

**The Pennsylvania State University
Workforce Education and Development**

Lesson Plan Template

Name of Instructor: Patrick Goodman
Program Title: HCCTC
Course Title: Culinary Arts
Unit Title: Safe Flow of Food
Lesson Title: Bimetallic Stemmed Thermometer
Lesson Performance Objective: Upon completion of the Lesson students should be able to speak to the 8 different parts of a knife. Through the lesson plan and Thermometer parts practice sheet all students will be able to identify all 5 parts with 100% accuracy.
Time (length of lesson): Lesson length is 20 minutes.
Equipment and Materials needed: Bimetallic thermometer, Youtube video, text book hand out.
Technical Standard(s): Use of Bimetallic thermometer , Intro to Culinary and Foundations textbook
Academic Standard(s): cc.1.2.11-12.A Reading Information Text, CC.3.5.9-10.B Reading Information Text. Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...

Introduction: 2 min video showing use of thermometer and parts of the thermometer. I will then explain to the class that we will learn the 5 parts of a Bimetallic thermometer.

Body:

Read over pages 144 and 145 in the Foundations TextBook.

Hand out images of Bimetallic thermometers for students to fill out.

Have the students label the image of the Bimetallic thermometer.

Ask for volunteers to tell me all parts of the knife as I point to them.

Summary: I will explain to the class that they will need to refer to the image sheet that we filled out each day until we have a quiz.

Student Assessment:

Formative Assessment(s) Asking questions at end of lesson, review Image sheet

Summative Assessment: 100% on 5 parts of a Bimetallic thermometer.

Universal Design for Learning (UDL)

Multiple Means of Engagement: Provided tasks that allowed for active participation.

Multiple Means of Representation: Using Text book with pictures, Video

Multiple Means of Expression: Demonstration on correct use of Thermometer, while explaining process

Bimetallic Stemmed Thermometer

A bimetallic stemmed thermometer, shown in the photo at right, can check temperatures from 0°F to 220°F (-18°C to 104°C). This makes it useful for checking temperatures during the flow of food. For example, you can use it to check food temperatures during receiving. You can also use it to check food in a hot- or cold-holding unit.

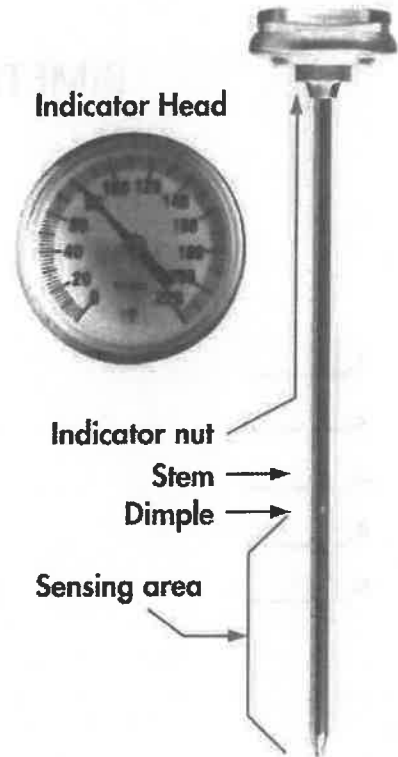
A bimetallic stemmed thermometer measures temperature through its metal stem. When checking temperatures, insert the stem into the food up to the dimple. You must do this because the sensing area of the thermometer goes from the tip of the stem to the dimple. This trait makes this thermometer useful for checking the temperature of large or thick food. It is usually not practical for thin food, such as hamburger patties.

If you buy these thermometers for your operation, make sure they have these features.

Calibration nut You can adjust the thermometer to make it accurate by using its calibration nut.

Easy-to-read markings Clear markings reduce the chance that someone will misread the thermometer. The thermometer must be scaled in at least two-degree increments.

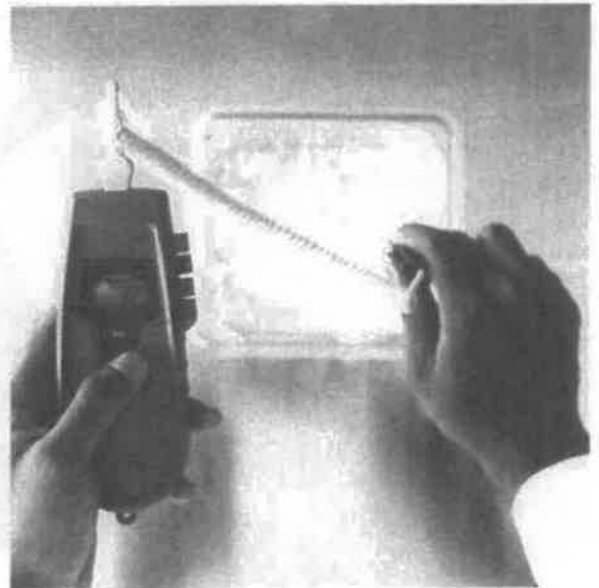
Dimple The dimple is the mark on the stem that shows the end of the temperature-sensing area.



Thermocouples and Thermistors

Thermocouples, such as the one in the photo at right, and thermistors are also common types of thermometers in operations. These tools are similar. The difference between them is the technology inside.

Thermocouples and thermistors measure temperatures through a metal probe. Temperatures are displayed digitally. The sensing area on thermocouples and thermistors is on the tip of their probe. This means you do not have to insert them into the food as far as bimetallic stemmed thermometers to get a correct reading. Thermocouples and thermistors are good for checking the temperature of both thick and thin food.

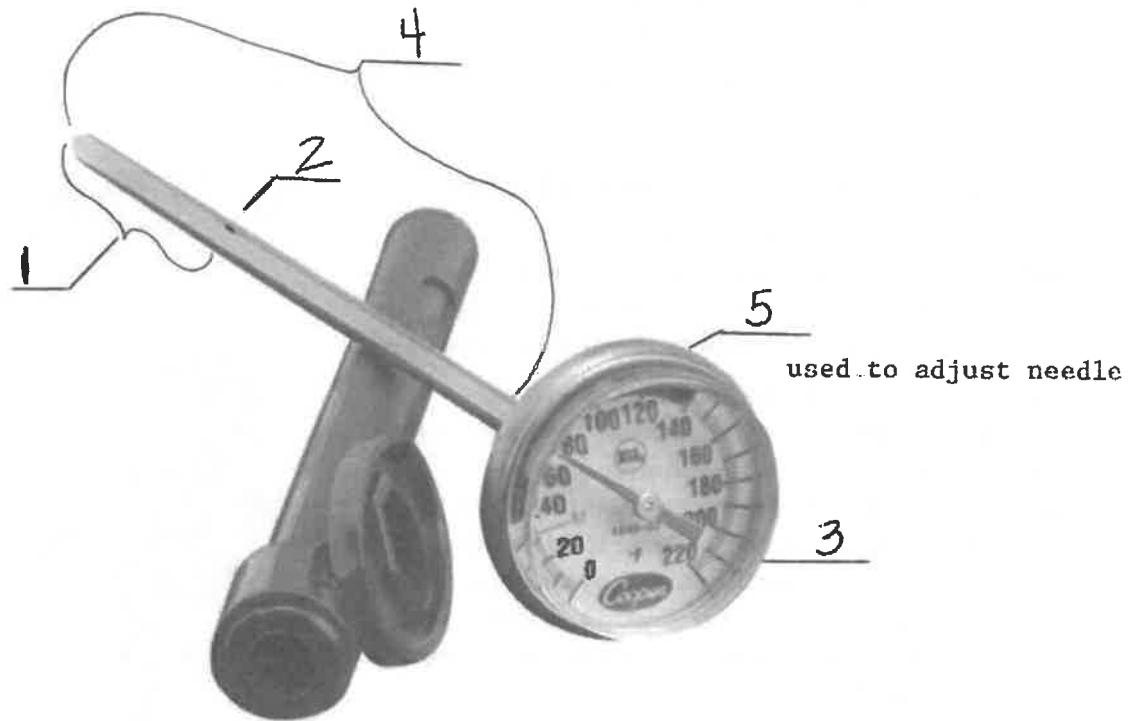


BIMETALLIC STEMMED THERMOMETER

Quiz Sheet

1. _____
2. _____
3. _____
4. _____
5. _____

- A. Indicator head
- B. Stem
- C. Sensing Area
- D. Calibration nut
- E. Dimple



Place the Letter that corresponds to the numbers below according to where they are on the Thermometer.

1. ___

2. ___

3. ___

4. ___

5. ___

