

## Vegetable Experiment

Name \_\_\_\_\_ Key \_\_\_\_\_  
Unit \_\_\_\_\_ Period \_\_\_\_\_

Because of their color, flavor, texture and nutritive value, vegetables make a valuable contribution to the diet. In preparing vegetables for serving, the problem is to conserve and even enhance all the qualities of the vegetables and determine the correct procedure and cooking time for vegetables.

### **Vocabulary List:**

**Texture :** *Hard-crisp, tender-crisp, soft, mushy, tough, stringy*

**Flavor:** *Strong, mild, bitter, sweet, bland, intense, characteristic, less flavorful, more flavorful, salty*

**Color:** *Bright, vivid, dull, darkening, spotting, whitish, olive-green, deepening, translucent, stable, unstable*

### **Vegetable and Method: (Answers will vary)**

	Raw	5 minutes	10 minutes	15 minutes	20 minutes
<b>Broccoli</b>					
<b>Color</b>					
<b>Flavor</b>					
<b>Texture</b>					
<b>Carrot</b>					
<b>Color</b>					
<b>Flavor</b>					
<b>Texture</b>					
<b>Potato</b>					
<b>Color</b>					
<b>Flavor</b>					
<b>Texture</b>					
<b>Zucchini</b>					
<b>Color</b>					
<b>Flavor</b>					
<b>Texture</b>					

1. Broccoli - Wash and trim. Cut off a small piece and set aside. Cut remainder into small uniform pieces.
2. Carrot - Wash and scrape carrot, cut off small piece and set aside. Cut carrot in smaller uniform pieces.
3. Potato - Scrub and pare potato. Cut in cubes. Place one piece in a cup of water to which 1/2 tsp. salt has been added.
4. Zucchini - Wash and trim off ends. Cut off small piece and set aside. Cut remainder into small uniform pieces.

### **Directions:**

Bring 1/2 cup water to a boil (at least 1/4-inch up on sides of pan at all

times). Add each separate vegetable to a separate pan, cover the pan, bring the water back to a boil as rapidly as possible. Lower the heat. DO NOT CONTINUE HARD BOIL. Remove one or several (depending on the number of pieces you have), every five minutes and place on a labeled dish or paper. **The pan should never boil dry.** The water should be at least 1/4-inch up the side of the pan. Make sure that a tight fitting lid is used. Aluminum foil under the lid will help to make the lid fit tighter.

### **Helpful information:**

#### **Characteristics of a well-cooked vegetable**

1. Tender-crisp texture
2. Retains natural vivid color
3. Retains characteristic flavor
4. Retains maximum amount of nutrients

#### **Procedure for obtaining the standard product**

1. Wash, cut, and trim vegetables if necessary.
2. Bring to boil 1/2 cup water in sauce pan. (You may need more water for a larger pan)
3. Add vegetable, cover pan, and bring water back to boil as rapidly as possible.
4. As soon as boil is again reached, lower heat to lowest temperature which will maintain production of steam (low boil). **Do Not Continue Hard Boil!**
5. Cook vegetable until **tender-crisp** in texture when it is pierced with a fork. Add extra water if necessary.

#### **Basic Principle:**

Color, texture, flavor, and nutritive value were lost completely or partially when vegetables were cooked in too much water, boiled rapidly for entire length of time, and overcooked.

### **Vegetable Lab Experiment Questions**

1. Why do we cook vegetables?

***Easier to eat and digest, more palatable***

2. Why is it important to turn the heat down after the water is boiling and the vegetables are cooking?  
***So the water doesn't boil out causing the vegetables to burn***
  
3. Which color remains the nearest the color of the fresh vegetable?  
***Orange***
  
4. Which color changes to a duller color or is less stable?  
***Green***
  
5. Which vegetable has a bland flavor?  
***Potato or Zucchini***
  
6. What happened to the broccoli when it was cooked longer than 20 minutes?  
***Stringy, color faded to a drab olive-green color, mushy, texture***
  
7. List the times at which each vegetable becomes tender-crisp.  
Broccoli - ***10 – 15 minutes***  
Carrot - ***10 – 15 minutes***  
Potato - ***20 minutes***  
Zucchini - ***8 – 12 minutes***
  
8. Why don't we cook the bottom part of the broccoli stock?  
***It is part of the stalk, woody, fibrous, and tough to eat***
  
9. Which vegetable became translucent as it cooked?  
***Potato, zucchini***
  
10. Why is it important to time the cooking of zucchini?  
***It can overcook very easily, soggy, fall apart***
  
11. What happened to the color of most of the vegetables after 5 to 10 minutes of cooking?  
***They intensified***