Measuring by Weight

Weight is the measurement of an item's resistance to gravity. Weight is expressed in ounces and pounds. Think of the difference between a cup of popcorn and a cup of water. Both take up the same amount of space, but they do not weigh the same. The water is heavier. To find out how much each cup weighs, use a kitchen scale, not a measuring cup. Weight is often measured in ounces, while volume—as discussed earlier in this section—is measured in fluid ounces.

A food scale is helpful for measuring ingredients by weight. Scales are used to weigh ingredients for preparation and portion control. Both ounce/gram and pound/kilo scales are necessary.

When using a food scale, do the following:

- Decide in what container to weigh the food.
- Place the empty container on the scale.
- Adjust the scale until it reads zero.
- Add the food to the container until the scale shows the desired amount.

Remember to correctly weigh an item and account for the weight of the container in which the item is located. This is known as **taring** the scale. To do this properly, you should do the following:

1. On a movable-face scale (a spring scale or portion control scale) place the container on the scale. Then adjust the face back to zero.
2. On a balance-beam scale, place the container on one end of the scale. Then place the tare weight on the other end until the beam balances.

There are a few different types of scales available for weighing food:

- **Spring scale**: The scale measures the pressure placed on the spring.
- **Balance beam**, also called a **Baker's scale**: The weight of the item is placed on one end and then product is placed on the other end until the beam balances.
- **Electronic scale**: This measures resistance electronically.

Figure 4.16 shows different types of scales.

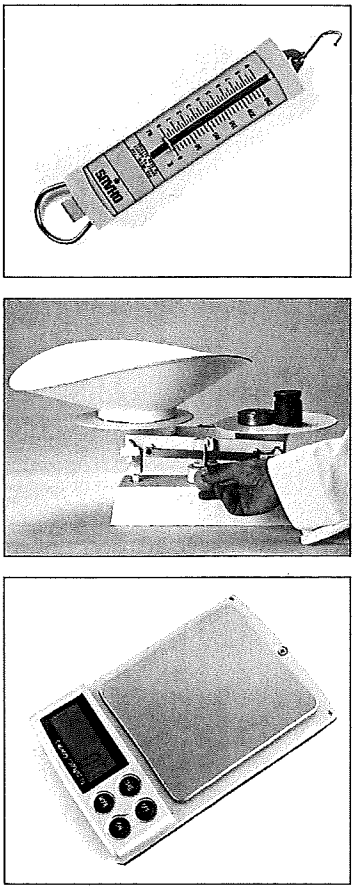

Figure 4.16: Types of scales include a spring scale (top), baker's scale (middle), and electronic scale (bottom).

Measuring Fat

Fat, such as butter, margarine, or shortening, can be measured in several ways:

- **Stick method:** This method is used for fat that comes in 1/4-pound sticks, such as butter or margarine. The wrapper is marked in tablespoons and in fractions of a cup. Simply cut off the amount needed.
- **Dry measuring cup method:** Pack the fat down into the cup, pressing firmly to remove air bubbles. Level off the top. When adding to the recipe, use a rubber scraper to empty as much of the fat as possible from the cup. Apply the same technique when using measuring spoons to measure fat.
- **Water displacement method:** This method involves combining fat with water in a liquid measuring cup. First, do some math: subtract the amount of fat to be measured from one cup. The difference is the amount of water to pour into the measuring cup. For example, to measure 2/3 cup of shortening, start with 1/3 cup of water in a measuring cup. Next, spoon the fat into the cup, making sure it all falls completely below the level of the water. When the water reaches the 1-cup level, you have the right amount of fat. Pour off the water and remove the fat with a rubber scraper. Although this method may seem complicated, it is the most accurate when measuring solid fats. Figure 4.17 shows the water displacement method of measuring fats.

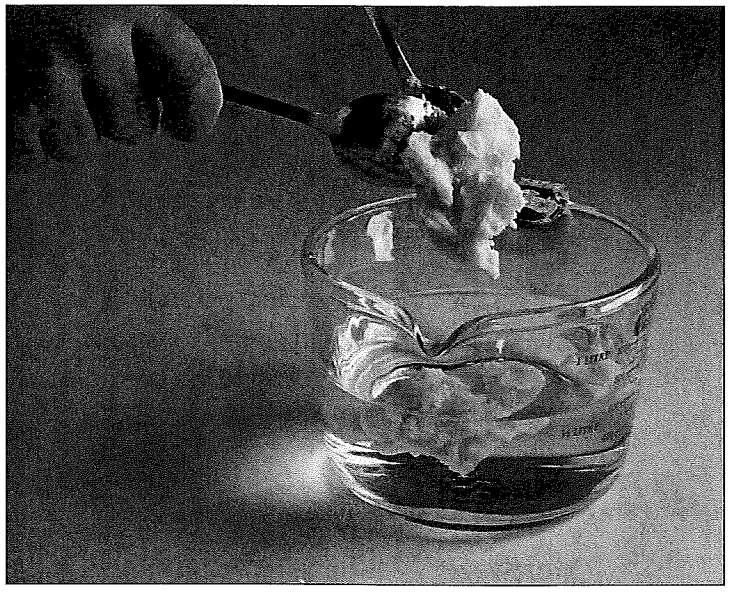

Figure 4.17: To measure irregularly shaped objects such as fat, use the water displacement method.

It is sometimes difficult to be exact with the dry measuring cup method because air bubbles can make the measurement inaccurate. Using the water displacement method also makes the fat easier to scrape out of the measuring cup because it isn't packed tightly.

Measuring Tips

Some recipes call for sifting ingredients; for example, flour, powdered sugar, and granulated sugar might need to be sifted together. **Sifting** is a process that removes lumps from an ingredient and gives it a smoother consistency. Be sure to sift dry powdery ingredients before measuring them. See Figure 4.18.

Figure 4.18: Sifting removes lumps from ingredients such as flour to give them a smoother consistency.

Never measure an ingredient while holding the measuring cup over the mixing bowl. Overpour and the entire recipe may be ruined.

If a recipe calls for ⅛ teaspoon of a dry ingredient but there is no ⅛ teaspoon measuring spoon, fill the ¼ teaspoon measure and level it off. Then, using the tip of a straight-edged spatula or table knife, remove half the ingredient.

EP/AP Amounts

Most vegetables have to be trimmed and cut before being used in recipes. As a result, cooks must calculate the correct **edible portion (EP)** amount from the untrimmed **as purchased (AP)** amount. Table 4.10 on the following page indicates the percentage yields for a variety of produce items.