Stock Market Unit

Introduction

The stock market unit can be expanded to take up as much or as little class time as you would like. Ideally, the students check their stocks weekly at the beginning of class throughout the semester, but you can skip weeks or use a shorter amount of time. This unit is designed to use the internet website Yahoo finance, but you could use other websites, or even the newspaper. Since the students are working on the computers, I have the students work in pairs. I have found that the physical layout of the computers limits communication if there are more than two people.

On the first class, the lesson plans introduce students to stocks – what they are, how to calculate the number of shares, how to read a stock table and use the Yahoo finance website. The students will have $10,000 to invest. They are to pick two companies; they can split the $10,000 however they would like between the two companies. If you want this unit to be a bigger part of the semester, then they can pick more than two companies. I found that students can update two companies in about 15 -20 minutes, and the grade sheets suggested throughout the course reflect this amount of time spent (10 -15 points each class, after the first class). If students spend more time on stocks, then you'll want to increase the points. After the initial setup, the students can sell and buy other stocks as often as you would like. This can be time consuming, so it will affect the flow of the other units.

On the yahoo finance website, below the stock table, are business articles related to the company. In an effort to have the students learn a bit about the world of business, the students are to scan these articles and write, each week, one new statement about something related to their company. (I check this off in red pencil each week, so I know if they wrote a new one the next class). If you are able, it would also be interesting to scan Business Weekly or some other business magazine. You may find articles about the companies your students are following, and could create an interesting worksheet, or, at least, give the students some additional insight into the company and how the business world works. (I found a McDonald's article while waiting at my dentist's office).

This unit also works well with having a financial planner come in and talk to the students as a guest speaker. Many adult education programs offer enrichment courses, and often there is a financial planner teaching some type of finance course. This could be a good place to start (they'll also have a feel for the level of your audience). The financial planner I was fortunate enough to find talked to the students about mutual funds (what they are, and how, unless you know a lot about the market, individual stocks are risky), and some basic financial literacy issues (how much to budget for rent, car, etc., how to pick from a menu of 410k options that you could see at a typical workplace, and, how to be very careful with credit cards). The students commented that she was interesting and worthwhile.

<u>Class #1</u>

The students will learn about what stocks are, how to calculate the number of shares, how to use the yahoo finance website, and how to set up their graphs. The students graph the price per share each week. They must set up a scale for the y axis of their graphs. Since we don't know how the stock will

perform, we will guess that it will not rise or fall by more than 20%. Some students like to use calculators to figure 20%, and some like to do it in their heads, working from 10%. Be sure the students understand both ways.

Pass out and go over the "What are Stocks?" handout (this was taken from the internet, but I don't remember the website), the "How Many Shares?" worksheet (taken from moneyinstructor.com), and the "How to Read a Stock Table" handout (also from the internet but don't remember website). The students only need to know column 3 (stock name), column 4 (three letter ticker symbol), and column 11 (closing price).

Next, put the students in pairs and explain that they have $10,000 to invest, and must pick 2 (or more) companies. Talk about different sectors that the students will be familiar with – fast food and restaurant companies, car companies, retail companies, etc. Explain they will follow their stock performance throughout the semester. Pass out the papers they will fill out tonight. They are to do one worksheet (the one that has corporation, symbol, and amount to invest at the top) for each company. They are also to do a graph of price per share for each company. (This graph comes from Real World Math Using Cooperative Learning by David and Judith Ellis). Explain that they are to take today's price per share and add/subtract 20% to set up their scale (since we don't know how the stock will perform, we are guessing it will stay within those limits). You do not want the y scale in difficult, awkward, increments. Have the students round out their answers and figure 'easy' numbers for the scale.

For example, suppose GAP stock was selling for $19.69 per share. Round to $20. 20% of $20 is $4.00. So put $20 next to the dark, dotted line, and have each line represent $1, so the scale ranges from $16 - $24. There will be about 3 or 4 lines on the top or bottom that are not used – the students do not have to use every line on the graph. The idea is to make a quick, easy to use, scale that will show plus and minus 20%. Lastly, they are to put a dot to show the $19.69 price per share data point at week 0.

The Team Portfolio-Buy is a summary sheet. They are to list each corporation they invested in. Lastly, pass out the directions to the website. When they are done, pass out the homework.

Sample grade sheet:
Group activities (described in the courseintro file) (10 points) _____
Corporation sheet and graph setup for company #1 (15 points) _____
Corporation sheet and graph setup for company #2 (15 points) _____
Summary sheet (10 points) _____
Total (50 points) _____

What are stocks?

Stocks are units of ownership in a company.

Why stocks are sold

Companies sell stock to get money so they can do things like —

- research better ways to make things
- create new products
- improve the products they have
- hire more employees
- enlarge or modernize their buildings

So just as the federal government sells bonds to raise money, businesses raise money by selling stock.

How it works

When you buy *stock*, you become a *shareholder*, which means you now own a "part" of the company. If the company's profits go up, you "share" in those profits. If the company's profits fall, so does the price of your stock. If you sold your stock on a day when the price of that stock falls below the price you paid for it, you would lose money.

Stock Prices Can Rise and Fall

In the stock market, prices rise and fall every day. When you invest in the stock market, you are hoping that over the years, the stock will become much more valuable than the price you paid for it.

Most experts will tell you that putting money in the stock market is a long-term approach to making your money work for you. Remember: people who succeed in the market typically let their stocks grow for 15 or more years.

No Interest

With stocks, there's no such thing as interest. Instead, when stocks are doing well, investors receive *dividends*. What are dividends? Read on!
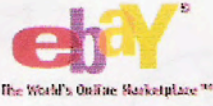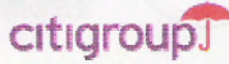
Dividends

Dividends are paid according to how many shares you own — for example, a dollar a share. Dividends can be paid in cash, but they can also be "paid" in the form of additional stock that is automatically re-invested in the company. Dividends are usually paid quarterly.

Name _____   Money Instructor   Date _____

How Many Shares?

COMPANY	PRICE PER SHARE	MONEY TO SPEND	MAX SHARES
ebay	$67.00	$70	_____
citigroup	$36.00	$87	_____
GE	$25.00	$54	_____
YAHOO!	$16.00	$74	_____
intel.	$17.00	$56	_____
STARBUCKS	$21.00	$79	_____

To calculate a % of a number

Find 15% of $300. Do this two ways.

With a calculator: In your head:

How to Read a Stock Table

52W high	52W low	Stock	Ticker	Div	Yield %	P/E	Vol 00s	High	Low	Close	Net chg
s45.39	19.75	ResMed	RMD			52.5	3831	42.00	39.51	41.50	-1.90
11.63	3.55	Revlon A	REV				162	6.09	5.90	6.09	+0.12
77.25	55.13	RioTinto	RTP	2.30	3.2		168	72.75	71.84	72.74	+0.03
31.31	16.63	RitchieBr	RBA			20.9	15	24.49	24.29	24.49	-0.01
8.44	1.75	RiteAid	RAD				31028	4.50	4.20	4.31	+0.21
s38.63	18.81	RobtHalf	RHI			26.5	6517	27.15	26.50	26.50	+0.14
51.25	27.69	Rockwell	ROK	1.02	2.1	14.5	6412	47.99	47.00	47.54	+0.24

Column 1 · Column 2 · Column 3 · Column 4 · Column 5 · Column 6 · Column 7 · Column 8 · Column 9 · Column 10 · Column 11 · Column 12

Columns 1 & 2: 52-Week High and Low - These are the highest and lowest prices at which a stock has traded over the previous 52 weeks (one year). This typically does not include the previous day's trading.

Column 3: Company Name & Type of Stock - This column lists the name of the company. If there are no special symbols letters following the name, it is common stock. Different symbols imply different classes of shares. For example, "pf" means the shares are preferred stock.

Column 4: Ticker Symbol - This is the unique alphabetic name which identifies the stock. If you watch financial TV, you ha seen the ticker tape move across the screen, quoting the latest prices alongside this symbol. If you are looking for stock quotes online, you always search for a company by the ticker symbol. If you don't know what a particular company's ticker i you can search for it at: http://finance.yahoo.com/l.

Column 5: Dividend Per Share - This indicates the annual dividend payment per share. If this space is blank, the compan does not currently pay out dividends.

Column 6: Dividend Yield - The percentage return on the dividend. Calculated as annual dividends per share divided by price per share.

Column 7: Price/Earnings Ratio - This is calculated by dividing the current stock price by earnings per share from the last four quarters. For more detail on how to interpret this, see our P/E Ratio tutorial.
Column 8: Trading Volume - This figure shows the total number of shares traded for the day, listed in hundreds. To get th actual number traded, add "00" to the end of the number listed.

Column 9 & 10: Day High and Low - This indicates the price range at which the stock has traded at throughout the day. Ir other words, these are the maximum and the minimum prices that people have paid for the stock.

Column 11: Close - The close is the last trading price recorded when the market closed on the day. If the closing price is u or down more than 5% than the previous day's close, the entire listing for that stock is bold-faced. Keep in mind, you are no guaranteed to get this price if you buy the stock the next day because the price is constantly changing (even after the exchange is closed for the day). The close is merely an indicator of past performance and except in extreme circumstances serves as a ballpark of what you should expect to pay.

Column 12: Net Change - This is the dollar value change in the stock price from the previous day's closing price. When yo hear about a stock being "up for the day," it means the net change was positive.

Corporation_____   Symbol_____   Amount to Invest_____

Date _____   Price per share _____

Scroll down below the stock chart to where is says Headlines. This section has recent articles about the company. Write a sentence or two describing three things going on in the company.

1.

2.

3.

<u>Calculations</u>

1. Figure out how many shares you will buy. Round all answers to the nearest hundredth. I must be able to follow your work.

2. Figure out how to label your graph.

Round the price per share to the nearest $5. _____

Calculate 20% above this rounded number _____. Show your work below.

Calculate 20% below this rounded number _____. Show your work below.

Figure out your scale and label it on your graph.   Show your work.

THE STOCK MARKET GAME

Graphing Change in Price per Share
(Weekly Graphing)

TEAM PARTNER | 4

By plotting the price per share of your stock on a graph, you can see the ups and downs of the stock price over a period of time. The beginning price is the point on the left side of the dotted line in the middle of the grid. Each <u>horizontal</u> line shows a rise or fall of _____. Each <u>vertical</u> <u>line</u> represents one week. Write the name of the stock you are graphing:_____

NAME OF COMPANY

VERTICAL LINES | | HORIZONTAL LINES

PRICE PER SHARE

+ 1/4

- 1/4   BEGINNING PRICE

WEEKS
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14
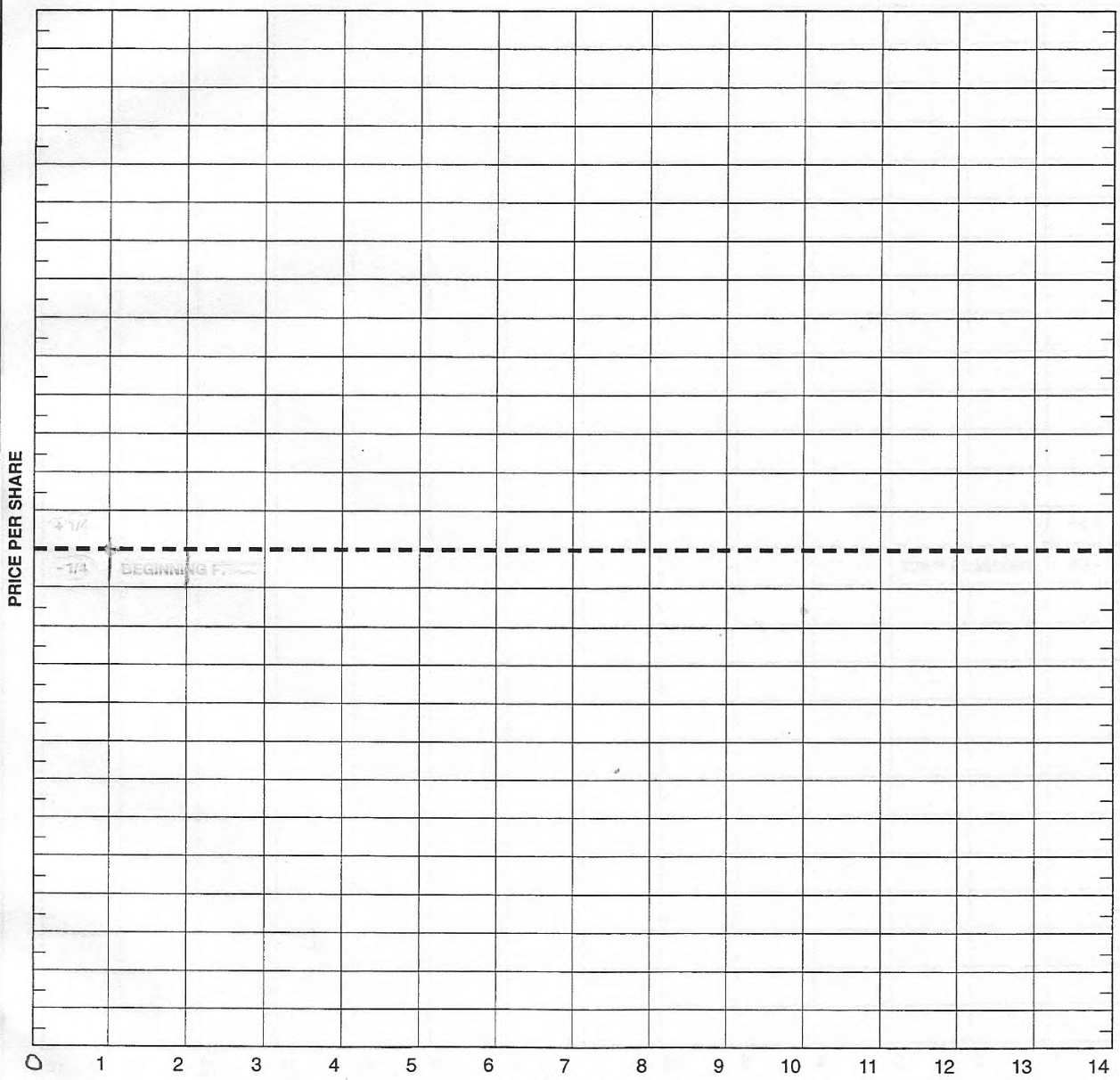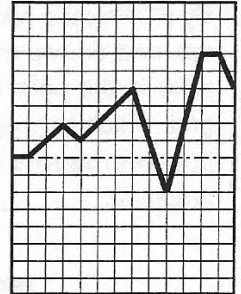
STARTING DATE: _____   STARTING PRICE: $_____ PER SHARE   ENDING DATE: _____   ENDING PRICE: $_____ PER SHARE

FIGURED BY: FIGURES CHECKED BY:

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Names:

TEAM PORTFOLIO - BUY

Date:

Team Name _____

Corporation	Symbol	Number of Shares	Price Per Share	Total Cost of Shares

Total Investment _____

In a few complete sentences, tell me why you chose these stocks, and why you allocated your money this way.

Go to website http://finance.yahoo.com. Click on the Investing tab at the top. Click on the Stocks tab at the top.   Underlined, near the top of the page it says Symbol Lookup. Click on this. You can now type in your company name and click on the Look Up button. This will come up with a list of companies that have similar names. Click on the company you are interested in and the stock data will appear.

Homework

Name:_____

You must show <u>all</u> your work to get credit. If you use a calculator you must write down the calculations you entered.

1. You have $5000 to invest. You want to invest 60% in Walmart and 40% in McDonald's.

    How much money will you invest in Walmart? _____

    How much money will you invest in McDonald's? _____

2. Walmart is trading at $48.31 per share, and McDonald's is trading at $44.81 per share. Round your answer to the nearest hundredth.

    How many shares of Walmart can you buy?_____

    How many shares of McDonald's can you buy? _____

3. Suppose these companies do not let you purchase partial shares.

    How many shares of Walmart can you buy? _____

    How many shares of McDonalds can you buy? _____

4. How much money will you have left over? _____

5. You want to graph the WALMART stock for the next 10 weeks. You have graph paper as shown below. There are 10 grid marks above the current price line and 10 grid marks below the current price line. You estimate that the stock will not change by more than +/- 15%. Figure your scale and label the graph. Remember to use easy numbers. You do not have to use every grid mark.

PRICE PER SHARE

BEGINNING PRICE
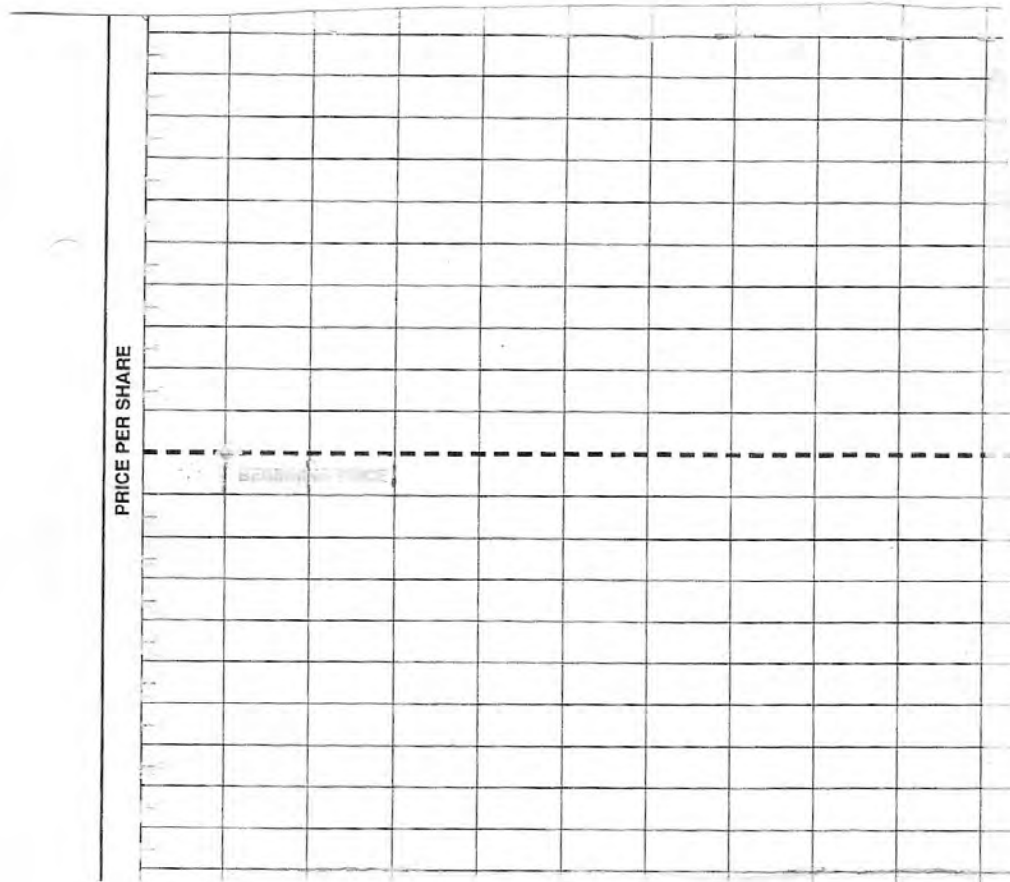
<u>Subsequent Classes</u>

After the first class, the students will use worksheets that also accommodate selling and buying transactions.   In the file 'weeklystockupdate' (put in a separate file because it has different margins) is a chart; they are to fill out one line of the chart each week (leaving the sell/buy columns blank if they did not do additional trading that week). They are to have one of these charts for each company they invest in. On the next page down is a worksheet where they can write down something new they learned from the business articles located below the stock table. They also need one of these for each company. They are to write down one new item each week.

The page following that is a summary chart; the students are to fill one of these out each week. The initial investment is $10,000. Notice that at the bottom of the chart they are to sum up their total investment market value, profit (loss), and % profit (loss).   It is the convention in business to write losses in ( ). The total investment can be calculated by summing the columns, except for the % profit (loss). If a student has more money invested in one company than another (say $2500 in one company and $7500 in another), the % profit (loss) of the $7500 company has to carry more 'weight' than the $2500 company, so they cannot sum this column. The must take their total profit (loss) and divide it by the $10,000 they initially invested. Included is a quiz that you could give the students after a few weeks – it does not cover selling and buying transactions – only graphing and profit/loss calculations.

At the end of the semester, they can compare the %profit(loss) to how much money the $10,000 would have made in a savings account. They can do a simple interest calculation that they learned in the car buying unit! If the stock market is favorable for that semester, be sure to caution students that investing in individual stocks if risky, and they could have easily lost money as well.

Company_____

Each week, scan the business articles located below the stock chart and write down a sentence or two describing something that is going on in the company.

Summary Chart

Date_____

Initial investment_____

Company	Today's market value	Profit (loss) to date	% profit/(loss) to date	Sell		Buy	
				Amount	# shares	Amount	# shares

Total
Investment _____ _____ _____

If you bought or sold stock:
In a few sentences describe why you chose to
    1) sell that particular stock
    2) buy that particular stock
    3) sell/buy with that particular amount of money

Quiz – Stocks

You must show all your work to get credit!

1. You have $15,000 to invest. You want to invest 25% in Starbucks, 15% in Mobil, and 60% in Toyota. Starbucks is $44.21 per share, Mobil is $67.18 per share, and Toyota is $38.12 per share. Show many shares will you buy for each company? Round your answer to the nearest hundredth.

Starbucks:

Mobil:

Toyota:

2. You want to graph the Mobil price per share. You anticipate that the price will not change by more than plus or minus 15%. Set up a graph scale for Mobil. (note: on next page insert blank graph)

3. When you check the stock prices several weeks later, you find that Starbucks is not $45.21 per share, Mobil is $65.99 per share, and Toyota is now $38.43 per share. What is your profit(loss) for each company? Round your answer to the nearest cent.

Starbucks:

Mobil:

Toyota

4. What is your total <u>percent</u> profit(loss) to date? Round your answer to the nearest hundredth.