

# Monopoly's Might

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Raising Capital and Debating the Pros and Cons of a  
Monopoly in a Free-Market Economy

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# Monopoly's Might

## Chapter Four

### Purpose and Overview

#### Time required

6–7 class periods

6–7 class periods

#### Project scenario

In a free market economy, competition and monopoly have advantages and disadvantages. As firms enter a competitive market, price falls and the amount of goods available increases. When a monopoly is established, the quantity of goods in the market as a whole decreases, and price increases over the equilibrium price set in a competitive market. However, the promise of economic profit created by monopoly power provides an incentive to innovate, which can lead to new discoveries and improved goods and services. Monopolies, then, have some positive effects as well as some that could be perceived as negative—especially by other firms driven from the market or consumers fearing higher prices and fewer choices.

*High school student entrepreneurs in a School-Based Enterprise (SBE) have developed, produced, and marketed an avocado with fewer calories than other avocados. Their faculty advisor alerts them to the need to expand production given the possibility of competition from other firms. During the course of the next three years, students analyze data on sales, revenue, costs and profits to help them convince a venture capitalist to invest in their SBE, then to fund research and development for a much-needed pesticide. Finally, after becoming a monopoly with a patent for the pesticide, the SBE is bought out by a large corporation. Students face an ethical dilemma—should they become employees of the monopoly or not—and must write a position paper and debate the pros and cons of competition and monopolies in a free market economy.*

#### Concepts to be learned

To successfully resolve the problem and complete the products required in this project, students need to understand and be able to apply the following economic concepts:

## Purpose and Overview

- Barrier to entry
- Competition
- Corporation
- Demand (change in and quantity)
- Demanded
- Entrepreneur
- Equilibrium price
- Equilibrium quantity
- Market
- Market economy
- Monopoly
- Opportunity cost
- Patent
- Price
- Profit
- Scarcity
- Supply (change in and quantity supplied)
- Tradeoff

Although an understanding of the following economic concepts is not essential to complete project tasks, teachers can use the unit to explain additional economic concepts including:

- Corporation
- Economies of scale
- Industry

## **NCEE content standards addressed**

*Monopoly's Might* is intended to be taught throughout the United States and, as appropriate, in other English-speaking countries. Teachers can use it to address the following *Voluntary National Content Standards in Economics* codified by The National Council on Economic Education in partnership with the National Association of Economic Educators and the Foundation for Teaching economics. For more information see [www.ncee.net/ea/standards](http://www.ncee.net/ea/standards).

| <b>Standard #</b> | <b>Economic Concept</b>                                   |
|-------------------|---|
| 1                 | Scarcity  |
| 2                 | Opportunity cost  |
| 3                 | Market systems (allocation of goods & services)           |
| 4                 | Economic incentives (prices, wages, profits, taxes, etc.) |
| 7                 | Market economies  |
| 8                 | Supply and demand   |
| 9                 | Effects of competition                                    |
| 14                | Entrepreneurs   |

## ● Teaching Monopoly's Might ●

### Sequence of the unit

Like the other BIE *Project Based Economics* Units, students complete *Monopoly's Might* by following a standard set of activities in a proscribed order. But within these activities, there will be variation in the timing and in the way students complete them.

The sequence of instructional activities is described below. This sequence is logical, and is based upon extensive pilot testing in high school economics classrooms. It is also informed by research into effective instruction. Although changes may be necessary to meet time constraints, address the needs of specific student populations, or include additional instructional materials and learning opportunities, we strongly encourage teachers to adhere to the sequence of activities as closely as possible—at least during the first several times *Monopoly's Might* is taught. Each instructional activity is discussed in more detail in the following section, the **Step-by-Step Teaching Guide**.

### **Pre-project planning**

0. **Prepare** for successful project implementation.

### **Launching the project**

1. Students receive the **First Memo from Ronnie Johnson, with 2008–2009 production data tables**, and discuss it as a whole-class.

### **Framing the inquiry**

2. Students develop the **initial Know List** with you (whole-class discussion).
3. Students develop the **initial Driving Question** with you (whole-class discussion).
4. Students develop the **initial Need-to-Know List** with you (whole-class discussion).

### **Problem-solving and learning activities**

5. Guide students in analyzing **2008–2009 production data tables** (whole-class discussion).
6. Give **Clarifying Lesson #1** on *demand*.
7. Students individually write **first Project Log entry**.
8. Review **individual Project Log entries** to assess understanding of economic concepts.

9. Students **write summaries and present “elevator talk”** to venture capitalist (in small groups).
10. Students receive **second memo from Ronnie Johnson and 2010 production data tables** (whole-class discussion).
11. Students revise **Driving Question** (whole-class discussion).
12. Students **revise the Know/Need-to-Know List** with you (whole-class discussion).
13. **Gives Clarifying Lesson #2** on *competition*.
14. Students individually write **second Project Log entry**.
15. **Review individual Project Log entries** to assess understanding of economic concepts.
16. Students plan and make **two-minute presentation to venture capitalist** (in small groups).
17. Students receive **final memo from Ronnie Johnson and 2011 production data tables** (whole-class discussion).
18. Students **finalize the Driving Question** with you (whole-class discussion).
19. Students **finalize the Know/Need-to-Know List** with you (whole-class discussion).
20. Give **Clarifying Lesson #3** on *monopolies*.
21. Students write **final Project Log entry**.
22. **Review individual Project Log entries** to assess understanding of economic concepts.
23. **Share supplied rubric with students** to guide their work (whole-class discussion).

***Presentation, assessment, and debrief***

24. Students write **position paper on joining a monopoly** (as individuals).
25. Students prepare their arguments and **debate the ethics of monopolies**.
26. Use **supplied scoring guide to assess** position papers.
27. Conduct **debrief to clarify and consolidate** students' understanding of key economic concepts.



## Daily Directions

### *Teaching Monopoly's Might*

28. Manage **student reflection** on the 21st-century skills practiced and the process of learning in PBL.
29. Use supplied **multiple-choice test** to assess individual students' understanding of key economic concepts.
30. Make **notes on adjustments** to the unit to improve student learning for the next time the unit is taught.

## Step-by-Step Teaching Guide

Each of the above instructional activities is discussed in more depth below, with tips for successful classroom implementation.

### Pre-project planning

#### 0. Prepare for successful project implementation.

There are a number of issues that must be considered before embarking on a problem with students. These include:

- How much time will be devoted to the project?
- What economics content resources need to be prepared in advance?
- Do all students have the basic skills (i.e., non-economics content, such as reading, working in groups, etc.) they need to tackle the project? If not, is it necessary to preteach some of these skills, establish student mentor relationships, or deal with these challenges in other ways?
- How will student groups be formed?
- How will groups report on their progress and be held accountable? Do report forms or other tools need to be developed?
- Is it necessary to arrange access to the media center or computer lab?
- Do parents or administrators need to be informed about the process of Project Based Learning and be assured that time spent on the project is focused on standards-specific learning goals?

### Launching the project

#### 1. Students receive the Entry Document, the first memo from Ronnie Johnson, with attached 2008–2009 production data tables, and discuss it as a whole class.

*The first memo from Ronnie Johnson and 2008–2009 production data tables may be found in the **Student Materials**.*

Have students *only focus on the memo* at this point—save the data tables for later (you may hand them out separately if you wish). Ask one or more students to read aloud the Entry Document while the whole-class focuses on it.

The memo can be projected so it can be read by the whole-class. Alternatively, copies of the memo can be duplicated and passed out to students, or viewed online as an email or document posted to a website.

## Daily Directions

### Step-by-Step Teaching Guide

#### Potential Hurdle

It is essential that the entire class be able to read and comprehend the Entry Document. If necessary, employ usual literacy-building strategies.



#### Economics Content Note

Do not at this point explain to students the meaning of the economic terms in the memo. They will do this for themselves once they begin working to solve the problem.



**Potential Hurdle:** As this memo sets up the scenario and the problem to be solved, it is essential that the entire class be able to read and comprehend the text. If necessary, employ the same literacy-building strategies you would normally use for this kind of reading material.

**Synopsis of memo:** Faculty advisor Ronnie Johnson's first memo congratulates his students in Avocado High School's School-Based Enterprise (SBE) for receiving an award from the Secretary of the U.S. Department of Education. Johnson notes the need to expand production and profits and asks students to prepare a one-minute "elevator talk" to a venture capitalist. They will need to explain "the economics behind our prices, costs, and profits over the past two years," and to "predict revenue and profit for the next year." Students are cautioned that "venture capitalists have strong backgrounds in economics and will expect your explanations to be grounded in demand and supply."

**Economics Content Note:** The memo contains a number of economic terms (demand, competition, production, profits). It is assumed that students will either not fully understand these terms or have misconceptions regarding their meanings. **Do not**, at this point, explain to students the meaning of these terms. This is something they must do for themselves (with your monitoring and guidance) once they begin working to solve the problem.

### Framing the inquiry

#### 2. Students develop the initial Know List with you (whole-class discussion).

Students must now assess what they already know about the problem posed in the Entry Document. This should be done as a whole-class by creating a "What Do We Know?" list on chart paper or a computer projector. Ask students to carefully review the Entry Document and offer items for the list, making sure to *only record what is in the text, not what might be inferred*. Students should be coached to identify all of the information that the Entry Document provides. They should conclude that this information is insufficient to solve the problem, and they need to know (learn) additional things.

Although each class generally produces a unique Know/Need-to-Know List, an example of the type of items that might appear on the first Know List follows.

#### What do we know?

- We belong to a School-Based Enterprise
- We produce and sell low-calorie avocados
- Ronnie Johnson is our faculty advisor

## Economics Review

### Markets

One of the main strengths of economic theory is its ability to provide a general explanation for the way in which price and output are determined in our economy, even though each industry has specific idiosyncrasies that underlie pricing and production.

In general, economists describe four distinct market types:

1. Pure competition
2. Monopolistic competition
3. Oligopoly
4. Pure monopoly

The table below briefly describes the characteristics of each of these four markets, which reflect a continuum rather than discrete markets. In general, two key characteristics underlie the movement from the competitive end of the market spectrum to the monopoly end: ease of entry into the market, and ease of substituting the firm's product with another's. In pure competition, no obstacles prevent firms from entering the market, and each firm's product is identical to other firms' products. In pure monopoly, absolute barriers exist to entry, and the firm's product is unique and has no close substitutes. As a firm moves from a purely competitive market to a monopolistic market (as our avocado company does) its control over price and profit potential increases.

| Characteristic              | Pure Competition             | Monopolistic Competition   | Oligopoly  | Pure Monopoly               |
|-----------------------------|------------------------------|----------------------------|--|-----------------------------|
| <b>Number of firms</b>      | A very large number          | Many                       | Few  | One                         |
| <b>Type of product</b>      | Homogeneous with other firms | Differentiated             | Homogeneous or differentiated                    | Unique—no close substitutes |
| <b>Control over price</b>   | None                         | Very limited               | Mutual dependence between firms                  | Considerable                |
| <b>Conditions of entry</b>  | No obstacles                 | Relatively easy            | Significant obstacles                            | Absolute barriers           |
| <b>Nonprice competition</b> | None                         | Considerable (advertising) | Usually considerable, if product differentiation | Mostly public relations     |
| <b>Typical examples</b>     | Agriculture                  | Apparel                    | Automobiles                                      | Local utilities             |

## Concept Definitions

*The curriculum is designed to teach the following concepts:*

**Barrier to entry:** Anything that prevents firms from coming into an industry

**Change in demand:** See *demand*

**Change in supply:** See *supply*

**Competition** (competitive market): A market in which 1) a very large number of firms sell a standardized product, 2) entry into the market is very easy, 3) the individual seller has no control over the price at which the product sells, 4) nonprice competition does not occur, and 5) a large number of buyers and sellers exists

**Corporation:** A type of firm that is a legal entity separate from the people who own, manage, and otherwise direct its affairs

**Demand:** Purchases of a good or service that people are actually able and willing to make given price and choices available to them. The **law of demand** states that a negative (or inverse) relationship exists between price and quantity demanded; that is, as price increases (decreases) the amount of a good purchased decreases (increases). Consumers' demand is determined by their tastes, their income, and by the price of other goods. The **demand schedule** is a table showing the quantities of a good that will be purchased at various prices. The **demand curve** is a curve that relates the price of a product and the quantity of the product that individuals are able and willing to purchase. **Aggregate demand** is the total demand for goods and services in the economy by households (for consumer goods), by firms and government (for investment goods), and by other countries (exports).

**Entrepreneur:** The human resource that combines other resources to produce a good, makes nonroutine decisions, innovates, and bears risks

**Equilibrium price:** The price in a competitive market where the quantity demanded and the quantity supplied are equal; the price where neither shortages nor surpluses exist and no incentive exists for prices to rise or fall

**Equilibrium quantity:** The quantity demanded and quantity supplied at the equilibrium price in a competitive market

**Market:** Any institution or mechanism that brings together the buyers (demanders) and sellers (suppliers) of a particular good or service

# Production of Avocados at Avocado High School

2008–2009

## Avocados

**Table 1A: Sales (in thousands), 2008**

| Price  | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|--------|-------------|-------------|-------------|-------------|
| \$0.49 | 0           | 0           | 0           | 0           |
| \$0.59 | 0           | 0           | 0           | 0           |
| \$0.69 | 0           | 0           | 200         | 0           |
| \$0.79 | 0           | 150         | 0           | 0           |
| \$0.89 | 100         | 0           | 0           | 0           |
| \$0.99 | 0           | 0           | 0           | 50          |
| \$1.09 | 0           | 0           | 0           | 0           |

**Table 1B: Total Revenue (in thousands), 2008**

| Price  | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|--------|-------------|-------------|-------------|-------------|
| \$0.49 | 0           | 0           | 0           | 0           |
| \$0.59 | 0           | 0           | 0           | 0           |
| \$0.69 | 0           | 0           | \$138       | 0           |
| \$0.79 | 0           | \$118.5     | 0           | 0           |
| \$0.89 | \$89        | 0           | 0           | 0           |
| \$0.99 | 0           | 0           | 0           | \$49.5      |
| \$1.09 | 0           | 0           | 0           | 0           |

**Table 1C: Costs (per avocado), 2008**

| 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|-------------|-------------|-------------|-------------|
| \$0.8       | \$0.7       | \$0.6       | \$0.9       |

**Table 1D: Profit (in thousands), 2008**

| 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|-------------|-------------|-------------|-------------|
| \$9         | \$13.5      | \$18        | \$4.5       |

## Low-calorie Avocados

**Table 2A: Sales (in thousands), 2009**

| Price  | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|--------|-------------|-------------|-------------|-------------|
| \$0.49 | 0           | 0           | 0           | 0           |
| \$0.59 | 0           | 0           | 0           | 0           |
| \$0.69 | 0           | 0           | 0           | 0           |
| \$0.79 | 0           | 0           | 250         | 0           |
| \$0.89 | 0           | 200         | 0           | 0           |
| \$0.99 | 150         | 0           | 0           | 0           |
| \$1.09 | 0           | 0           | 0           | 100         |

**Table 2B: Total Revenue (in thousands), 2009**

| Price  | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|--------|-------------|-------------|-------------|-------------|
| \$0.49 | 0           | 0           | 0           | 0           |
| \$0.59 | 0           | 0           | 0           | 0           |
| \$0.69 | 0           | 0           | 0           | 0           |
| \$0.79 | 0           | 0           | \$197.5     | 0           |
| \$0.89 | 0           | \$178       | 0           | 0           |
| \$0.99 | \$148.5     | 0           | 0           | 0           |
| \$1.09 | 0           | 0           | 0           | \$109       |

**Table 2C: Costs (per avocado), 2009**

| 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|-------------|-------------|-------------|-------------|
| \$0.8       | \$0.7       | \$0.6       | \$0.9       |

**Table 2D: Profit (in thousands), 2008**

| 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|-------------|-------------|-------------|-------------|
| \$28.5      | \$38        | \$47.5      | \$19        |