



## **Y-STEM**

### **1. What is STEM?**

STEM stands for Science, Technology, Engineering and Mathematics

### **2. Why is the Y becoming involved with STEM?**

In today's world, STEM proficiency is more and more often a key to personal, professional, organizational and even national success. By engaging members of our community in STEM related activities, we are not only enriching their lives, but investing in our own future.

It's just plain fun – building robots, designing hovercrafts and programming animated stories are great STEM related activities, but so are cooking, understanding fitness, environmental activism and a host of other activities.

### **3. What does it mean for a program to be a Y-STEM program?**

Y-STEM programs are programs that relate to STEM education, fields and/or career paths.

### **4. What Y-STEM programs are being offered this summer?**

#### ***Summer Robotics Add On - Level 1 (Beginner)***

- Participants will assemble LEGO NXT MINDSTORM® robots with a partner or small team and then program the robot to navigate obstacles and complete simple missions.
- Available for youth entering grades 3-5
- No experience necessary

#### ***Summer Robotics Add On – Level 2 (Intermediate)***

- Participants will use more advanced features of the LEGO NXT MINDSTORM® kit and programming platform.
- Activities include learning to use multiple and more varied sensors, incorporating functional LEGO attachments to the base robot and more in-depth programming
- Available for youth entering grades 3-5
- Must have completed level 1 (this year or last year)

#### ***STEM Extravaganza***

- Assembling LEGO NXT MINDSTORM® robots with a partner or small team, programming those robots to complete simple and more advanced tasks using the NXT programming platform
- Performing a series of hands on science demonstrations such as exploring atom models, building a balloon rocket, engineering a boat and designing a flinker (an object that neither floats nor sinks).

### **5. Do the participants get their own robot? / Why don't the participants get their own robot?**

Unfortunately, no. Participants work in small teams, so there is no fair way to decide who gets the robot. The robotics kits are quite expensive and the only way to keep our prices reasonable is to share materials.



## **Y-STEM (cont.)**

**6. My child is really interested/ahead in school/brilliant but isn't old enough for the programs, can he she still join?**

Unfortunately, no

**7. Why do the add ons only meet 3 days a week?**

This prevents participants from being double booked with swim days and other field trips for the camp at large

**8. My child has an NXT mindstorm at home, can s/he go right to the intermediate add on?**

Unfortunately, no

**9. Do you have any programs for younger participants (not yet old enough to enter grade 3)?**

Unfortunately, at this time, we do not

**10. Where can I find more information about Y-STEM programs?**

Contact Randall Ziman at [randallziman@ymaryland.org](mailto:randallziman@ymaryland.org)