

“Time Value of Money Magic!”

a. *Note to educator: The graph on Slide 23 of the Choosing to Save Essentials PowerPoint presentation can be used as a standalone demonstration if time and supplies do not allow for the completion of the jelly bean demonstration described below.

b. Prepare for the “Time Value of Money Magic!” demonstration:

i. *Note to educator: Preparation for this activity should be completed before beginning the lesson.

ii. Purchase a large bag of Jelly Beans.

1. *Note to educator: Other types of candies will work for the demonstration as long as there is a minimum of six colors. The graph on slide 23 of the Choosing to Save Essentials PowerPoint presentation 7.14.2.G1 is used in conjunction with this demonstration. The colors on the graph correspond to the eight standard colors of jelly beans: orange, purple, yellow, green, red, pink, black, and white.

iii. Obtain a clear object to hold the candies during the demonstration, such as a Ziploc bag or clear bowl.

iv. Color code and divide the jelly beans into the following numbers.

1. Color 1= 10 jelly beans

2. Color 2= 1 jelly beans

3. Color 3= 3 jelly beans

4. Color 4= 6 jelly beans

5. Color 5= 8 jelly beans

6. Color 6= 11 jelly beans

a. Note to educator: The graph on slide 23 corresponds with the use of the following colors:

i. White- 10

ii. Orange-1

iii. Purple-3

iv. Yellow-6

v. Green-8

vi. Red-11

c. Complete the “Time Value of Money Magic!” demonstration.

i. Ask participants, “Can money magically grow?”

ii. Explain to participants that although it is not magic, money can grow on its own if the time value of money is utilized. Interest allows money to grow on its own.

iii. Place 10 jelly beans in the clear container.

1. Explain to participants that each jelly bean represents \$10.00. This represents a \$100.00 initial investment.

iv. Add 1 jelly bean of a different color to the clear container.

1. Start Slide 23 of the Choosing to Save Essentials PowerPoint presentation. The first animation explains that \$7.00 in interest was earned over the first year of the investment, so the investment is now worth \$107.00. The jelly bean added to the initial investment represents this \$7.00 (rounded up).

2. Explain to participants that the owner of this investment has earned \$7.00 and he/she didn't do anything! It's magic!
- v. Add 3 jelly beans of a different color to the clear container.
 1. Continue with slide 23. Explain the second animation for year 5 of the investment.
- vi. Add 6 jelly beans of a different color to the clear container.
 1. Continue with slide 23. Explain the third animation for year 10 of the investment.
- vii. Add 8 jelly beans of a different color to the clear container.
 1. Continue with slide 23. Explain the fourth animation for year 15 of the investment.
- viii. Add 11 jelly beans of a different color to the clear container.
 1. Continue with slide 23. Explain the fifth animation for year 20 of the investment.
- ix. Note to educator: If time allows, the jelly bean demonstration can be continue to year 50.

The number of jelly beans would be:

 1. Year 25= 16 jelly beans
 2. Year 30= 22 jelly beans
 3. Year 35= 31 jelly beans
 4. Year 40= 43 jelly beans
 5. Year 45= 60 jelly beans
 6. Year 50= 85 jelly beans
- x. Continue with slide 23. Explain to participants that at year 50 the investment would be worth \$2945.70 and would earn \$845.46 in interest alone.
- xi. Pass the clear container of jelly beans around the room and ask participants to look for the jelly beans that represent the initial investment (our example uses white jelly beans).
 1. Explain to participants that these represent the only money that was actually provided by the investor. All of the other colored jelly beans represent free money in the form of interest earned.
- xii. The following table represents the time value of money calculations used in this demonstration.

Year	Amount Investment is Worth	Interest Earned in That Year
Initial Investment	\$100	0
1	\$107.00	\$7.00
5	\$140.26	\$33.26
10	\$196.72	\$56.46
15	\$275.90	\$79.19
20	\$386.97	\$111.07
25	\$542.74	\$155.77
30	\$761.23	\$218.48
35	\$1,067.66	\$306.43
40	\$1,497.45	\$429.79
45	\$2,100.25	\$602.80
50	\$2,945.70	\$845.46

d. Slide 24: Maximizing Your Return

- i. Discuss how participants can use time, money, and interest rates to maximize return.