

Rubber Bands–Price Elasticity 101

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SUBJECT(S): Economics

GRADE LEVEL(S): 9, 10, 11, 12

≡ OVERVIEW:

In this lesson, we look at the economics concept of price elasticity by introducing students to complementary and substitute goods. Using the Knowledge@Wharton article “The Crowded, Caffeinated Soft Drink Sector: Who Will Bubble Up to the Top?” students will think about substitutes and complements from a business perspective. Finally, building on student work, the teacher will introduce the terms inelastic and elastic to describe different types of supply and demand curves.

≡ NBEA STANDARD(S):

- Economics, I. Allocation of Resources
- Economics, IV. Markets and Prices

Objectives/Purposes: The purpose of this lesson is for students to understand the concept of *price elasticity*.

- Students will be able to define *complementary* and *substitute goods*.
- Students will be able to explain how *substitute goods* influence supply and demand.
- Students will graphically describe *elastic* and *inelastic* demand curves.

Knowledge@Wharton Article: [“The Crowded, Caffeinated Soft Drink Sector: Who Will Bubble Up to the Top?”](#)

Other Resources/Materials:

For Teachers:

- Internet Access (Outside of the Classroom)
- Printer/Copier
- Chalkboard/Whiteboard
- Butcher Paper
- Markers

Activity:

The lesson is divided into four parts: (1) Introduction, (2) Guided Reading, (3) Exploration Activity and (4) Closing

1. Introduction (10-15 mins)

As always, introduce this lesson by reminding students of the previous lessons. Throughout this unit we have been looking at the relationship between supply, demand and price. Today we will continue that theme by looking at how demand curves *differ* for different types of products.

During this introduction, ask for several volunteers to help you reiterate lessons of supply, demand and equilibrium pricing:

- Volunteer 1: Come up with a product or service for this example.
- Volunteer 2: Come up to the chalkboard and draw a supply curve for this product/service.
- Volunteer 3: Come up to the chalkboard and draw a *demand* curve for this product/service.

Once students have a supply and demand curve (see Figure 1) on the board, ask the students a few questions. (NOTE: If students did not include numbers on the graph's axes, fill them in now). For example, "What is the equilibrium price for this market?" "What quantity will be sold at this price?"

Figure 1



Finally, ask students, “What will happen to the quantity demanded if the price goes up?” (Pick a concrete number, e.g. a price increase of \$5).

Next, have another volunteer come up to the chalkboard and draw a *new* demand curve on the same graph. Make sure that this curve has a significantly different slope than the original curve, BUT ask the student to draw the curve with the *SAME* equilibrium price. The graph should now have look like Figure 1 with Figure 2 or Figure 3 superimposed.

Figure 2

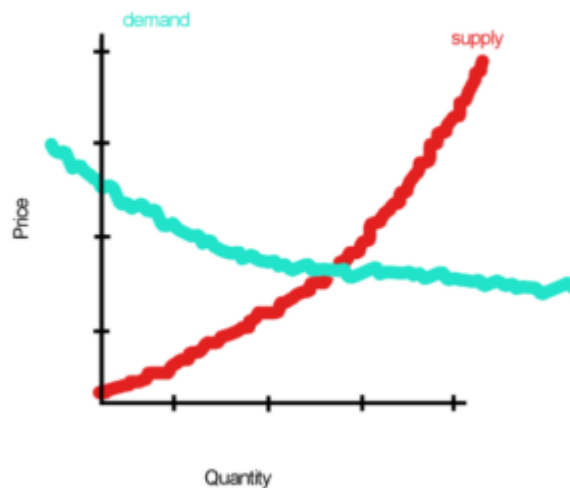
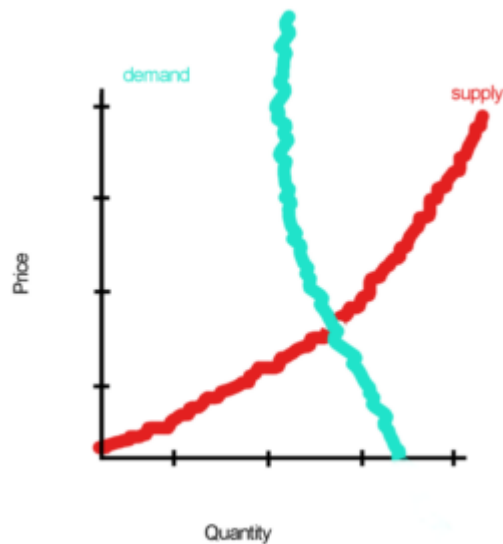


Figure 3



Ask students, “What is different about these two demand curves?” “With this new curve, what will happen to the quantity demanded if price goes up?” (Use the same concrete number as the example above).

After students answer, define the terms *elastic* and *inelastic* demand. An elastic demand curve is highly sensitive to changes in price. An inelastic demand curve is not.

Briefly, ask students to think about examples of each.

2. Guided Reading (5-10 mins)

Next, have students read through the article [“The Crowded, Caffeinated Soft Drink Sector: Who Will Bubble Up to the Top?”](#) As the students read, provide them with a few simple questions: Is the demand for soft drinks elastic or inelastic? Why?

After students finish the article, have them share their answers to the guided questions. Students may present multiple rationales for why the soft drink industry is elastic or inelastic. In either case, do not worry about the students providing a *correct* answer. Instead, use their responses to introduce the terms *complement* and *substitute*.

Explain to students that *complementary goods* and *substitute goods* always refer to a relationship between two or more items. Two products are *complementary goods* when they go hand-in-hand, when demand for one creates demand for another—for example, hot dogs and hot dog buns, socks and shoes.

On the other hand, two products are *substitutes* when they are interchangeable, when one product can easily replace the other — for example, McCormick brand spices and store-brand spices, or even more plainly, different brands of apparel (Nike shorts vs. Adidas shorts).

3. Exploration Activity (10-20 mins)

Once students have an idea of *complements* and *substitutes*, break the class into small groups. Give each group a large piece of paper.

Ask each group to choose a product/service or business for this exercise (e.g. a bank, a restaurant, a clothing manufacturer). Have students write their business at the top of their paper.

Next, give each group four minutes to list as many *complement* products and services as they can. Each group should only list complements to their chosen industry/product.

After four minutes are up, give each group another four minutes to list as many *substitute* products and services as they can. Again, these should only be substitutes for the chosen business' products and services.

Have the groups report back to the class as a whole.

4. Closing (5 mins)

Close this lesson by having students think about the relationship between *substitutes* and demand. What happens to a demand curve when there are many substitutes? Remind students of the definition of *elastic* and *inelastic*.

Practice Outside of the Classroom:

Ask students to look for examples of complements and substitutes the next time they shop at a supermarket. What do students notice about the location of these products? The packaging? The price?

What Worked and What I Would Do Differently:

This lesson worked well. If necessary, give students slightly more group time. I found that group members significantly helped out students who were shaky on the definitions of terms. Even when students could not easily explain the terms, they were able to give clear examples to explain the concepts.