

# FUEL YOUR GAME DAY - EVERY DAY IS GAME DAY

## ACTIVITY: THE YOGURT REACTION

### OVERVIEW

In this activity, students will experiment with how using different ingredients can influence the composition, taste, and pH of yogurt.

### TIME

One 45-minute class period

### PREPARATION

1. Gather the materials needed for student measurement activities listed in Materials.
2. A copy of the scientific method chart worksheet provided with this activity.

## MATERIALS

In addition to common classroom materials and an Internet connection, students will need:

- Four different types of store-bought yogurt (Plain Greek, Fruit Greek, Plain regular, fruit regular with different bacteria if available). One small container of each is sufficient. You will allow students to take small spoonfuls of each type back to their grouping arrangements to make observations.
- pH strips ([possible source](#))
- Spoons and small cups for student collection of yogurt. *Provide each student with a separate spoon for each sample. You may wish to use [craft sticks](#) as they are more economical and environmentally friendly than plastic.*

# ACTIVITY: THE YOGURT REACTION

## ACTIVITY PROCEDURE

### Step 1

Let students know that in this activity they will focus on how differences in yogurt ingredients (fat level of milk, flavors, fruits, bacteria) affect the taste, consistency, and/or pH level of yogurt.

### Step 2

Have students work in small groups to make observations about the different types of yogurt that you have provided. Allow them to take small spoonfuls to their groups seats in order to observe consistency, taste, pH levels. *Be mindful of safe food handling so that students do not share spoons/craft sticks or cross-contaminate samples by reusing them.*

### Step 3

After each group has collected their yogurt samples, have students work in groups to complete their scientific method chart worksheets with how they will examine their yogurt and how they think the different ingredients will affect the consistency, taste, and pH of the yogurt.

### Step 4

Provide students with enough time to make observations about the consistency, taste, and pH of each type of yogurt they are observing (10-15 minutes, depending on the number of samples).

### Step 5

Lead a brief class discussion about the variety of observations students made and their ideas about how different ingredients affect the characteristics of different types of yogurt.

### Step 6

Have students complete their scientific method charts on the next page and discuss briefly what their next questions might be.

## REFLECTION

What have you learned about fermentation, bacteria, and the yogurt-making process that you think others your age should know?

# ACTIVITY: THE YOGURT REACTION

*Use this scientific method chart to complete an observation activity on how ingredients affect yogurt. Create your hypotheses and predictions first and then conduct your taste-tests and observations to confirm or disprove your predictions.*

<b>Observation:</b> Yogurt is available in a variety of types and flavors, each with its own set of ingredients.	
<b>Question:</b> How do different ingredients affect the taste, consistency, and pH of yogurt?	
<b>Hypothesis/Hypotheses:</b>	<b>Prediction/s:</b>
<b>Materials:</b> Yogurt samples, spoons/craft sticks for tasting, cups with samples provided by the instructor.	
<b>Experiment Steps/Observation and taste-testing plan:</b>	
<b>Outcome:</b>	<b>New Question(s):</b>