Future Scientist Camp

Offline Coding

Target Grade Level(s): 2nd - 6th

Programming is building the instruction through programming language for a computer to complete tasks for a desired output. Coding = following directions!

Coding Vocabulary:
Code: The language that programmers create and use to tell a computer what to do.
Command/Sequence: An instruction for the computer. Many commands put together make up algorithms and computer programs.
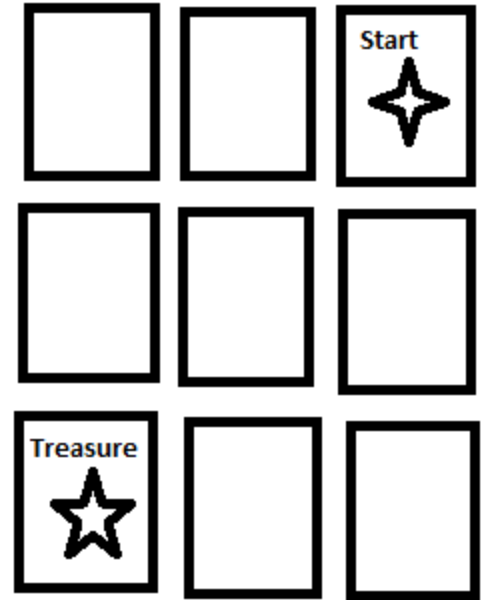**Algorithm**: A list of steps to finish a task.
Loop: The action of doing something over and over again.
If/Then (conditionals): Statements that only run under certain conditions.

10 white pieces of paper
Markers

Supplies

How can we code offline?

Challenge

1. Draw out a treasure on one of your pieces of paper. On another draw a starting point. Arrange your pieces of paper as shown in the picture. Grab another person to help you with this activity.
2. **Challenge:** Follow the programmer's instructions to find the hidden treasure.
3. Develop your own hand or body motions to represent different movements.
   a. For example: if clapping means move north and the programmer wants to move the treasure seeker 3 spaces north, they will clap 3 times.
4. Each team member will take turns with the different roles (programmer and treasure seeker). The programmer will hide the "treasure" and choose the start point (indicated by the compass). They will then fill in the 3x3 grid with blank pieces of paper.
5. The programmer must then give instructions to the treasure seeker. The other team members are mentally guessing where they think the treasure is while waiting their turn.