

Sphero Bolt IR Communication

Student _____

Student _____

Group Activity
2 Students, 2 Bolt Robots

Synchronized Water Dance (Programming)

STRAND 4

Students will be introduced to software design, coding structures, and software development.

Standard 1

Explore the concepts of computational thinking, the software design process, programming structures, and programming languages.

- Understand the concepts in computational thinking.
 - Decomposition, algorithms, binary, etc.
- Understand and use the software design process
 - Input, processing, output.
 - User interface design (UI)
 - User experience (UX)
- Understand and use programming structures.
 - Sequence programming
 - Decisions with if – then – else statements
 - Loops – repeat, for, while, etc.
 - Functions, modules, methods
 - Variables
- Understand and explore different programming languages.
 - Block type languages
 - Text based languages



Use 2 Sphero Bolt Robots

Explore the IR Communication – compatibility. Challenge: Create a program that uses both robots to synchronize a dance in the 9 x 3 - foot water tank.

This is an Exploratory Activity

DDD = Discover – Design – Do !

Discover the functionality of the Bolt Robot.

Start with the Sphero EDU app.

Sign In

Review the Bolt Boat Races.

Program the Bolt using the IR to communicate with the second Bolt.

Create a unique dance or program that is synchronized.

Design Challenge:

Students may research a type of water propulsion that can provide more movement within the water, such as an attachable fin. It must be easily removable and approved by your instructor.

#1 – Discovery Notes: _____

#2 – Design Challenge Notes _____

#2 Do – recording or live demonstration _____
