

# Monthly 4-H Club Activity

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**COOPERATIVE EXTENSION**  
College of Agriculture, Forestry and Life Sciences



## Nailed it!

**Objective:** To develop fine motor skills while appreciating engineering and math concepts in art.

**Age Range:** All ages

**Hands-on Activity:** Create string art

**Life Skills:** HEAD = decision-making, learning to learn;  
HEART = nurturing relationships;  
HANDS = self-motivation;  
HEALTH = stress management.

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### Introduction

Art and the sciences have been closely linked for centuries. One of the most noted artists that anchored their craft in the sciences was Leonardo Da Vinci (1452-1519). He was a keen observer of the natural world and made connections across fields of study. He meticulously studied botany, anatomy, geology, chemistry, and more to make his paintings masterpieces that have stood the test of time. He was even a student of engineering and some of his sketches are still captivating the imagination of engineers and scientists today! You can use string art, a very basic form of creative art, to create patterns and explore geometry. It really puts the “A” in STEAM – Science, Technology, Engineering, Art, and Math. String art can be very large and complex with intricate planning or it can be very simple and random (Figure 1). The choice is yours! Express your creative side with this project!

### Activity Materials

- Small brad nails
- Block of wood
- Craft string or yarn
- Hammer (use adult supervision)
- Scissors

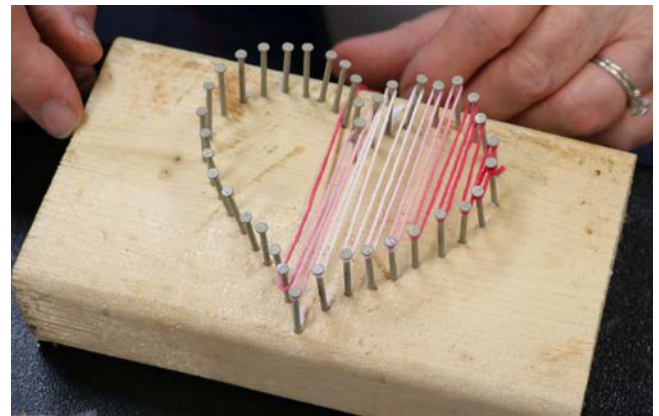


Figure 1. String art can use a structured, intentional pattern (top) or a randomized design (bottom) to fill in the shape created by the nails.

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## Activity Instructions

- 1.) Gather your materials and decide on a design that will fit on your block of wood. (Start with simple shapes first; then, move on to more complex designs.)
- 2.) You can use pencil to sketch your design directly on the board or you can use a paper template that you tear away after you add your nails (shown right).
- 3.) Hammer your nails into the block wood about  $\frac{1}{4}$ " or until they feel secure. (Adults may have to assist with this part.)
- 4.) Tie your string to one nail and start wrapping the string around other nails!
  - a. You can choose a random order to your string work or you can try to create a symmetrical design. Outlining your nails can also help accentuate the border of your work.
  - b. Try layering with multiple colors.
- 5.) Tie off your string with a double knot around a nail when finished and trim the excess with scissors.

NOTE: You can use push pins, cardboard/corkboard, and yarn as alternatives to nails, wood, and string for younger youth.

## Reflection

What did you notice about your design as you began adding the string? What did you find challenging about this activity? What will you do with your string art?

## Conclusion

While this activity is a simple craft on the surface, it can have great benefits on both the body and mind. Arts and crafts are excellent forms of expression and cathartic ways to spend time. The math and engineering that emerges is also an added bonus. Use this activity to build your fine motor skills and confidence in STEAM.

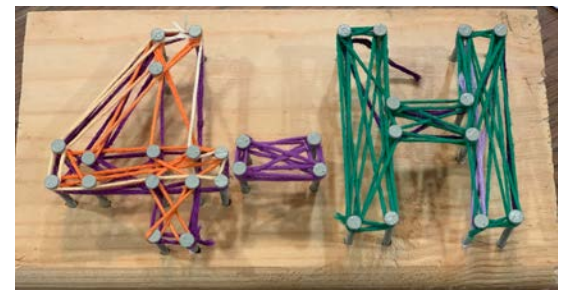
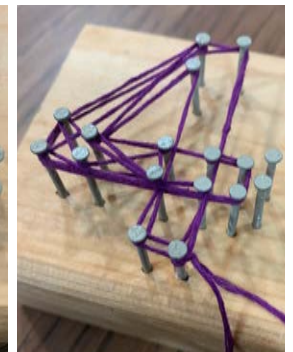
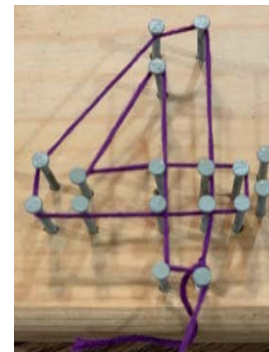
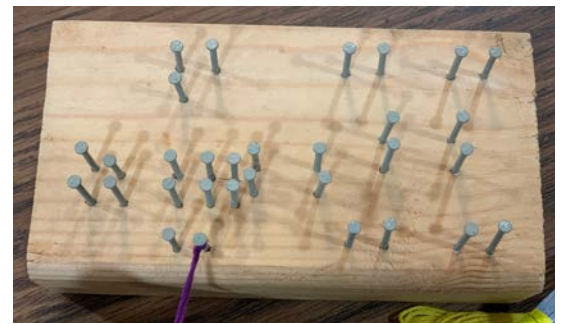
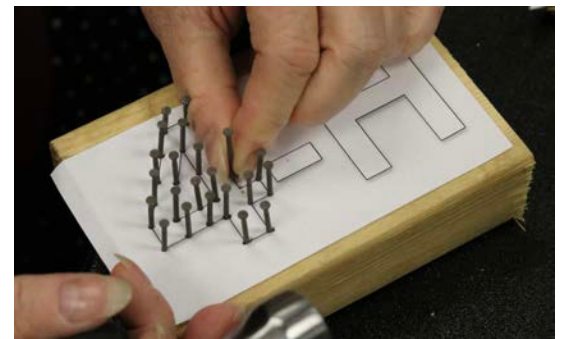


Figure 2. Steps involved in creating 4-H string art.

## Resources:

Ervin, A. 2020. String Art. Ohio State University Extension. 4-H 365.02 Creative Arts. [https://ohio4h.org/sites/ohio4h/files/imce/books\\_resources/Self-Determined/e365-02%20String%20Art.pdf](https://ohio4h.org/sites/ohio4h/files/imce/books_resources/Self-Determined/e365-02%20String%20Art.pdf)

Lin, A. 2019. String Art DIY. Kansas State University Extension – 4-H Agent Articles. <https://www.johnson.k-state.edu/4-h/agent-articles/string-art-d-i-y.html>

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