

Investigative Herbal Adventures

Try out these cross-curricular herbal adventures with your students:

MATH

- *How fast does dill grow? – Measure and graph the growth rates of dill plants, make size comparisons
- *When will a seed germinate? – Use seed catalog/seed packet information and math to predict when a seed will germinate and how long it will take to mature. Predict when a seed would need to be planted in order to be ready for a chosen holiday.
- *Compare the sizes of herb seeds?
- *Observe and record the air and soil temperatures in your class herb garden?
- *Calculate the weight and volume of soil when it is wet and when it is dry.
- *Calculate how many sage plants will fit into a 6 ft. x 6 ft. garden
- *Demonstrate how cooking with herbs and spices can help you learn fractions.

SCIENCE

- *Dead or alive? – use basil plants to compare the difference between living and non-living things
- *What is pH? – how does pH affect the smell and taste of basil, sage, and oregano
- *What happens if I water thyme plants with soda or tomato juice?
- *Why do herbs smell? – investigate what parts of herb plants cause them to smell
- *Plant identification – press and label various herb plants, draw and diagram the parts of a leaf

WRITING/LANGUAGE ARTS

- *What role have herbs played in the development of modern day medicine? – have the students interview a pharmacist about the role of herbs in the development of medicine, have them write a written report or give an oral report to share what they have learned.
- *Compare and contrast the facts and fiction about various herb plants.
- *Describe various herb plants growing in your garden
- *Write a letter to your local extension service or botanic garden asking a “plant-related” question?
- *Learn to use the library or internet by researching a certain type of herb or plant

SOCIAL STUDIES

- *What role have herbs and spices played in different cultures?
- *How are herbs and spices used around the world?

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*Do herbs have economic uses? – examine the ingredient labels of various household products to determine whether herbs are listed in the ingredients, visit the grocery store and look for products that use herbs

HEALTH

*What role do herbs play in healthy eating?

*Can herbs be used to spice up vegetable dishes?

*Do herbs have nutritional value?

*Use herbs to learn about how to harvest and preserve food?

CULTURAL ARTS – music, art, drama

*Paint or draw various herbs and plants

*Write a play that depicts the life cycle of a sunflower or other plants

*Does Basil like Beethoven? – learn how music affects plant growth and behavior

*Make or decorate clay pots for a school plant sale

*Develop advertising skills by designing marketing materials and plant labels for a school plant sale.

*Write the lyrics for songs that teach about the parts of a plant or the life cycle of a plant.

*Decorate rain barrels for a school plant sale or for use by your school.

ADDITIONAL ACTIVITIES:

Do herbs have a strong smell?

Activity #1: Divide the students into groups of 3 to 4. Give each group two to three clippings of fresh herbs, a carnation, and a clipping from a houseplant. Have the students compare the plants and record their observations in a notebook. Next, have the students label their four bowls with Herb One, Herb Two, Carnation, and Houseplant. Have them use their scissors to chop up each of the plants. Place each one in the four bowls. Have students observe the smell of each one and record their observations. **Materials needed:** -various fresh herbs (dill, rosemary, thyme, oregano, bay,), carnations, clippings from houseplants (coleus, ferns, etc.), scissors, four bowls

Do herbs and plants have economic uses?

Activity#1: Have the children examine the ingredient labels of various household products to look for ones that use herbs in them and have them list these in their notebooks. Next, have them look at home and in their local grocery store for products that use herbs in the ingredients. **Materials needed:** various household products that have herbs in the ingredients. Items such as herbal shampoos, mint

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toothpaste, cooking spices, lotions, perfumes etc. Or make copies of the ingredient labels.

Activity #2: Have the students interview a pharmacist to learn about how herbs and plants have been used to develop medicines; and how they are still used today.

Activity #3: Have the students research the historical uses of herbs for cooking and medicine.

How do herbs affect the taste of food?

Activity#1: Start by having the children taste plain butter on a cracker. Have them record their results. Next, place ½ C. butter into four bowls. Then add a scant tablespoon of freshly chopped dill, parsley, sage, and oregano into each of the four bowls. Mix well. You may want to let the mixtures sit for 20-30 minutes to allow the flavors to blend. Have the children try each of the four blends on a cracker and observe the results. **Materials needed:** 1-1 ½ C. butter for each group of students, crackers, various fresh herbs (dill, rosemary, sage, thyme, oregano), 3-4 bowls, scissors

Activity #2: Have the children determine what types of herbs are used on pizza, in spaghetti, in stuffing, etc.

Which are stronger, dried herbs or fresh herbs?

Activity: Compare the taste of freshly cut herbs to their dried counterparts. Put a scoop of plain butter, sour cream or mashed potatoes into six bowls. Label the bowls with numbers 1-6. Add the following to each bowl and mix well: bowl #1 – 1 tsp. freshly chopped sage, bowl #2 – 1 tsp. freshly chopped oregano, bowl #3 – 1 tsp. freshly chopped parsley, bowl #4 – 1 tsp. dried sage, bowl #5 – 1 tsp. dried oregano, bowl #6 – 1 tsp. dried parsley. Have the students mix up the herbs and then let the the mixtures sit for thirty to sixty minutes. Ask the students to taste the different mixtures and compare the results. Next, have them record their observations.

Materials needed: 6 bowls, 1-1 ½ C. (plain butter, sour cream, or mashed potatoes), dried oregano, sage, and parsley, fresh cuttings of oregano, sage, and parsley, crackers

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