Prompt: Spider Maze

Objective(s):
- Can you design and build a maze?
- Can you design a spider with 8 legs using your 4 pipe cleaners?
- How can your spider move through the maze?

Activity that Involves problem-solving and strategic thinking:
- Students will work individually or together using materials provided to plan and build a maze.
- Students will problem-solve ways to move the spider through the maze.

Standards addressed:
- CCSS.ELA-LITERACY.L.K.5.A:Sort common objects into categories.
- CCSS.MATH.CONTENT.K.G.A.2: Correctly name shapes regardless of their orientations or overall size.
- CCSS.Math.Content.1.G.A.1: Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
- CCSS.ELA-Literacy.SL.1.4: Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
- NGSS: NGSS.K-2-ETS1-2 - Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed.

Background knowledge needed:
- What is a maze?
- How to make a plan - sketch a design

Materials:
- Plastic trays or pieces of cardboard
- Pipe cleaners (4 small pieces to make the spider)
- Tape, red dots, markers
- A variety of building materials such as straws, popsicle sticks, Duplos, Keva Planks, sticks

Questions or statements to elicit engagement:
- Show me the path your spider will be taking?
- Where will it start and where will it end?
- How did you come up with your design?
- What will happen if….
- Tell me more about….

Vocabulary:
Maze, direction, path, turn, design, brainstorm, obstacle, move

Reflection:
What worked well?

What did you have to change?
How did you decide on your design?
How did you get your spider to move through the maze?
What could you add?

Extension/Adding more complexity:
- Add more obstacles to your maze to increase difficulty
- Write the numbers 1 - 10 on the red dots. Putting numbers in order make a path for your spider to travel through to make it through the maze. Count backwards as your spider goes in reverse through the maze.