Name _____

Age .... **Grade** .... **Club** ....

Project (i.e. knit scarf, fuse bead magnet, etc.) ....

Parents best contact information: ....

Category (circle one): Kit or Original Design

Design/pattern is attached (Required) ☐

Below or attached, the participant should write a paragraph explaining how they made their project. The paragraph should include one sentence minimum for each of the four components of computational thinking (See other side). Use <u>one</u> of the questions listed below <u>each</u> category as prompts if needed.

Cloverbud does not require the paragraph, but a simple explanation would be helpful
(See examples on the other side)

Paragraph explaining project:

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Below are the 4 concepts of computational thinking as well as prompts to use in the explanation paragraph

Pattern Recognition (Look for repeating sequences)
- How did you use patterns in your pixelation project?
- Are there patterns in your project?
- Do any patterns repeat?
- Is your project symmetrical or asymmetrical?

Decomposition (Break the problem down)
- How did you break down the project from beginning to end?
- Were there parts of your project that were more difficult than others?
- When did you break down a large part of your project into smaller steps?

Algorithmic thinking (Use step by step directions)
- How did you use step by step instructions in the kit?
- How did you organize the step-by-step directions you used in your original project?
- Did you skip any steps or change the order? What was the result?
- If someone else wanted to make your project, what instructions would you give?

Abstraction (Focus on important parts and remove unnecessary parts)
- What are the most important parts of your project?
- Were there any unnecessary parts of your project?
- Was there anything you eliminated to make the project easier or cleaner?
- How did you organize the project while you worked on it?
- Did you use abstraction in your project?

Example Paragraph for 4-H contestants:

 I made my own house from Legos. I used patterns by using a rotating pattern of different sized blocks to make the walls stronger. I used decomposition to break my projects into steps. First I designed the house with drawings, then I used the drawings to help me build my project from Legos. I started with the house, then added details outside like the yard and mailbox. I used algorithmic thinking by organizing the Legos I would need on a tray before I started a new step. I used the element of abstraction when I decided not to make the trampoline in the yard because wanted the focus to be the house and the trampoline would have been too big. I am proud of my Lego House.

Example Paragraph for Cloverbud Contestants:

 I made a perler bead Mario. I used a pattern I found online. I put all the perler beads on the board in the right order. When I finished, my grandma ironed it for me. We added a keychain after it was cooled off. I loved making my Perler bead keychain.