

Student Activity 11: Fun with *Terrapin Logo*

If your class has *Terrapin Logo*, you can connect it to Tuff-Bot using Bluetooth and give it commands from your computer. Your teacher will set up *Terrapin Logo* so that it can talk to Tuff-Bot. When Tuff-Bot is connected to Logo, you can't press any buttons on Tuff-Bot. They don't work when Logo is controlling Tuff-Bot.

Logo uses commands like FD (or FORWARD), BK (or BACK), RT (or RIGHT), and LT (or LEFT). Each of these commands needs a number to tell it how far to move or how much to turn. Programmers call these numbers are called "inputs."

To make sure Tuff-Bot is connected to Logo, type this command and press the <Enter> key.

```
tuffbot?  
Result: TRUE
```

If the result is TRUE, then you are all set to give Tuff-Bot commands to follow.

Think of what you want Tuff-Bot to do. Then you can send it the commands. This instruction sends Tuff-Bot commands to move forward 2 steps and then turn right 45 degrees. It is the same as pressing Tuff-Bot's Forward button twice and the Right button once.

```
tuffbot.write [fd 2 rt 45]
```

Tuff-Bot won't run those commands until you tell it using the Go command, like this (just like pressing the Go button on Tuff-Bot):

```
tuffbot.go
```

Logo can also send Tuff-Bot a set of instructions to repeat, like this. But first you have to clear the previous commands. This is just like pressing the X on Tuff-Bot.

```
tuffbot.clear
```

Here is how to send Tuff-Bot instructions to move around the shape of a square:

```
tuffbot.write [repeat 4 [fd 1 rt 90]  
tuffbot.go
```

The REPEAT command takes two inputs: a number of times to repeat the commands in the list, and a list of commands. Try it!

Note: If you have used Logo before, you may be used to typing instructions like FD 60, but don't do this with Tuff-Bot. If you enter FD 60, Tuff-Bot will go 60 steps, a lot farther than you expected!