# league logo.jpgLevel 0 – EE Workshop Lesson 1

## Context:

**Topic**: Introduction to Electrical Engineering

**Total learning time:** 120 minutes

**Number of students:** 1 - 8

**Description:** Introduce students to Electrical Engineering Aas a career

## Lesson Objective:

In this lesson, students will learn how to:

* Electronic components
* Circuit diagrams
* Ohms Law
* Power law

## Materials/Preparation (Recipes):

* Verified student GitHub accounts with League Level 0 Module 0 starter code
* Eclipse IDE with Java JDK installed
* League Level 0 Module 0 starter code imported into Eclipse
* Web browser
* Robot Graffiti Recipe (http://level0.jointheleague.org/Mod0Recipes/RobotGraffiti.html)

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## Introduction and Anticipatory Set:

Note: Students should all have completed an Introduction to Java Workshop prior to attending this class. If this is not the case, omit this part of the lesson.

“In the workshop, we learned how to create a Robot and make it use a pen to draw patterns on the screen. Can anyone remember any of the code we wrote to get that to work?” Write correct answers on the whiteboard.

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## Instruction and Guided Practice:

* Fill in the missing components from the introduction activity on the whiteboard. Make sure you have all the elements required to complete the RobotSquare recipe.
* Ask students to open the class RobotSquare in Eclipse.
* Have them find the class name in the code.
* Have them find the main method Remind the students that a class must have one if it is going to run. Point out the start and end curly braces. Remind them that the code has to go between the braces.
* Review the recipe process. Write the code in the space beneath the instruction. Do the instructions in number sequence, not necessarily the order in the code.
* Have students code step 1 and run the program (remind them how to run it). Make sure everyone has a Robot on their screen.
* Remind students that all the components of the program are on the whiteboard and ask them to try to put them in the correct place in the program and run it.
* Cruise the room and help students who are stuck.

## Independent Practice:

* Show the students how to find the Robot Graffiti recipe (http://level0.jointheleague.org/Mod0Recipes/RobotGraffiti.html).
* Have students attempt to code this program independently.
* Cruise the room and help students who are stuck.

## Assessment:

* Informal assessment is made by teacher during guided and independent practice.
* Formal assessment will be made as part of the end-of-module Checkpoint.

## Closure:

* Review the creation of a class, addition of a main method, creation of a Robot object, and the sequencing of method calls.
* Help students sync their code to their GitHub accounts before the end of class.

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