

# Class Starters & Enders

## Making the Most of Instructional Time Five Minute Lessons

Class Starters and Enders help utilize the last minutes of class when a lesson ends but there is not enough time to start another, or for an interest approach at the beginning of class. Mini-lessons correlate to GPS in the programs areas below.

### Avast, Ye Scurvy Bilge Rats! – (From Peter Pan)

**Program Areas:** Healthcare, Family & Consumer Sciences, Agriculture

**Instructions:** Read the material and make notes of important points, answer questions, and be ready to discuss this topic.

Have you ever wanted to be a pirate or seaman exploring the New World? Unfortunately, though adventurous, the lives of these men were not as glamorous as they are portrayed in the movies. Two hundred years ago, explorers setting out to sea had a 50 percent chance of returning.

Major causes of death were not sharks or being washed overboard. Instead, many pirates and seamen died from common mishaps or because of **nutritional deficiencies** such as **scurvy** or **dysentery**.

Scurvy caused **symptoms** including discolored spots on the body, swollen legs, **putrid** gums, fatigue, ulcers, rotten bones, and fungus flesh. Old scars would break open just as if the wound had recently been inflicted. In advanced stages of scurvy, sailors would often **hemorrhage**. Often seamen would come into port with very pale skin and with their teeth falling out due to scurvy. They would also take many trips to the bathroom, a symptom of dysentery, which leads to other nutritional deficiencies and low resistance to infection. Pirates thought scurvy was a curse because their animals did not get the disease, but scurvy was caused by a lack of **vitamin C**, which the human body requires to function.



Citrus fruits, such as oranges, can help prevent scurvy

Animals, unlike humans, make their own vitamin C. Humans have to get vitamin C from what they eat. Because marine travel was slow, fruits and vegetables high in vitamin C were apt to **spoil** due to a lack of refrigeration. Vitamin C can be found in green vegetables, berries, citrus fruits, asparagus, broccoli, beef liver, Brussels sprouts, cantaloupe, cauliflower, mangoes, sweet peppers, pineapple, radishes, spinach, strawberries, and tomatoes.

Vitamin C, also known as **ascorbic acid**, is needed by many organs and body systems, including the adrenal glands, blood, bones, capillary walls, connective tissues, heart, mucous membranes, nervous system and teeth. It has been known to help prevent **infection**, enhance **immunology**, and help prevent **cancer**.

The cause of scurvy was discovered by a British doctor about 250 years ago. He selected six groups of sailors and gave each one a different diet to eat. Those eating citrus fruits did not develop the symptoms of scurvy. Using this information, British sailors were assigned a daily ration of lime juice to prevent scurvy. Hence, the sailors became known as "limeys."

#### **Review Questions**

1. Why did pirates think scurvy was a curse?
2. What body organs and systems need vitamin C?
3. What is another name for vitamin C?
4. What are the symptoms of scurvy?
5. How can people prevent scurvy?
6. What did sailors have to eat to prevent scurvy?
7. What foods are good sources of vitamin C?
8. Why did fruits and vegetables spoil on ships?
9. Why does the body need vitamin C?
10. If a pirate went exploring at sea, what was the chance he'd return?

#### **History Connection**

Research other diseases common to sailors and pirates in the 1500s to 1800s. What diseases are seafarers prone to today?

#### **Science Connection**

Research other diseases caused by nutrient deficiencies. Include beriberi, rickets, goiter, pellagra, tetany, osteoporosis, and growth retardation.

#### **Terms**

*Define the following terms.*

Ascorbic Acid	Immunology	Scurvy
Cancer	Infection	Spoil
Dysentery	Nutritional Deficiency	Symptoms
Hemorrhage	Putrid	Vitamin C