Worksheet 1: "Potato Growth and Photosynthesis"

Objective: Explore the growth of potatoes and the role of photosynthesis in the process.

Instructions:

Watch the video on "Science in the Garden" focusing on the segment about yellow and red potatoes.

Fill in the blanks with the appropriate terms or phrases related to potato growth and photosynthesis.

a. Potatoes grow underground in structures called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

b. During photosynthesis, plants convert \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and store them in the tubers.

c. The stored starches in potatoes are used to grow new \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

d. New sprouts grow from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the potato.

e. Photosynthesis is the process by which plants convert \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into sugars.

Worksheet 2: "Camouflage and Adaptation"

Objective: Understand how the golden crab spider uses camouflage to catch prey and protect itself.

Illustration and Description:

Draw a scene where the golden crab spider is camouflaged in its natural environment.

Write a brief description explaining how the spider's ability to change colors aids in its survival.

Discussion Questions:

In small groups, discuss how other animals use camouflage for survival.

Share examples and discuss the advantages and challenges of using camouflage in different environments.

Worksheet 3: "Color Changes in Purple Potted Beans"

Objective: Explore the science behind the color changes in purple potted beans, specifically focusing on anthocyanin pigments.

Instructions:

Watch the segment in the "Science in the Garden" video about purple potted beans.

Fill in the blanks with the appropriate terms or phrases related to the color changes in purple beans.

a. The purple color in beans is due to the presence of the pigment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

b. Anthocyanin is water-soluble and changes colors when the \_\_\_ of the cell sap is altered.

c. Purple beans turn green when heated because heat breaks down \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

d. The breakdown of anthocyanin during heating also reveals the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that was masked by the pigment.

Experiment and Observation:

Conduct a simple experiment with purple potted beans, heat them, and observe the color changes.

Record your observations and compare them with the information provided in the video.

Visual Representation:

Create a visual representation (drawing, chart, or infographic) illustrating the role of anthocyanin in determining the color of purple beans.

Include captions or labels to explain the key concepts.