

# TARWATER ELEMENTARY SCHOOL STEM LAB

Activity ID: **G-2**

Activity Name: **Learn to Code**

## MATERIALS:

Materials Provided in Bin:

Item:	Quantity:	Notes:
lesson Plan	1	
Activity Folders	10	
Sets of Game Tiles	10	
Game Pawns	10	
Storage Pouches	10	
Flip-top Storage Box	1	

Materials In STEM Lab or Classroom (Common Items):

Item:	Quantity:	Notes:
None		

Materials Teacher/Parents Need to Provide:

Item:	Quantity:	Notes:
None		

## WHAT ARE WE DOING?

These fun engaging file folder games use computer-free exercises to help children learn about coding! The 10 games cover grade-appropriate early coding skills that will help children develop computational thinking and problem solving skills. These games, which are perfect for use both independently and in small group centers, are divided into 3 levels.

1. Level 1 - students write a code to move their pawns from start to finish by selecting the most efficient path using a limited number of moves.
2. Level 2 - students are challenged to write code to move their pawns from start to finish in the most efficient way while collecting an object.
3. Level 3 - students will write a code using the asterisk sign. This will allow them to simplify their code without repetitive language.

## VIDEOS / LINKS:

For other coding and computer science: [code.org](https://code.org)

## SAFETY NOTES:

N/A

## SCIENCE TERMS:

1. Asterisk sign (\*) in .coding means multiplication
2. RIGHT\*3 on a tile means to move their pawn 3 spaces to the right

## STEPS:

1. Select an activity folder and point out that the front of the folder shows the materials students will need to play.
2. Read the instructions together.
3. Encourage the students to look at the illustrations to make sure they understand what to do.
4. Students will code a program of commands to take their pawns from start to finish by placing arrow tiles in order along the top or side of the folder.

## QUESTIONS TO ASK STUDENTS:

- What would happen if you started the game by moving your pawn right instead of down?
- What would happen next?
- What would happen if you moved up instead of down?

## CLEAN-UP:

Please place all games pieces and the activity guide into the file folder.

Return file folder to the bin.

**IF RUNNING OUT OF A SUPPLY IN THE BIN, PLEASE  
CONTACT LAURIE JONES IN THE OFFICE (X4307)  
[JONES.LAURIE@CUSD80.COM](mailto:JONES.LAURIE@CUSD80.COM)**