Prices and Percentages

Using a current list of prices for food and clothing, the students will practice math skills related to percentages.

Grade Level: 6 - 8th
Subject: Math
Length of Time: About 1 - 2 Class Periods

Common Core Alignment

CCSS.Math.Content.7.RP.A3 - Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

- (See note; not applicable as a separate requirement)

Objectives & Outcomes

The students will be able to use proportions, percentage equations, and other similar skills to find discounts on prices, add tax, and find the total cost for various consumer products.

Materials Needed

- Teacher-made list or local store advertisements of current prices on a variety of food and clothing items
- Calculator
- Worksheet to record information with amount of money shown for students to “spend”

Prepare ahead of time: Gather enough advertisements for each student in the classroom or teacher-made list of prices for food and clothing items; blank worksheet for students to record information, discounts, etc.; decide on an amount of money to “give” students to spend. Sample for opening to lesson.

Procedure

Opening to Lesson

- Teacher will display the prices of two or three food or clothing items.
- Ask students: Have any of you ever purchased one of these items?
- Allow students to give responses, ask what they paid for the items.
- Ask students if they paid a tax or had a discount.
Body of Lesson

Modeling

- Point out the regular price of one of the items.
- Tell students it is on sale for 15% off.
- Ask if they know how to reduce the cost by 15%. (If not known, demonstrate)
- Next, tell students there is a 6% sales tax on the purchase. Have students figure the sales tax total and then the final cost of the item.
- Distribute the worksheet to the students and the advertisements/price lists

Guided Practice

- Explain the assignment to the students, and “give” each student their spending money
- All food products are 15% off (or other discount), clothing is 35% off (or other discount)
- Tax is 6% on food and 8% on clothing (or other %)
- Students will begin “purchasing” items and listing them on the worksheet, calculating the final cost for each item
- Remind students of the starting amount of money and they cannot spend more than they have
- Throughout the class period(s) have specials and distribute coupons or special discounts students can use for a limited time only on certain products, surprise students with % mark-ups
- Encourage students to buy as many different products as possible, do not allow large quantity purchases of a single item
- Give students approximately one full class period to shop and calculate the discounts, taxes, and grand totals
- Collect all completed worksheets

Independent Practice

- Create a short test or quiz assessing the students ability to figure discounts and taxes

Closing

Review the method of discounting/taxing items. Allow students to give feedback about the exercise and any difficulties they may have had. What would they do differently next time?

Assessment & Evaluation

Review worksheets completed during lesson, use a commercial-made or teacher-created set of word problems related to percentages, discounts, tax, etc.

Modification & Differentiation

Students work in pairs. No calculators. Instead of advertisements or other price list, attach realistic price tags to classroom items. “Give” students more of less money to spend. Use coupons for % off or Cents/dollars off.
Related Lesson Plans

**Silent Geometry**

The students will practice using geometry formulas measuring items in the classroom to find area and volume, radius and circumference, and identify the types of angles.

**Order in the Math Class**

The students will physically review the order of operations.

**Take a Vacation**

The students will plan a vacation for themselves, group of friends, or family, considering the costs involved.

**Interest-ing Math**

Students will learn about simple interest and how to calculate the real cost of a loan, credit card, and other types of borrowing.