# CREATIVE CODING

*Unplugged Technology! Children will exploring and practice creating sequences with tangible technology tools.*

**Big Idea**
This activity will help children understand the importance of sequencing and recognizing symbols as a domain of Early Coding.

**Standards**

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| CCSS.ELA-LITERACY.RF.K.1.D Recognize and name all upper- and lowercase letters of the alphabet. | Students will recognize and name the letters in their names as well as the letters on their binary cards. |
| IELDS 4.B.ECd With teacher assistance, begin to form some letters of the alphabet, especially those in own name | Students will form the letters of their name in writing before beginning beading. |
| CCSS.MATH.CONTENT.K.CC.B.4.A When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. | Students will count out the number of black and white beads needed for each letter and tell how many. |

**Materials**
- Precut String with a knot at one end(for necklaces or bracelets)
- Bowls for Beads
- Black beads
- White beads
- Red (or non-black or white) bead
- Binary Code letter cards (we recommend laminating them and putting them on a ring)
- Paper and writing utensils

**Setup**
On a table, place the bowls with beads. Each color bead should be in its own bowl. Place paper and a writing utensil and the binary code letter cards at each student spot.

**Directions**
1. Talk to students about different languages. Just as we have different languages, computers do too! One computer language is binary, which uses just 2 symbols to communicate. Today we're going to create our own jewelry using binary!
2. Encourage students to write their names on the paper to start (for younger students, adults can write their names, or they can just do their first letter).

3. Once students have written their names, show them how to find their letter in the binary letter cards. Demonstrate how to match the black and white beads to the black and white circles on each card. Students can use the red bead to separate their letters.
4. Help students select their string, count their beads, and beginning stringing their letters.
5. When students are all done, their jewelry can be tied on for them to wear!

*Investigation Questions: What do you notice about the binary letters? Do they look the same or different from the letters we use? Do you know the names of the letters in your name? Can you find your letter? How many black beads do we need? How many white beads? What else could we spell in binary?*