

Discussion points, activities, and writing prompts to help educators use
Alexander Graham Bell Answers the Call

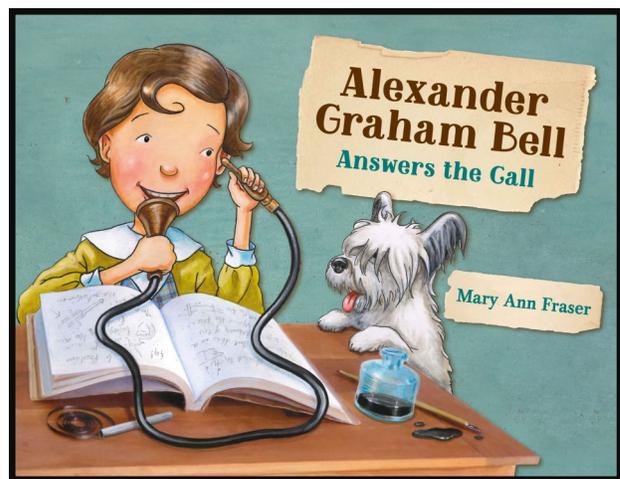
About the Book

“This will inspire young inventors” — *Kirkus Reviews*

“... makes the facts easy to digest for younger readers” — *School Library Journal*

Well before Alexander Graham Bell invented the telephone, Aleck (as his family called him) was a curious boy, interested in how and why he was able to hear the world all around him. His father was a speech therapist and his mother was hearing impaired, which only made Aleck even more fascinated by sound vibration and modes of communication.

Driven by curiosity and an eagerness to help others, Aleck became a teacher for the deaf. His eventual invention of the telephone proved that he never stopped thinking big or experimenting with sound.



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E-book editions available

Aligned to the Common Core & Next Generation Science Standards Grades 2-3

About the Author



Mary Ann Fraser has worked on more than sixty books for children, including *No Yeti Yet* (Peter Pauper Press) and *Heebie-Jeebie Jamboree* (Boyd's Mills). She lives in Sunnyvale, California.

Visit Mary Ann online at <http://www.maryannfraser.com/>.

Activity: MAKE YOUR OWN TIN CAN TELEPHONE

MATERIALS YOU WILL NEED:

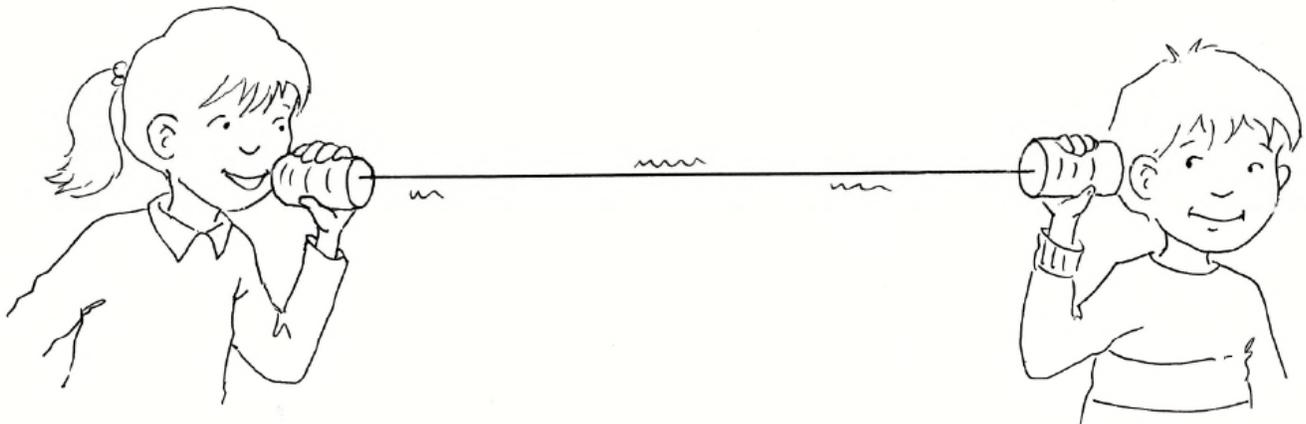
- Two clean, empty tin cans with no tops (make sure to cover the sharp edges! We recommend duct tape.)
- A hammer
- A nail
- A strong piece of string (at least 10 feet long)
- Two buttons

DIRECTIONS:

1. Hammer a hole through the center of the bottom of each can.
2. Remove the nail.
3. Tie a button onto one end of the string.
4. Pass the other end of the string inside one of the cans and out through the bottom until the button is against the inside bottom.
5. Pass the end of the string through the bottom of the other can from the outside to the inside.
6. Pull out the end of the string from the second can just far enough to tie on the other button.
7. Pull the string until the button is resting against the inside bottom of the second can.
8. Make the string tight between you and the person you want to talk with. Do not let the string touch anything.
9. Talk into one can while the other person holds the other can to their ear.

HOW DOES IT WORK?

The button passes on the vibrations to the can which then transmits the vibrations along the string to the opposite can, to the ear of the other person.



Discussion: HOW TO BECOME AN INVENTOR

Here are some tips to help you become an inventor like Alexander Graham Bell:

1. Think of a problem that needs solving. Ask yourself is there something that could work better? Faster? For example the telephone solved a problem with communication. Ask family and friends about their problems.
2. Keep a lab book. In it, write down all of your ideas. Note how you first thought of it and be sure to jot down a date. Not every idea will work, but write them all down. Don't be afraid to think outside of the box to come up with unusual solutions.
3. Check to see if your idea is original. Has somebody else already had the same idea? How could you improve on their idea?
4. Read about other famous inventors to become inspired.
5. Sketch out your idea. Aleck often made drawing of his ideas. Use a pencil so you can easily make changes.
6. Show your idea to your parents or teacher to get their suggestions.
7. Make a list of materials you will need to build a sample of your invention, also called a prototype. How might you reuse items from around the house? What tools will you need?
8. Schedule a time to work on your prototype. Ask your parents when they might be available if you think you will need their help.
9. Build a prototype. Ask for help if you need to use any power tools.
10. Test your prototype. Write all of your results in your lab book. Take photographs, or better yet, video showing various stages of your prototype at work.
11. Name your invention. Come up with several ideas. Ask people which they think best describes your invention.
12. Congratulations! You are an inventor!

Learn More

[Britannica](#). Learn more about Alexander Graham Bell's inventions and interests, including the telephone, airplanes, electrical bullet probes for surgical use, and phonographs.

[The First Call](#). Listen to Alexander Graham Bell's first phone call.

[Evolution](#). See the evolution of the telephone, from 1876 to today.

Activity: HOW TO BRAINSTORM LIKE AN INVENTOR

Inventors are good at coming up with new uses for familiar objects. Can you brainstorm some unusual new uses for the objects listed below?

A straw _____

A paper-clip _____

A paper towel tube _____

A pipe cleaner _____

A rubber band _____

Select one of your ideas and draw a picture of it below.

