Lesson: <u>The Great Investo and the Winning Ticket</u>

Materials:
Teacher will supply:
- document camera
- pencils
- tape or magnet to display word card
- calculators (1 per student, or 1 per group of 3-4 students)

Banker will supply:
- 30 copies of Handout 1 (2-sided)
- 30 copies of Handout 2

Bankers: Your Teach Children to Save Day packet will include a copy of the book, <u>The Great Investo and the Winning Ticket</u>, a copy of the lesson, a paper bag, colored tickets (95 yellow, 5 red, 2 green and 1 blue) and the PROBABILITY word card. If your teacher requires transparencies, they will also be included.

Preparation:
Review the lesson ahead of time.
Before beginning the lesson, place Handout 1 under the document camera.

Tips for Bankers:
1. Write the story questions on post-it notes, then place the sticky notes on pages where the reading stops.
2. As you read, show the pictures to the students. You can show them using the document camera if one is available.
3. As you are having students record answers on the handout, you should do the same on your projected copy.
4. Distribute gifts from your bank at the **end** of the session.

Procedure:
1. **Introduce** yourself and your bank.

2. Begin the lesson by **asking** the following questions.
   a. What does it mean to save money? *(Not spending your money right now, keeping it for later)*
   b. Why is saving money important? *(Saving helps to satisfy our wants, such as making expensive purchases and life's emergencies.)*
   c. How many of you save your money? *(Answers will vary.)*

3. **Distribute** Handout 1, one per student, and ask students to have pencils on their desks.

4. **Show** the cover of the book. **Read** the title and author. Tell students that Investo the Money Magician is up to his old tricks of thinking he can conjure up money without having to work for it.

5. Begin to **read** the story, stopping after page 9. **Ask**: How much money does Investo have? *(We don't know, but it's not enough for the vacation he'd like to have.)* **Ask**: What

is Penny's advice? *(Save a little each day until you reach a goal.)* **Explain:** When you are saving money for a specific reason, we call that a **savings goal**. **Ask:** What would Investo's savings goal be? *(to have enough money for his dream vacation)* Do any of you have a goal for your savings? *(answers will vary; might include college, a video game, a laptop, etc.)*

6. Continue reading, stopping after page 11. **Ask**: What is Investo's objection? *(Saving a little each day takes too long.)* What is the prize that Investo will try to win? *(the trip to the amusement park)*

7. Continue reading, stopping after page 13. **Ask**: What kind of contest is Investo going to enter? *(a raffle)* Describe a raffle. *(Buy tickets, and you win if your ticket is pulled from all the other raffle tickets.)* **Ask:** How much did each ticket cost? *($1.00)* How good do you think your chances are of winning a raffle? *(Many people can buy raffle tickets, so it depends how many tickets were purchased.)*

8. **Activity:** Let's pretend that Investo bought five raffle tickets. *(Place five red tickets in the paper bag; have students and you write 5 in the appropriate space on **Handout 1, #1**)* Now let's pretend that ninety-five (95) more tickets were bought by other people. *(Place 95 yellow tickets in the bag; have students write 95 in the appropriate space.)* How many total tickets are in the bag? *(100)* What fraction tells us how many red tickets are in the bag? *(5/100)* Does Investo have a good chance of winning? *(No, but he might get lucky.)*

9. Continue reading, stopping after page 16. **Ask:** Did Investo win? *(No)* How much money did he lose? *($5; write that in the appropriate space on the handout.)* **Explain:** When you only have a chance of winning something, it is called PROBABILITY. *(Hang up the word card.)* **Probability is the likelihood that an event will happen.**

10. Continue reading, stopping after page 19. **Ask:** What kind of contest is this? How does it work? *(Must buy boxes of cereal and send in the box tops; one name will be randomly selected.)*

11. Continue reading, stopping after page 21. **Ask**: How many box tops did Investo send in? *(100; you and the students write that number in the appropriate space on **Handout 1, #2**.)* Let's pretend that other people sent in 900 box tops. What fraction represents Investo's boxtops? *(100/1000; complete filling in the blanks on the handout)* **Ask:** What is the probability (likelihood) that Investo will win? *(He has a 1 in 10 [100/1000] chance of winning, so his chances are not very good.)*

12. Continue reading, stopping after page 23. **Ask:** Did Investo win? *(No)* If each box of cereal cost $1.00, how much money did Investo spend*? ($100.00; write that in the appropriate space on the handout.)*

13. Continue reading, stopping after page 25. **Ask:** What is Penny's good advice? *(If it looks too good to be true, then it's probably phony. You win by saving your money.)*

14. Continue reading, stopping after page 27. **Ask:** When you buy a ticket where you select numbers, what is this kind of contest called? *(Lottery)* How much money did Investo spend? *($50; you and the students write that number in the appropriate space on **Handout 1, #3**).* Do you think he has a good probability of winning? *(no)*

15. Continue reading, stopping after page 33. **Ask:** Can anyone explain what *interest* is? (*an amount of money the bank adds to a savings account based on a percentage of the money saved*) **Explain:** Your saved money earns interest which is more money in your account, so then the money you've saved plus the interest earn interest. When interest earns more interest it is called **compound interest**.

16. Continue reading, stopping after page 35. **Ask:** Did Investo win? *(No)*

17. Finish reading the book. Have students add up the amount of money Investo has spent on the contests *(**Handout 1, #4**)*. **Ask:** How much money has he spent and lost? *($155.00)*

18. **Complete Handout 1** by having students (individually or in groups of 3 or 4) use calculators to figure out how much money Investo could have if he had saved it in an interest-earning savings account that will earn 5% (.05) each month. You and the students record the answers in the appropriate boxes. The first set is completed for you.

19. **Activity—if you have time:** Distribute Handout 2. Remove three yellow tickets from the paper bag and replace them with one blue ticket and two green tickets. The bag now has 100 tickets: 92 yellow, 5 red, 2 green, and 1 blue. The red, green and blue tickets are winning tickets. Red wins $1.00, green wins $5.00, and blue wins $10.00. One at a time, have various students draw a ticket out of the bag, note the color and how much would be won. Record the information on Handout 2. Place the ticket back in the bag and proceed in the same manner with other students drawing a ticket. As a group, answer and discuss the questions at the bottom of the page.

20. **Wrap-up** –Ask the following question:

    a. If you enter a contest, what is the probability that you will be a winner and be able to reach your goal? *(Not very good)*
    b. If you save your money in a bank, with that money earning interest and compound interest, what is the probability that you will reach your savings goal? *(Excellent chance if you save steadily over a period of time.)*

Name _____   **Handout 1**

1. How many raffle tickets did Investo buy?   _____

    How many tickets were bought by other people?   _____

                    Total number of tickets bought: = _____

    What fraction represents Investo's tickets?   _____

    How much money did Investo lose? $_____

2. How many box tops did Investo send in?   _____

    How many box tops did other people send?   _____

                    Total number of boxtops sent: _____

    What fraction represents Investo's box tops?   _____

    How much money did Investo lose? $_____

3. How much money did Investo spend on lottery tickets? $_____

4. How much money did Investo spend on all the contests? $ _____

5. Did Investo make wise choices of what to do with his money? _____
    What would a wiser choice have been?

6. Let's pretend that instead of wasting the money, Investo deposited that money in a bank savings account that earns 5% interest each month. Use a calculator to figure out how much Investo's account could have in 12 months. Round the number to the nearest dollar.

	Interest earned (multiply by .05)	Beginning amount + Interest (last amount starts the next month)	Rounded to:
January	$155 X .05= $7.75	$155 + $7.75 = $162.75	$163
February	$163 X .05 = _____	_____ + _____ = _____	
March	_____ X .05 = _____	_____ + _____ = _____	
April	_____ X .05 = _____	_____ + _____ = _____	
May	_____ X .05 = _____	_____ + _____ = _____	
June	_____ X .05 = _____	_____ + _____ = _____	
July	_____ X .05 = _____	_____ + _____ = _____	
August	_____ X .05 = _____	_____ + _____ = _____	
September	_____ X .05 = _____	_____ + _____ = _____	
October	_____ X .05 = _____	_____ + _____ = _____	
November	_____ X .05 = _____	_____ + _____ = _____	
December	_____ X .05 = _____	_____ + _____ = _____	

5

Name _____   **Handout 2**

In the paper bag we have 100 tickets that have the following values:

Yellow -- $0	Red -- $1.00
Green -- $5.00	Blue -- $10.00

We are going to pretend to buy one $2.00 lottery ticket each week. Each week we will draw one ticket out of the bag and record the amount of money won.

	Buy $2.00 ticket	**Amount won**
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		
Week 6		
Week 7		
Week 8		
Week 9		
Week 10		
TOTAL		

1. Figure the difference (subtraction) between the amount spent and the amount won.

    Did we win more or lose more? _____

2. Instead of buying a $2.00 lottery ticket each week, we are going to save that amount in the bank. **Remember:** Your savings will earn interest!

    How much money would we save in 10 weeks? $_____

    Is that amount more or less than the amount we won? _____

3. What is the smartest thing to do with your money?

Handout 1 (Page 1) Answer Key

1. How many raffle tickets did Investo buy? _____**5**_____

    How many tickets were bought by other people? _____**95**_____

           Total number of tickets bought: = _____**100**_____

    What fraction represents Investo's tickets? _____**5/100**_____

    How much money did Investo lose? $_____**5.00**_____

2. How many box tops did Investo send in? _____**100**_____

    How many box tops did other people send? _____**900**_____

           Total number of boxtops sent: _____**1,000**_____

    What fraction represents Investo's box tops? _____**100/1000**_____

    How much money did Investo lose? $_____**100.00**_____

3. How much money did Investo spend on lottery tickets? $_____**50.00**_____

4. How much money did Investo spend on all the contests? $ _____**155.00**_____

5. Did Investo make wise choices of what to do with his money? _____**No**_____

    What would a wiser choice have been? **Saving his money in a bank where it could earn interest**

Handout 1 (Page 2) Answer Key

	Interest earned (multiply by .05)	**Beginning amount + Interest** (last amount starts the next month)	**Rounded to:**
January	$155 X .05= $7.75	$155 + $7.75 = $162.75	$163
February	$163 X .05 = $**8.15**	**$163 + $8.15 = $171.15**	**$171**
March	**$171** X .05 = **$8.55**	**$171 + $8.55 = $179.55**	**$180**
April	**$180 X .05 = $9.00**	**$180 + $9.00 = $189**	**$189**
May	**$189 X .05 = $9.45**	**$189 +$9.45 = $198.45**	**$198**
June	**$198 X .05 = $9.90**	**$198 + $9.90 = $207.90**	**$208**
July	**$208 X .05 = $10.40**	**$208 + $10.40 = $218.40**	**$218**
August	**$218 X .05 = $10.90**	**$218 + $10.90 = $228.90**	**$229**
September	**$229 X .05 = $11.45**	**$229 + $11.45 = $240.45**	**$240**
October	**$240 X .05 = $12.00**	**$240 + $12.00 = $252**	**$252**
November	**$252 X .05 = $12.60**	**$252 + $12.60 = $264.60**	**$265**
December	**$265 X .05 = $13.25**	**$265 + $13.25 = $$278.25**	**$278**

Handout 2 Answer Key

In the paper bag we have 100 tickets that have the following values:

                Yellow -- $0   Red -- $1.00
                Green -- $5.00   Blue -- $10.00

We are going to pretend to buy one $2.00 lottery ticket each week. Each week we will draw one ticket out of the bag and record the amount of money won.

	Buy $2.00 ticket	**Amount won**
Week 1	**$2.00**	**ANSWERS IN THIS COLUMN WILL VARY**
Week 2	**$2.00**	
Week 3	**$2.00**	
Week 4	**$2.00**	
Week 5	**$2.00**	
Week 6	**$2.00**	
Week 7	**$2.00**	
Week 8	**$2.00**	
Week 9	**$2.00**	
Week 10	**$2.00**	
TOTAL	**$20.00**	

2. Figure the difference (subtraction) between the amount spent and the amount won.

    Did we win more or lose more? _____

3. Instead of buying a $2.00 lottery ticket each week, we are going to save that amount in the bank. **Remember:** Your savings will earn interest!

    How much money would we save in 10 weeks? $__**20.00**_____

    Is that amount more or less than the amount we won? **Answer will vary**

4. What is the smartest thing to do with your money? **Saving your money in a bank where it could earn interest.**

Probability