**Holiday Coding Ornament**

**TIME**

45 MINS-1 HOUR

**AGE RANGE**

5TH-8TH GRADE

**INGREDIENTS (MATERIALS)**

- PONY BEADS (THREE DIFFERENT COLORS)
- PIPE CLEANERS
- SHORT RIBBON
- BINARY ALPHABET SHEET (ATTACHED)

**MODIFICATIONS**

- CONNECT BOTH ENDS OF THE PIPE CLEANER TO FORM A CIRCLE ORNAMENT
- TIE TWO PIPE CLEANERS TOGETHER TO CODE A LONGER WORD
- HAVE CHILDREN READ CODE FROM THE ORNAMENT YOU WROTE

**PROCEDURE**

1. AFTER GATHERING MATERIALS, CHOOSE WHAT WORD YOU WOULD LIKE TO CODE (FOUR LETTER WORDS LIKE GIFT AND SNOW FILL UP ONE PIPE CLEANER PERFECTLY)

2. HAVE YOUR CHILD WRITE THE WORD DOWN SO THEY CAN FOLLOW ALONG WITH ITS SPELLING

3. DESIGNATE WHAT COLOR OF BEAD CORRESPONDS WITH 1, 0, AND SPACE

4. USING THE BINARY ALPHABET SHEET PROVIDED, WRITE THE CODE BY THREADING BEADS IN THE CORRECT SEQUENCE

5. DON’T FORGET TO USE A DIFFERENT COLOR BEAD TO SEPARATE THE LETTERS

6. ONCE THE CODE IS WRITTEN, TWIST THE TWO ENDS OF THE PIPE CLEANER AND BEND INTO A CANDY CANE SHAPE

7. TIE A SMALL RIBBON ONTO THE PIPE CLEANER

8. HANG YOUR ORNAMENT
## ALPHABET in Binary Code

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**WRITE YOUR NAME IN CODE!**

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**Example:**

**Bob**

**Code:** 01001011 01010000 01000010 01000001 01010010 01010100 01001001 01010011 01010110 01010111 01000010 01000001 01010010 01010100 01001001 01010011 01010110 01010111

**Example:**

**Alice**

**Code:** 01000001 01000010 01000011 01000100 01000101 01000110 01000111 01010000 01010001 01010010 01010100 01001001 01010011 01010110 01010111 01000010 01000001 01010010 01010100 01001001 01010011 01010110 01010111