

## Robotics Badges: *Programming Robots 2*

### Input and Output Cards

Print and cut out one set of cards for each group of 3–4 girls to use in As Everyone Arrives: Input/Output. You may want to tape or glue them on to heavier paper or index cards.



#### HOW TO PLAY:

1. Choose a judge for the round. The judge takes the Input cards, shuffles them, and lays them in a pile face down, then does the same with the Output cards.
2. The judge draws an Input card and an Output card and shows them to everyone. Each group member must come up with a rule that ties the input and output. The connection may be silly, but there should be some kind of logic to justify it.  
  
For example: If the Input is “Favorite sport” and the Output is “Apple pie,” a possible rule could be, “If you have burned up 200 calories playing your favorite sport, you may have a piece of apple pie.”
3. The judge decides whose rule is best/funniest/most sensible for that round.
4. For the next round, pick another person to be the judge. Keep playing until time for this activity is up.

#### Things to Know:

- The Sense-Think-Act definition says that a robot is a machine which uses information about its environment to determine how it interacts with the physical world around it.
- A robot’s controller uses its sensors to find out what’s going on in about the world around it. In computer programming this information, or data, is known as the input.
- The robot’s computer brain processes the data and figures out what action to take. This action is called the output.

**OUTPUT:**  
**100 Kittens**

**INPUT:**  
**Favorite sport**

**OUTPUT:**  
**Parachute**

**INPUT:**  
**Upside down**

(continued)



<b>OUTPUT:</b> Apple pie	<b>INPUT:</b> Math test	<b>OUTPUT:</b> Honor roll
<b>INPUT:</b> Space aliens	<b>OUTPUT:</b> Movie makeup	<b>INPUT:</b> Earthquake
<b>OUTPUT:</b> Concert tickets	<b>INPUT:</b> Summer Vacation	<b>OUTPUT:</b> Going fishing
<b>INPUT:</b> Thunderstorm	<b>OUTPUT:</b> Driving lessons	<b>INPUT:</b> 25 puppies