

Amazing Maze

Leader Guide



Fashion
through science

WITH THIS ACTIVITY

- Maze Template



We are
Engineers!



Movement
Improvement



Marvelous
Materials



Smart
Clothing



Patternmaking
Tools n' Tech

Big Picture

Young designers will develop or refresh sewing skills.

What's the goal?

Young designers will practice using a sewing machine. This is an entry-level activity that should be completed prior to undertaking a larger sewing project. They will control sewing speed, using the presser foot as a sewing guide, backstitch, and pivot at corners.

Grouping

Individuals will complete their own maze.

Preparation

1. Cut muslin into 4" x 11" strips. Fold them in half, so the finished dimensions are 4" x 5.5".
2. Print and cut out each maze on the heat transfers.
3. Apply the transfer to the folded muslin.

Materials

What they need: (per person)

- Printed maze (make extra for mess-ups or just extra practice!)
 - Muslin strip, 4" x 11"
 - Iron-on transfers (clear or white background). These usually have to be printed with an ink jet printer.
- Thread sewing machines – contrasting thread
- Pencils

Prep Time: 1 Hour

Activity Time: 30 Minutes

Difficulty: Level 1



- a. The muslin is folded so that the young designers can sew through two layers of fabric. On many machines, it is very difficult to set the tension to sew through one layer of lightweight fabric. Sewing through two layers is easier and reduces the likelihood of problems with machine tension or bobbins.

Let's get started!

Say to young designers: In this activity, we're going to learn several sewing techniques through completing a maze pattern.

1. Try to complete your maze using a sewing machine. Backtack at the beginning and at the end of your line of stitching.
 - a. Use a pencil to complete the maze and then follow the lines.
2. Start sewing:
 - a. Raise the presser foot and line up your fabric, using the presser foot as a guideline. The center of the presser foot should be centered over where you want to sew. Notice if the edge of the presser foot lines up with any lines on your fabric maze. If so, keep the edge of the presser foot lined up with the line to help guide your work.
 - b. Lower the presser foot.
 - c. Press on the foot pedal to start sewing.
 - d. Sew 3 or 4 stitches.
3. Create a **backtack**:
 - a. A backtack is a series of 3-4 stitches that overlap so that the stitching is secure. This is usually done at the beginning and end of each seam or stitch line.
 - b. To create a backtack, use the reverse lever on the sewing machine to sew backward 3-4 stitches. Be sure to keep lined up and sew directly on top of

VOCABULARY

Seam/seamline: A line of stitching that joins two or more layers of fabric.

- the first stitches.
- c. Release the reverse lever/button and sew forward 3-4 stitches, again over the stitches you have sewn.
 - i. You have created your first backtack! Remember to do this at the beginning and end of every line of stitches you make!

VOCABULARY

Backstitching/Backtack: Stitch in reverse for a few stitches at the beginning and end of the seam.

4. Navigating Corners:
 - d. At the first corner, instruct the young designers to:
 - i. Stop.
 - ii. Lower the needle by rotating the hand wheel (if necessary).
 - iii. Lift the presser foot.
 - iv. Rotate the fabric.
 - v. Lower the presser foot.
 1. Start sewing again. Do this for each corner you come across.
5. Continue until the maze is finished.
 - e. If some are struggling:
 - i. Suggest they draw the line with the pencil first, and follow the line.
 - ii. Encourage them to keep going, if they have extra stitches at the corner, that is OK!
 - iii. You may have extra mazes on hand, so that those who have never sewn can have a 'practice' trial and then have a go at their 'final' maze.