



There will also be one regular Wednesday afternoon program on the “Power of Wind” that will reach approximately 85 children.

Preschool sessions will use science activities and stories for several of their weekly programs that help youngsters understand simple scientific concepts. These programs will reach at least 25 children each week.

Two local science teachers will present a program all about “Weird Science” that will entertain as well as inform children about funny science principles. This program will reach 30-40 children.

#### **5. Description of program or activities:**

“Intro to Robotics” has children build a tiny robot that cleans up an “oil spill,” going where it is too hazardous for humans. The participants must problem-solve how to come up with a solution, build the robot, and determine whether or not they were successful in removing the spill. Each child will have a robot to take home. Classes are 3 hours in length.

“Gear-Tech 21” is more advanced, and the kits are rented from the extension office. There is more reading, math, and problem-solving, and children will learn how to build and program a robot to do specific commands using a laptop[ and the software. There is a robotics contest they can participate in later. The software, Legomindstorms Education NXT software 2.1, will be installed on the library’s 6 laptops that the teams will use. These sessions are 2 days, 12 hours total.

We will offer an adult session of “Gear-Tech 21” in late May, and will encourage those who take the class to come on the youth workshop days and help them.

There will be a “Power of Wind” Program on one of the regular weekly sessions that will be led by the extension office personnel. It starts with pinwheels and shows how to create enough power with a pinwheel to pick a penny off the floor, and progresses to more in-depth uses of wind, even having kids design a wind charger blade that is the most efficient.

Preschool children will explore science with a story each week about a concept such as color and rainbows, gravity, chemistry, weather, our bodies, and water, and do activities that explore the weekly themes.

**6. Detailed Time Line for Completion of the Projects:**

Late May—Adult Robotics Class

All other classes and programs in June and July, dates to be arranged later

- \*: “Intro to Robotics,” workshops will be two 3-hour workshops
- \* “Gear-Tech 21” workshop (2 days, each day 9-12 AM, 12:30-3:30 PM)
- \* “The Power of Wind” will be one weekly program
- \* “Weird Science” will be one weekly program
- \* Preschool weekly programs during June and July

**7: Targeted number of youth who will be impacted by this project:**

125

**8: Personnel who will be involved:**

Youth services librarian  
High school library page

**9: Plans for finding staff and time for this additional project:**

The county extension office personnel are very proficient at giving these programs, so the youth librarian’s job will be to co-ordinate everything, see that supplies and materials are present when needed, make sure all programs and activities are well-publicized, run off copies of needed materials, and supervise children during the events. The library page will assist with these also.

**10: Means of Evaluation:**

How many children and adults attend the workshops?

How many library books on the subjects were circulated?

What were the responses to the activities—nervous, interested, attentive, bored, inattentive?

See if there is interest in forming a robotics club if a leader can be found.

**11. Approximate date to begin project: May 27, 2014**

**12. Yes,** if awarded a grant I would be willing, if asked, to make a presentation at a state or system youth event or via teleconference.

## **Explanation of Expenditures:**

### **13: Contracted Services:**

- 5 stipends for extension personnel @\$50 per session, \$250
- 2 \$50 stipends for “Weird Science” program, \$100

### **14: Library Materials:**

Site software purchased through the Merrick County Extension Office called Legomindstorms Education NXT 2.1 for use in programming robots in the Gear-Tech 21” sessions - \$340. After the summer activities people will still be able to use the software to continue to expand their knowledge and work with robotics. If there is sufficient interest, the library will purchase more books and other materials to supplement the collection.

### **15: Personnel costs:**

An estimation of the amount of hours the youth services librarian and high school page for the hours spent specifically on this project and the supervising of the workshops. \$200

### **16: Program Materials/Supplies:**

- 8 kits @ \$25/kit—each kit has 4 robots for the “Intro to Robots” \$200
- Rental for 20 “Gear-Tech 21” kits \$20/kit - \$400
- Miscellaneous supplies like dixie cups, cardstock, pencils, dowels, heavy cardboard, hot glue, paints - \$75

**17: Training:--none**

**18: Equipment:--none**

**19: Operations and Maintenance:--none**

**20: Promotion:**

Advertising in area newspapers, flyers, posters, other publicity, \$75

**Nebraska Library Commission Youth Grant Program  
PROPOSED PROJECT BUDGET**

<i>Describe each expenditure below.</i>	<i>round figures to the nearest whole dollar amount</i>
Contracted Services (7 sessions / \$50 stipend per session)	350
Library Materials (site software for robotic programming)	340
Personnel Costs (Youth librarian and library page - 20 hr.)	200
Program Materials-Supplies (robot kits—8 kits @ \$25, 20 rented kits @ \$20, misc. supplies \$75)	675
Training	
Equipment	
Operations and Maintenance	
Promotion (advertising in newspapers, flyers)	50
Other	
<b>Estimated Total Project Budget</b>	<b>1615</b>

The local match must be at least 25% of the total project cost (above). At least 10% of the total must be matched in cash. Please indicate in the boxes below how your local funds will be used for the project.

Cash (must total at least 10% of the Estimated Total Project Budget above.)	162
Other (personnel and promotion costs)	250
Total local expenditures (match) (must total at least 25% of the Estimated Total Project Budget above.):	412
Amount being requested as a grant from the Library Commission: (this box will automatically be filled in. It will show the results of subtracting the total local expenditures from the total project budget.)	1203

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