

Lesson 8

Save and Invest: Investing for a Lifetime

Lesson Description

In this lesson, students will build their own investment portfolio from five fictitious mutual funds. Using a Flash application, students will have the opportunity to simulate the performance of a portfolio over a 40-year investment period, rebalance periodically and experience the power of compound interest. At the end of the simulation, students will discuss their results and share what they learned through the investment simulation.

National Standards in K–12 Personal Finance Education (www.jumpstart.org)

Saving and Investing

Standard 3: Evaluate investment alternatives.

Instructional Objectives

Students will:

- Create a diversified portfolio.
- Compare different strategies of investing over a 40-year simulation.
- Compare annual rate of return and portfolio value, based on a group-selected mix of investments.

Time Required

One 50-minute class period

Materials Required

SmartBoard

Notebook File

Calculators for each student

Copies of Handout 1: Allocation and Portfolio Values for each group

Copies of the Building Wealth mutual fund fact sheets for each student

Warning

The first time you teach the lesson, save a master copy to your computer or a flash drive. If you do not, you will not be able to save notes from each class. Before each class, reload the master copy of the notebook file to be certain that all of the elements on each page are ready for use.

Procedure

1. Display Slide 1. Tell students that today they are going to simulate a lifetime investment experience.
2. Display Slide 2. Review the instructional objectives.
3. Display Slide 3. Hand out copies of the Building Wealth mutual fund fact sheets to each student and review the

names, symbols and investment objectives of each. Give students a few minutes to read the fact sheets and ask questions about the information contained within. See Lesson 7 procedure document for a description of each part of the mutual fund fact sheets.

4. Display Slide 4. Divide the class into four groups. Distribute copies of Handout 1: Allocation and Portfolio Values to each group. Use the graphic on the screen and the information below to explain Handout 1 to the class.
 - Point to the initial value blank on the graphic. Tell students that in this blank they will write the starting value of their portfolio (provided by the simulation) for each five-year period. Every group will start with \$10,000.
 - Point to the allocation lines on the graphic. Tell students that on these lines they will determine the percentage of their portfolio they want to invest in each of the Building Wealth mutual funds. They can put as much or as little as they wish into each fund, but the total must be 100 percent.
 - Point out the strategy/remarks lines. Tell students that every five years they will have the opportunity to reallocate their portfolio. When they do, they must write down the reason for the changes they made. Reasons will vary but could include:
 - Put more in the bond fund to help limit losses.
 - Put more in international because it has the highest annual rate of return.
5. Display Slide 5: Use the information below and the Flash application on the slide to run the Investing for a Lifetime simulation.

The following screenshots will explain the two views of the simulation.

The Allocation Screen

1. Allocation 1

2. % % % % %
 BWLCF BWMCF BWSCF BWIIF BWBIF

Allocation 2

% % % % %
 BWLCF BWMCF BWSCF BWIIF BWBIF

Allocation 3

% % % % %
 BWLCF BWMCF BWSCF BWIIF BWBIF

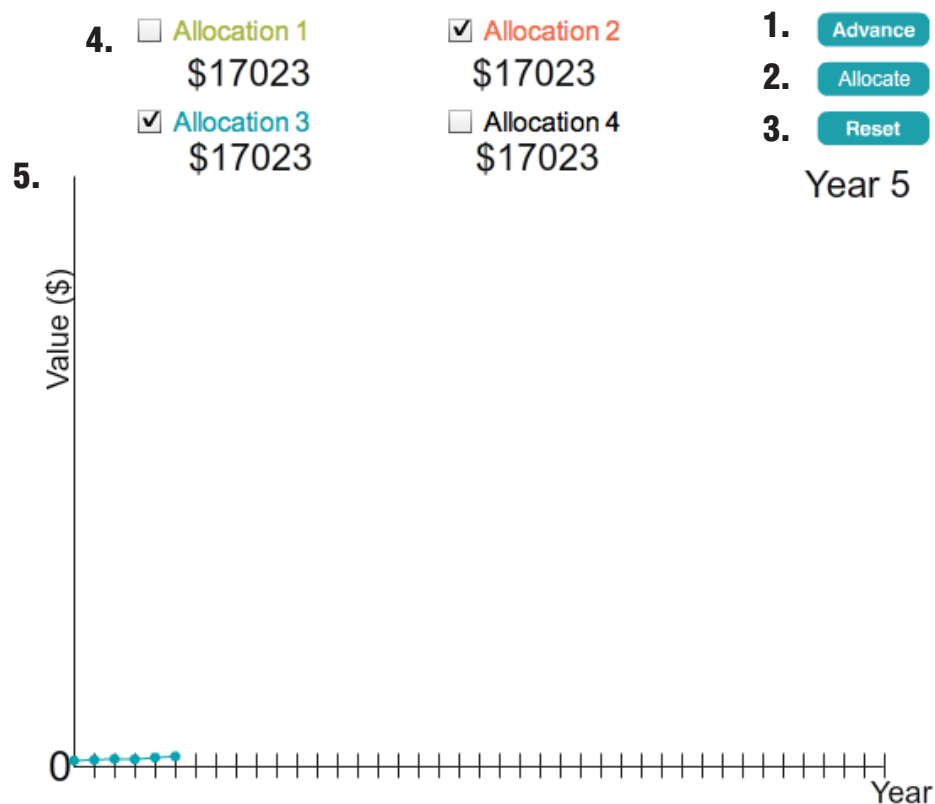
Allocation 4

% % % % %
 BWLCF BWMCF BWSCF BWIIF BWBIF

3. [Graph](#)

- 1. Team Name:** By touching the text in this area, groups may designate a custom name. This name will allow them to identify their team's graph and account value on the simulation screen.
- 2. Team Allocation:** In each of these boxes, teams will determine their allocation for the next five years of the simulation. To change a percent allocation, touch the number and use the keyboard. The fund ticker symbols (located on the left side of the mutual fund fact sheets) allow students to distinguish between the funds. In order, the funds are the Building Wealth Large Cap Fund (BWLCF), Building Wealth Mid Cap Fund (BWMCF), Building Wealth Small Cap Fund (BWSCF), Building Wealth International Index Fund (BWIIF) and Building Wealth Bond Index Fund (BWBIF).
- 3. The Graph Button:** This button will move from the allocation screen to the simulation screen. Each time you change allocation (every five years), you will touch this button to return to the simulation.

The Simulation Screen



- 1. Advance Button:** This button will advance the simulation one year. Each time you press the button, a year counter (directly below the buttons) will display where you are in the simulation.
- 2. Allocate Button:** This button will return you to the allocation screen. Every five years, you will touch this button and give the class time to reallocate their portfolio.
- 3. Reset Button:** If you have a need to restart the simulation, press the reset button. All of the data will be reset, so you cannot use this to replicate the simulation you reset.
- 4. Allocation Selection and Values:** Each check box is tied to an allocation on the allocation screen. When selected, the returns of that allocation will display on the graph. You can check as many or as

few as you like. Initially, when there is very little variation between the teams, only one graph will be visible. As the values diverge, all teams will become visible. Team name changes made on the allocation screen will be reflected on the simulation screen. The color will correspond to the graph displayed by checking the box. Below each team name, the account value of that team's portfolio will display. The value will update each year to reflect the new returns.

- 5. Main Axis:** The selected allocations will display on this axis. The y-axis runs from \$0 to \$1,000,000 and the x-axis from 0 to 40 years. It is possible that an account could be worth more than \$1,000,000 by the end of the simulation, in which case it will exceed the top of the axis. Even if the lines overlap the buttons, the function of each button will not be impacted.

Running the Simulation

Once you have divided the class into groups and given each group a copy of Handout 1, begin the simulation by gathering team names and initial allocation on the allocation screen. Once all teams have entered their allocation, touch the graph button to advance to the Simulation Screen.

To advance the simulation and update the portfolio value, touch the advance button. Each press will advance the simulation one year. Every five years, have the students copy down their portfolio value onto their Handout 1. Since each group's performance will be visible, have the highest and lowest group discuss their strategy for the preceding five years.

Every five years, press the allocate button to return to the Allocation Screen and allow students to make changes to their allocation. On Handout 1, the group must provide a strategy or remark for changes they are making. An example of a strategy might be:

- “We made a lot of money last period and want to protect some of it. The bond fund has never lost more than 2.92 percent, according to the fact sheet, so we added more money to that fund.”

Repeat the process of advancing five years and reallocating until you reach year 40. The advance button will disappear, and the simulation is over.

Closure

Use the following questions to lead a discussion about the simulation.

- Was there any strategy that was very effective?
- Were there any patterns they noticed when they changed allocation?
- Did the students have more or less money than they expected when the simulation began?

Explain that since the simulation lasts 40 years, it simulated working from 27 to 67 years old. Ask students if they feel it is possible to have \$10,000 invested by the time they are 27?

Ask students what other actions they could take to increase their total account value in real life? Answer will vary but might include:

- Stay invested longer (more than 40 years).
- Contribute additional money each year.

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Handout 1: Allocation and Portfolio Values

Team Name _____

Group Members

Year 1

Initial Value: \$10,000

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 5

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 10

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 15

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 20

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 25

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWLCF _____%

Strategy/Remarks

Year 30

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 35

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks

Year 40

Initial Value: \$ _____

Allocation:

BWLCF _____% BWMCF _____% BWSCF _____% BWIIF _____% BWBIF _____%

Strategy/Remarks
