



Cahill Ingenuity

## Dear Book Club Host:

Welcome back to The 39 Clues Book Club! If you are new to the club, don't forget to check out the Establish Your Cahill Stronghold introductory theme materials. Or, if your club just finished reading one of The 39 Clues books, reference the book-specific resources on the club website.

This month, you and your club members will explore Cahill Ingenuity by discovering the famous Cahill family members who are the world's greatest inventors. In the activities listed below, club members will be introduced to those inventors and their inventions. They will also get a chance to create their own invention to help Amy and Dan stop the Vespers!

### Activity 1: Ingenious Cahills

**Prepare ahead:** 1) Photocopy the **Ingenious Cahills** handout, making enough copies for every club member. 2) Secure pens or pencils for everyone present.

For this activity, club members will need to use their own ingenuity to match each famous inventor to his or her invention. The inventions listed on the handout should be familiar to everyone since they are things that get used almost every day. But inventor names may not be as well known. If you and your club members need help, search the Internet for answers.

This activity may be done individually or in pairs.

**Answer Key:** 14, 6, 9, 8, 15, 12, 1, 7, 4, 11, 2, 16, 3, 5, 10, 13

### Activity 2: Crack the Code

1) Photocopy the **Crack the Code** handout, making enough copies for every club member. 2) Secure pens or pencils for everyone present.

Codes are hidden in the pages of The 39 Clues books and on the cards. In this activity, club members will help decipher an important message sent to Cahill Command by Jonah Wizard. Using the Morse Code alphabet on the handout, members will decipher this top-secret message that needs to get to Amy and Dan.

**Message:** Vesper One knows our next move. Warn Amy and Dan!

**Bonus:** Challenge the club members to create their own message in Morse Code. Have other members try to decipher the messages.

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### Activity 3: Keep Your Mind Sharp!

1) Photocopy the **Keep Your Mind Sharp!** handout, making enough copies for every club member. 2) Secure pens or pencils for everyone present. 3) Secure calculators for members who need assistance.

Magic squares have been around for centuries. Cahill family member Benjamin Franklin has been credited with making them popular. When doodles of inventions turned into math doodles, he knew he was onto something fun and exciting.

In magic squares, the sum of the numbers in each row and column all equal the same number. In the squares on the **Keep Your Mind Sharp!** handout, one number has been left out of each column or row. The sum for each is given underneath. Members must add the numbers in the boxes to find the missing numbers. Feel free to have members work alone or in pairs. Calculators may be used, especially for the bonus square.

Answers:

8	1	6
3	5	7
4	9	2

16	2	3	13
5	11	10	8
9	7	6	12
4	14	15	1

52	61	4	13	20	29	36	45
14	3	62	51	46	35	30	19
53	60	5	12	21	28	37	44
11	6	59	54	43	38	27	22
55	58	7	10	23	26	39	42
9	8	57	56	41	40	25	24
50	63	2	15	18	31	34	47
16	1	64	49	48	33	32	17

### Activity 4: Creating Ingenious Devices

Prepare ahead: 1) Photocopy the **Creating Ingenious Devices** handout, making enough copies for every club member. 2) Secure pens or pencils for everyone present. 3) Secure smart phones, computers, or other Internet-ready devices.

Cahill creative genius helped form The 39 Clues. Now they need the creativity of family members past and present to defeat the Vespers.

Have your members put their technology skills to the test to help Amy and Dan in the Vesper fight. In this activity, **Creating Ingenious Devices**, members will search the three websites listed on the handout to learn about famous inventors and their inventions.

After exploring the websites, have members choose one invention they feel can help in the fight against the Vespers. Ask them to provide a description of the invention and to explain how it will aid Amy and Dan. If a member can't find an invention that suits their needs, they should feel free to get creative and invent their own! That's the Cahill way.

This activity may be done in groups or individually.

Good Luck!

—The 39 Clues Book Club

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## Ingenious Cahills

Members of the Cahill family possess the greatest minds of all time. They are the creators of inventions that we used in the past and still use today. How well do you know your famous family members? Match the inventors in the left-hand column with their invention on the right-hand column. Good luck!

### Inventors

- \_\_\_\_\_ Thomas Edison
- \_\_\_\_\_ Margaret Knight
- \_\_\_\_\_ Nicola Tesla
- \_\_\_\_\_ George Crum
- \_\_\_\_\_ Levi Strauss
- \_\_\_\_\_ Philo T. Farnsworth
- \_\_\_\_\_ Frank Epperson
- \_\_\_\_\_ Richard James
- \_\_\_\_\_ Whitcomb Judson
- \_\_\_\_\_ Frank Zamboni
- \_\_\_\_\_ Orville and Wilbur Wright
- \_\_\_\_\_ Benjamin Franklin
- \_\_\_\_\_ Frank Henry Fler
- \_\_\_\_\_ Ole Kirk Christiansen
- \_\_\_\_\_ Chester Greenwood
- \_\_\_\_\_ Alexander Graham Bell

### Inventions

- 1. Popsicle
- 2. Airplane
- 3. Bubble Gum
- 4. Zipper
- 5. LEGOS
- 6. Machine to fold square-bottom paper bags
- 7. Slinky
- 8. Potato Chips
- 9. Radio
- 10. Earmuffs
- 11. Zamboni Ice Resurfacing Machine
- 12. Television
- 13. Telephone
- 14. Incandescent Light Bulb
- 15. Denim Jeans
- 16. Bifocal Glasses

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## Keep Your Mind Sharp!

We need to stay one step ahead of the Vespers. Don't get caught off guard. Exercise your brain, but don't forget to have fun. One of the Cahill's most famous family members, Benjamin Franklin, liked to keep his mind sharp by creating magic squares. When you add the numbers in each column or row, you'll end up with the same number! See if you can find the missing numbers in the squares below.

8	1	
3		7
	9	2

\_\_\_ + \_\_\_ + \_\_\_ = 15

16	2	3	
5	11		8
9		6	12
	14	15	1

\_\_\_ + \_\_\_ + \_\_\_ + \_\_\_ = 34

**Bonus:**

Take the challenge! See if you can master Grace Cahill's favorite Franklin magic square!

Hint: The magic number is 260.

52	61	4	13		29	36	45
14	3		51	46	35	30	19
53	60	5	12	21	28	37	
11		59	54	43	38	27	22
55	58		10	23	26	39	42
9	8	57	56	41		25	24
50	63	2	15		31	34	47
16	1	64	49	48	33		17



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## Creating Ingenious Devices

Attention Cahill Agents! You never know when a mission will call for extraordinary creativity. Invention is in your family genes. Search the following websites to find an invention that can help Amy and Dan defeat the Vespers. Or, if you can't decide which one to choose, invent your own!

### ***What in the World?***

Visit the Library of Congress site on ingenious devices. Play the game and learn about the inventions.  
[tinyurl.com/ingeniousinventions](http://tinyurl.com/ingeniousinventions)

### ***Inventors and Inventions***

Check out Zoom School's index of inventors and their inventions.  
[zoomschool.com/inventors](http://zoomschool.com/inventors)

### ***Inventor & Invention***

KidsKonnnect page of amazing facts and links to inventors and inventions, new and old  
[tinyurl.com/inventorandinventions](http://tinyurl.com/inventorandinventions)

Inventor: \_\_\_\_\_

Invention: \_\_\_\_\_

It was invented in the year: \_\_\_\_\_

It was invented because: \_\_\_\_\_

Cahill agent use: \_\_\_\_\_

Reasons it is useful for defeating the Vespers:

\_\_\_\_\_  
\_\_\_\_\_

### **My Own Ingenious Device**

Name of Device: \_\_\_\_\_

It is used for: \_\_\_\_\_

It looks like this: (Draw your invention on a separate piece of paper.)

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