The Invention of the Telephone and the art of Doug Jamha

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All images created by Grade 4 and 5 students

While in Edmonton I happened upon the art of Doug Jamha. His work was intriguing because he uses telephone book pages as the medium on which to place his drawings. Images need to be previewed before showing them to students.

I decided to use his art as a starting point in our study of the invention of the telephone. Alexander Graham Bell. There is much controversy as to the [hone be invented in Canada. In 1870 he began experimenting with how sound traveled. He knows that sound waves caused vibrations. In a direct quote from Bell, "And so it happened in the summer of 1874, during my visit to my father's house in Brantford, Ontario, considering myself and discussing with my father the numerous experiments I had made in Boston relative to the reproduction of musical sounds by electricity for the purpose of multiple telegraphy, the thought of the membrane telephone was elaborated. So that the conception of the telephone originated in Brantford in the summer of 1874."

Resources

The Canadian Inventions Book – Janis Nostbakken and Jack Humphrey

Canada Invents – Susan Hughes
Inventors and Inventions – Lorraine Hopping Egan
Canadian Women Invent – Annie Wood
Alexander Graham Bell – Michael Webb

Objectives
Expose the children to various types of phones
Explore the use of a different artistic medium other than blank paper
Use printmaking techniques
Use ellipses to draw the telephone
Be able to recognize highlights and draw them.
Use the word line to describe their drawings of telephones
Use the word free form shape to describe some of the shapes in the telephone
Be able to describe the telephone based on the shapes they see
Know that Alexander Graham Bell invented the telephone in Canada.

Materials
Lesson 1
Styrofoam meat trays (in the Saskatoon area Unisource product #072154)
Black block printing ink
Rollers
Old telephone books
Images of telephones – old and new
Newsprint

Lesson one
Printmaking on Telephone Book pages

Procedure

Discuss the invention of the telephone by Alexander Graham Bell and the evolution of the telephone.

There have been a lot of arguments about where the telephone was invented. Brantford Ontario? Or Boston, Massachusetts? The Inventor settles the

argument in a speech he made in Branford 1906. He said that the telephone was made in Branford Ontario and in Boston in 1911. "It so that the summer of 1874 during a visit with my father I was discussing about the numerous experiments I had made in Boston relative to the reproduction of musical sounds by electricity for the purpose of multiple space telepathy was elaborated and the telephone was made in the summer of 1874."

Cut the edges off of the Styrofoam trays

Trace the trays onto blank newsprint.

Using the various images of the telephone begin to draw them within the shape traced on the newsprint. I found wonderful images of old phones on the internet.

I had the children break down the shapes within the telephone so that they could more easily draw it. See image below where I have drawn them on top of it. It is important that children are able to find the shapes within an image and to draw it effectively.

Draw the telephone. The only thing that I did not have them draw was the numbers on the buttons or rotary dial.

Once they are done drawing the phone, cut along the line that is the size of the Styrofoam.

Tape the drawing of the phone to the Styrofoam.

The children will now trace the phone onto the Styrofoam. The best way to transfer the image is to drag the pencil along the line it will create an indent in the Styrofoam. Wherever the children create a line it will appear white when printed. The newsprint will tear where they trace over it and this is ok. The tracing needs to be done with a very sharp pencil. If the pencil is dull it will make a very wide line on the Styrofoam and detail will be lost.

Remove the newsprint. Retrace any lines that may be too light.

In printmaking anything that is pressed down does not grab ink and anything that sticks up does. The students now need to make the negative space (anything that is not the telephone) pressed down. There are two ways to do this, one by cutting away the negative space with an Xacto knife or press it down with a pencil or pen. A chopstick works well for this as well. Some areas are too small to be cut off and you will have to press it down. The students will need to press down the dial and button spaces and all of the highlighted areas on the phone.

Example of what the trays will look like. These are used ones (printed on and cleaned).

What will remain is all that will be inked black when they print.

Inking Tips

1. Put the ink onto a rolling surface. Roll the roller over the ink. Ink the Styrofoam tray (telephone) in two directions, so that the ink covers well.

2. Place the Styrofoam tray on the paper, ink side down. Press down; the ink will stick to the paper.

3. Flip the paper over and rub evenly on the back. Turn paper over and carefully remove the Styrofoam tray.

4. <u>Some tips on creating good prints using a roller</u>

    a. Floor tiles make excellent rolling trays. Be sure to use the correct amount of ink; too much fills the cracks, too little tears the Styrofoam. The correct amount of ink sounds like wet tires on pavement.

    b. Place new ink on the Styrofoam tray well above where the roller is moving. Bring in new ink only as needed.

    c. Be sure that the roller rotates fully on the tray to have even distribution of ink, like rolling the paint on a wall, you want even distribution.

    d. Take a little ink when needed on the roller and then move roller to center of tray.

When the children have finished printing they can add the numbers to the dial using a fine point marker.

Lesson Two

All images are by Kindergarten children

Materials

Block paint
Large paper
Permanent markers (wide)
Images of telephones – old and new
Large paper 18 x 24"

Objectives

Use the word line to describe their drawings of telephones
Use the word free form shape to describe some of the shapes in the telephone
Be able to describe the telephone based on the shapes they see
Know that Alexander Graham Bell invented the telephone in Canada.
Understand and create texture in their paintings through the use of paint
Expose the children to various types of phones

(I did this lesson with the kindergarten class and it was very successful)

Drawing Telephones

After discussing the invention of the telephone by Alexander Graham Bell.

There have been a lot of arguments about where the telephone was invented. Brantford Ontario? Or Boston, Massachusetts? The Inventor settles the argument in a speech he made in Branford 1906. He said that the telephone was made in Branford Ontario and in

Boston in 1911. “It so that the summer of 1874 during a visit with my father I was discussing about the numerous experiments I had made in Boston relative to the reproduction of musical sounds by electricity for the purpose of multiple space telepathy was elaborated and the telephone was made in the summer of 1874.”

I had the children practice drawing telephones on newsprint.

I had them draw several different types of phones. I had some old phones on hand and the children loved trying to phone their own number using the rotary dial. They had never had the chance to dial anything but a push button.

Using very large paper the children drew the telephone that they liked the best and drew it much larger on the large paper.

After drawing the phone they painted the entire paper with many different colours in many different places. They used very bright colours. We did discuss that phones are often neutral colours and that if you want someone to look at your art you need to create something that will attract attention (brightly coloured phones)

The children really enjoyed painting the phones because instructed them not to worry about staying inside the lines.

The lines are now traced over with a marker very carefully. You want them to draw carefully so that another set of lines is not created. The numbers on the dial can be written with a very small fine tip marker.