Plant Parts Scavenger Hunt

Overview: Plants are everywhere and it's your students' job to find them. Scour the school property in search of as many parts as you can find.   Leave no stone unturned or lunchbox unopened.

Procedure:
1) List the plant parts for which you will be searching (root, stem, leaf, seed/fruit). Have the students make predictions about what the scavenger hunt will reveal such as: which plant part is a more common food; which part is more prevalent; etc.
2) Search for plant parts. Keep your eyes peeled throughout the school day for plant parts in their many forms. Be sure to include food items during mealtimes, potted plants that may be decorating the school building, and plants that can be found outside. Be sure to include things like mashed potatoes, peas in beef stew, etc. The search can take place during one group period or over an extended period of time.
3) Tally the number of different parts not each individual part. Example: If steamed broccoli is served during lunch that would be one tally….if raw broccoli is also in salads then that would be ANOTHER tally.
4) Discuss the results.

ASOLs Covered in this Activity:

<mark>SCIENCE</mark>
3S-SI 1: The student will demonstrate an understanding of scientific reasoning, logic, and
        the nature of science by planning and conducting investigations in which
        a) observations and predictions are made and questions formed;
        b) observations are differentiated from personal interpretation;
        c) observations are repeated to ensure accuracy;
        d) two or more characteristics or properties are used to classify items;
        h) data are collected and recorded, and bar graphs are constructed using
        numbered axes;
        i) data are analyzed, and unexpected or unusual quantitative data are
        recognized;
        j) conclusions are drawn;
        k) observations and data are communicated;
3S-SI 2: The student will demonstrate an understanding of scientific reasoning, logic
        and the nature of science by planning and conducting investigations in which
        a) observations are made and repeated to ensure accuracy;
        b) predictions are formulated using a variety of sources of information;
        c) objects with similar characteristics or properties are classified into at least
        two sets and two subsets;
        g) questions are developed to formulate hypotheses;
        h) data are gathered, charted, graphed, and analyzed;
        i) unexpected or unusual quantitative data are recognized;
        j) inferences are made and conclusions are drawn;
        k) data are communicated;
3S-LPS 1: The student will investigate and understand that plants and animals undergo a

series of orderly changes as they mature and grow. Key concepts include
a) animal life cycles;
b) plant life cycles.

3S-ESS 4: The student will investigate and understand basic patterns and cycles occurrin in nature. Key concepts include
b) animal life cycles;
c) plant life cycles.

5S-SI 1: The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
a) distinctions are made among observations, conclusions, inferences, and predictions;
b) objects or events are classified and arranged according to characteristics or properties;
i) data are collected, recorded, analyzed, and displayed using bar and basic line graphs;
k) data are communicated with simple graphs, pictures, written statements, and numbers;

5S-SI :2 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
a) items such as rocks, minerals, and organisms are identified using various classification keys;

5S-LPS 1: The student will investigate and understand basic plant anatomy and life processes. Key concepts include
a) the structures of typical plants and the function of each structure;
b) processes and structures involved with plant reproduction;

5S-LPS 2: The student will investigate and understand how plants and animals, including humans, in an ecosystem interact with one another and with the nonliving components in the ecosystem. Key concepts include
c) flow of energy through food webs;

5S-LPS 3: The student will investigate and understand important Virginia natural resources. Key concepts include
b) animals and plants.

8S-SI 1: The student will demonstrate an understanding of scientific reasoning, Logic, and the nature of science by planning and conducting investigations which
a) observations are made involving fine discrimination between similar objects and organisms;
h) data are analyzed and communicated through graphical representation;

8S-SI 2: The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
a) data are organized into tables showing repeated trials and means;
b) a classification system is developed based on multiple attributes;

8S-SI 3: The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
h) data tables for descriptive statistics showing specific measures of central tendency, the range of the data set, and the number of repeated trials are constructed and interpreted;

i) frequency distributions, scatter plots, line plots, and histograms are constructed and interpreted;

j) valid conclusions are made after analyzing data;

8S-LS 3: The student will investigate and understand how organisms can be classified. Key concepts include

a) the distinguishing characteristics of domains of organisms;

b) the distinguishing characteristics of kingdoms of organisms;

c) the distinguishing characteristics of major animal phyla and plant divisions;

d) the characteristics that define a species.

Extension Idea:

Change the parameters of the search to make it more complex. Some examples are: add additional plant parts; plants in various stages of the life cycle; or native vs. foreign plants.

3E-RW 2a: The student will use newly acquired vocabulary drawn from reading and other content areas.

3E-CN 1g: The student will sequence at least two steps in a procedure or ideas/incidents in an event.

4E-RW 1c: The student will use newly acquired vocabulary drawn from reading and other content areas.

5E-RW 1f: The student will demonstrate understanding of content-specific words.

5E-WP 1: The student will

b) select an event or personal experience and use drawing, writing, or dictating to compose a message about it;

c) add more information to own drawing, dictating, or writing to strengthen the message.

5E-WP 2: The student will

a) use technology (including assistive technologies) to produce and publish writing;

b) write information related to personal experiences and answer simple questions about those experiences.

5E-WP 3: The student will

c) select an event or personal experience and write one thing about it;

d) revise own writing by adding more information.

5E-WP 4: The student will

b) use spelling rules when writing by capitalizing the first letter of familiar names.

5E-WP 6: The student will

a) use technology to produce and share writing;

5E-WP 7: The student will

b) write to convey ideas and information by selecting a topic and listing words, facts, or details related to the topic;

c) produce writing that expresses more than one idea with a logical organization;

d) plan by brainstorming and revise own writing by adding more information;

e) use technology, including the Internet, to produce writing.

7E-RW 1: The student will
       e) demonstrate an understanding of word relationships by using
       synonyms and antonyms.

7E-CN 1: The student will
       e) use content words and phrases from a nonfiction text.

8E-RW 1: The student will
       e) acquire and use content words and phrases.

8E-WP 1: The student will
       a) write to convey ideas and information including facts, details,
       and other information.
       d) use content specific vocabulary when writing about a topic.

8E-WP 3: The student will
       b) write to convey ideas and information including facts, details,
       and other information as well as graphics and multimedia as needed.

8E-WP 5: The student will
       a) write an argument to support a claim with one clear reason or
       piece of evidence.

HSE-WP 1: The student will
       b) write to convey ideas and information using clear organization and
       including facts, details, and other information as well as graphics and
       multimedia as needed.
       c) write about an event or personal experience by introducing
       the event or experience, at least one character, and describing multiple events
       in sequence.

HSE-RW 2: The student will
       c) acquire and use content words and phrases.

Extension Idea:

After completing the activity, have the students write about their experience and what they learned. Particular attention may be given to content words and sequence of events. Encourage students to include illustrations, tables, graphs, and digital photographs. Texts might take the form of a PowerPoint presentation, book, journal entry, newsletter, or blog. These texts might make great additions to self-selected reading libraries.

MATH

3M-NSCE 2: The student will a) solve addition and subtraction problems when result is
       unknown with number 0-30.

3M-PSPFA 1: The student will
       a) create picture graphs from collected measurement data;
       b) use picture or bar graph data to answer questions;
       c) insert data into a preconstructed bar graph template;
       d) interpret data from a variety of graphs to answer questions.

4M-NSCE 1: The student will
       b) compare whole numbers (<, >, =);

5M-PSPFA 1: The student will

a) compare two sets of data within a single data display such as a picture graph, line plot, or bar graph;

b) represent and interpret data on a picture, line plot, or bar graph given a model and a graph to complete.

6M-PSPFA 1: The student will

a) display data on a graph or table that shows variability in the data;

b) summarize data distributions on a graph or table;

c) answer a question related to the collected data from an experiment, given a model of data, or from data collected by the student.

HSM-FS 3: The student will

a) given data, construct a simple graph (table, line, pie, bar, or picture) and answer questions about the data.

Extension Idea:

Display the results in a graph (table, line, pie, bar, or picture graph) for easy comparison. Discuss and answer questions about the results.

History

HS-G 2: The student will describe how the location of his/her community, climate, and physical surroundings affect the way people live, including their food, clothing, shelter, transportation, and recreation.

HS-E 6: The student will explain that scarcity (limited resources) requires people to make choices about producing and consuming goods and services.

HS-E 8: The student will recognize that because people and regions cannot produce everything they want, they specialize in what they do best and trade for the rest.

Extension Idea:

Students choose a country other than the U.S. and conduct research in order to learn about the different types of plants that are consumed by the native peoples. Using photos if possible, students can report to the class about what they have learned.

Materials Needed:
-writing utensils
- data sheets (these will contain spaces for each of the categories)
-resource materials

Instructional Setting:
This activity will take place in the classroom, lunchroom, and outside.

Community Connections and/or Peer Interaction:
Students can work together in small groups. This activity encourages students to interact with peers and adults across all areas of the school.

Functional Activity/Routine:
This activity encourages functional skills such teamwork, following instructions, dictating instructions, making observations, developing and testing hypothesis.

Strategies to Collect Evidence:
For collection of evidence, be sure that each student records a hypothesis, data, and conclusion individually.

Specific Options for Differentiating this Activity:
-Prepare, as necessary, for each student to make choices and communicate with their preferred method. This may include using augmentative communication.
-Adjust the activities difficulty based on your students' ability.
-Students with varying skills can be assigned jobs to do based on their needs or skill level.
-Allow students to use their preferred "pencil" when writing. This may include a writing utensil, keyboard, alternative pencil, or dictating to a scribe.