change as new evidence and new ideas are proposed and tested against the existing body of scientific knowledge. Scientists do not all agree about every detail of the scientific knowledge at any time. Nevertheless, there is a core of well-established knowledge that is not subject to change. Scientific knowledge is also subject to revision in the light of new evidence. Different explanations may be offered for the same phenomena, and different interpretations may be made of the same set of data. Most of the time, however, scientists can easily recognize which explanations are more reasonable.
- Regulation and Behavior
  - All organisms exchange signals with their environment. These signals may be in the form of light, heat, motion, sound, or chemicals. Organisms respond to these signals in ways that are generally beneficial to their survival. The number of different responses to environmental stimuli is limited by the number of different kinds of cells in the organism and by the number of different ways in which each cell can respond to environmental stimuli.

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Strand 1: Inquiry Process

- Concept 2: Scientific Thinking (Investigating and Modeling)