

# **CLEANING PENNIES**

## **Items needed:**

**1. 7 Clean Applesauce/fruit cups (individual serving size)**

**2. 7 Dirty pennies**

**3. Small amount of each liquid:**

**Ketchup, Apple Juice, Dish Soap, Gingerale, Vinegar, Water**

**4. Pinch of salt**

## **Directions:**

**1. Put 1 liquid into each applesauce cup (7 cups)**

**2. Drop a dirty penny into each cup (may need to push the penny into the ketchup)**

**3. Leave each penny in the cup of liquid for 10 minutes**

**4. Fish out the pennies**

**5. Wipe the penny clean with a paper towel**

**\*Which liquid cleaned the pennies best?**

**Facts: Pennies are made out of copper. Copper reacts to the air (oxygen) which makes the pennies get dark. This reaction is called copper oxide. Copper oxide dissolves in acid. Acid is found in the vinegar and the ketchup. Vinegar with salt added causes a chemical reaction. This chemical reaction is called hydrochloric acid. Vinegar with salt added is more acidic that just plain vinegar.**

**Try other liquids such as: mustard, Coke/Pepsi, or Maple Syrup.**

## **FROZEN APPLE JUICE CUBES**

### **Items needed:**

- 1. Ice Cube tray**
- 2. Apple Juice**
- 3. Water**
- 4. Glass**

### **DIRECTIONS:**

- 1. Pour some apple juice into ice cube tray. (If you do not like Apple Juice then try: lemonade, peach juice, cranberry juice, or orange juice.)**
- 2. Put some water into an ice cube tray.**
- 3. Put both the juice ice cube tray and the water ice cube tray into the freezer overnight.**
- 4. Put some frozen juice cubes into a glass and then pour juice onto your cubes.**
- 5. Put some water ice cubes into a glass and pour juice into the glass.**
- 6. Let the glasses sit and see what happens.**

**As the water ice cubes melt, they return to the water liquid which will water down (or weaken) the juice. But the frozen juice cubes when they melt will return to juice and will not water down your juice.**

**Condensation (moisture on the glass) will also happen when the cold glass and the warm air come into contact with each other.**

**Try freezing fruit such as: peaches, cherries, blueberries, or strawberries and put them into a glass and pour juice over the frozen fruit. What a COOL drink for the summer! Enjoy those drinks.**

