

■ **Introduction to Robotics: Worksheet**

**The goal:** You will learn the basics of Lego® Mindstorms®, and the *Robolab* software. Without *Robolab* (or another equivalent **control program**), the RCX would be useless.

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1. The name of the software used to program the RCX is \_\_\_\_\_.
2. We use an infrared device to communicate with the RCX and download the instructions. This device is a transceiver and is called the \_\_\_\_\_.
3. A transceiver is a \_\_\_\_\_ and a \_\_\_\_\_ in one.
4. The RCX has both input and output ports. An input device is any part of our robot that collects data of some sort. These are usually called \_\_\_\_\_. An example of a sensor is the \_\_\_\_\_ sensor.
5. An output device is something that displays an action. These are usually called \_\_\_\_\_. Examples of actuators are \_\_\_\_\_ and \_\_\_\_\_.

6. Circle the two icons that **must** always be included in your programs.



7. Draw a big X through the programming icon above that is used to stop power from flowing to an output port. This would result in stopping motors or turning off lamps.
8. Draw an arrow from this question to the icon in question 6 that is used to set a condition of time. In other words, an amount of time must pass before a new action occurs.
9. Describe the icon used to download a program from *Robolab* to the RCX. What does it look like? \_\_\_\_\_
10. What are the two methods for creating a turning motion when our robot moves?  
\_\_\_\_\_ and \_\_\_\_\_