



LEARNING ACTIVITY

Materials Needed

- Scissors
- White glue
- Braille Alphabet Sheet
 (Printed on 2nd page)

Grade Range

3-5

6-8

Topics/Skills

Life Science; Sense of touch; Structures and Processes

Learning Standards

NGSS: <u>From Molecules to</u> <u>Organisms</u>

Duration

30 - 45 minutes

Prep Time

10 minutes

Braille Alphabet

Learn How to Read Without Using Your Eyes!

How can people read who cannot see printed letters? To learn the answer students will create a raised (3D) braille alphabet and identify braille letters through touch. Students will also build empathy for visually impaired persons and an appreciation for their skill in reading by touch alone.

Activity Challenge

Learn how to read braille by creating a sensory (3D) braille alphabet sheet.

Preparation

- 1. Review the materials needed list and gather materials.
- 2. Print the Braille Alphabet Sheet as needed.
- 3. Place a small dot of white glue on each large black dot. When the glue dries the dot patterns can be felt to identify each braille letter.

To Do

- 1. Close your eyes and practice reading the letters of the first row with a single fingertip as you recite the alphabet (a, b, c, etc.).
- 2. Repeat step 1 using different fingers from both hands each time.
- 3. Decide which finger works for feeling the dots.
- 4. Practice reading the other rows of letters in the same way as in step 1.
- 5. Repeatedly feel any letter pattern that is difficult to identify.
- 6. Use the blank letter/dot pattern template to write your name, one letter in each cell.
- 7. For each cell below darken the dots to match the letter's braille pattern.
- 8. Add small glue dots as in the **Preparation** step 3.
- 9. Fold the letter cell row under the dot pattern row so the dots are on top. Feel your braille name.
- 10. Once you have learned to identify all the letter patterns, cut out each letter along the dotted lines.
- 11. Pick a group of 3 or more letters that are in order alphabetically. Close your eyes, mix up the letter order, and then rearrange the letters back into alphabetical order. Repeat using different and/or more letters.

Observations

Which finger worked best for feeling the braille patterns? Was the finger on the dominate or non-dominate hand?

Note that all the printed letters are lowercase. There is no alphabet of capital letters. To indicate a letter is a capital the cell in front of the letter has a single dot in the bottom righthand column. There are no separate braille numbers. There is a "number sign" pattern that indicates the following letters are to be numbers. A number sign followed by "a" "a" would be read as "11".

There is a pattern between 2 rows of the braille letters. What is the pattern?







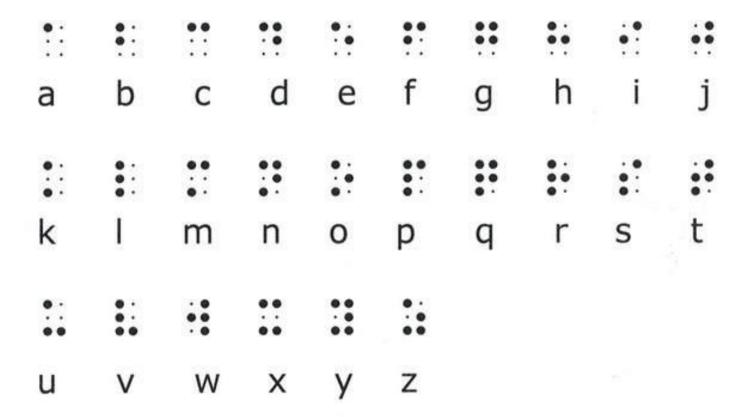
Extensions

• Learn the braille patterns visually and practice by visually reading the braille patterns by doors in public buildings.

The Content behind the Activity

Louis Braille, born in 1809, was a young French child who was accidently blinded. At age eleven he started to work on a better way to represent individual letters with raised dots, now known by his name. The French military used raised dots for reading messages at night without using a lamp. Louis used a smaller 2 by 3 grid pattern which could then be read with one fingertip which greatly increased the reading speed. Reading speed was further increased as new dot patterns were created to represent several letters (a contraction).

Braille Alphabet Sheet



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