Special Moves Kit Lesson 1

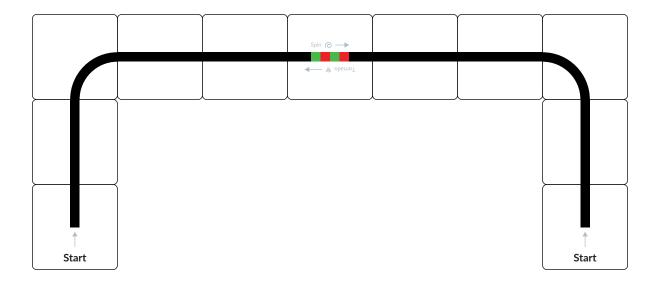**Spin and Tornado – Two Ways to Turn**

Name:_____

Date:_____

How many ways are there to turn around? Probably more than can be counted. Ozobot knows a few ways. This lesson covers the Color Codes called Spin and Tornado.

As a warm-up allow students to choose a way to turn around. A few options are to stand up turn around once and sit down, to spin standing up, sitting down, or on your knees, or to start slowly and spin getting faster.

Spin and Tornado are asymmetric codes meaning that the direction the code is read is important. Spin and Tornado are also opposites of each other. So when the code is read from one direction the bot will perform Spin, and from the other direction it will perform Tornado. Use the T-chart on the next page to compare and contrast these two codes.

Place the Color Code Magnets in the following configuration:

Spin ◎ →

Tornado

Start   **Start**

Run the bot from the Start on the left and observe the action of the bot. It should turn around two times in short bursts. Have students mimic the action. Note that the bot sees the green square first. That is one way it knows to Spin.

Run the bot from the Start on the right and observe the action of the bot. It should spin around 4 times, starting slowly and getting faster. Have students mimic the action. Note that the bot sees the red box first. That is one way it knows to perform Tornado.

Using the T-chart write things that are similar and different. Then, identify the items on either side that are related. Replace Spin with Tornado and repeat the above, asking students to make predictions about what they will observe.

COLOR CODE MAGNETS

ozobot

Name:_____

Date:_____

Spin	Tornado

Name:_____

Date:_____

Possible Solution

Spin	Tornado
Turns around 2 times.	Turns around 4 times.
Turns in short bursts.	Starts slowly and speeds up
Lights flash pink and white	White lights flash
Color code is made of green and red blocks.	Color code is made of green and red blocks.
The bot sees green first	Bot sees red first.

COLOR CODE MAGNETS

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