WONDERFUL WATER

2015 Ohio 4-H Cloverbot Challenge

We use water everyday: to drink, cook, take a bath, wash dishes and do laundry. But do your Cloverbuds also know that water provides energy and transportation, aids in manufacturing and perhaps most importantly, helps grow our food? Water is critical to our survival.

The Challenge

What affects water quality? Litter, detergents, oil, chemicals, pesticides, fertilizers, temperature, erosion and runoff to name a few. **The Challenge is to identify an impact factor and create a solution to the selected problem.** For example, the problem with washing your truck in the driveway means that soap and cleaners run off and eventually end up in the water supply. To solve this dilemma, your Cloverbuds create an elevated truck platform with a special filter that purifies the water before it goes back into the water supply. It might sound impossible to you, but let your Cloverbuds' imagination and curiosity run amok!

Explore Water

The Challenge encourages Cloverbuds to explore this most important resource. They will have the opportunity to discover all aspects of water, including:

- Properties
- Scarcity
- Uses of water
- Conservation
- Water Quality
- Global water issues

Challenge Guidelines

- ✓ Teams must have at least two, but no more than eight members. All participants must be 4-H Cloverbud members
- ✓ Models must be constructed in an area no larger than 15"x15". A baseplate is recommended.
- ✓ Any type and quantity of interlocking bricks (ie: Mega Bloks, LEGOS) may be used.
- ✓ Models must feature a moving part or simple machine (lever, wedge, inclined plane, wheel and axel, pulley, screw).
- ✓ Poster must include team name and members' names. Use the poster to highlight the overall experience.
- ✓ All teams will receive a trophy and individual medals.
- ✓ Teams must be present at the May 30 Challenge in order to receive trophies and medals.

Ohio 4-H Cloverbots will explore the properties of water, the water cycle, and factors that affect water quality while building a model out of interlocking blocks and exploring engineering design elements.

Let's Begin! Learn About Water

Below are online resources and activities you can use to help your Cloverbuds learn more about water. Feel free to use your own ideas, too. Use as many or as few as you like. It's up to you!

Information about global water issues
http://water.org/news/lesson-plans/
Look for "Elementary Curriculum" for lessons plans and mini-units.

Focus on rivers and lakes
http://extension.usu.edu/waterquality/htm/kidspage
Printable games to help understand storm water

Water cycle information from the Environmental Protection Agency
http://water.epa.gov/learn/kids/drinkingwater/kids_k-3.cfm
Includes instructions to build a water cycle

Info about drinking, ground water, and watersheds
http://ag.arizona.edu/waterquality/activitiesindex.html

Fun activity to construct a working water filter from a 2-liter bottle
http://pbskids.org/zoom/activities/sci/waterfilter.html

Ohio 4-H Self Determined Project Idea Starter
365.18 Ways of Knowing Water
http://go.osu.edu/x8s

Suggested Timeline

START NOW! There is no required training this year. Everything you need to know to get started is right here!

First meeting

- ❑ Get to know you games
- ❑ Explain the Cloverbot Challenge
- ❑ Find out what children know about water: uses, sources, properties, etc.
- ❑ Facilitate a water activity
- ❑ Distribute a parent handout explaining the Ohio 4-H Cloverbot Challenge. Include the dates of your meetings, field trip information, and the date, time, and place of the event.

Second meeting

- ❑ Facilitate a water activity
- ❑ Review the Challenge Problem: What affects water quality?
- ❑ Brainstorm a list of project possibilities and select a focus

Subsequent meetings

- ❑ Field trip
- ❑ Community service project related to the topic of water
- ❑ Construct project model
- ❑ Create a project poster
- ❑ Continue water activities

Questions?

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The Event

Where: Nationwide & Ohio Farm Bureau 4-H Center
2201 Fred Taylor Drive, Columbus, OH 43210
Date: Saturday, May 30
Time: 9 -11:45 a.m. OR 1-3:45 p.m.
The teams closest to Columbus will participate in the morning session and the remaining teams will participate in the afternoon session.

Team Registration

New for 2015
There is no cost for clubs to register for the Ohio 4-H Cloverbot Challenge. Returning teams may use their kits from previous years. New teams may use their own interlocking blocks and base plates or may purchase a kit at half the cost.

ALL TEAMS MUST REGISTER AT THIS SITE:
Deadline to register: April 15, 2015
http://surveys.cfaes.ohio-state.edu/cfaes/index.php/729616/lang-en

ORDER A KIT
New teams that need a kit may order one at a reduced rate thanks to funding from the Ohio 4-H Foundation.

Kit includes: a large brick set, a simple machines brick set, a motorized mechanisms set, and a build to express set *(This kit is not required to participate. Any interlocking blocks may be used.)*

Reduced kit cost: $165

Order deadline: Checks must be received by ***March 14*** to receive a kit at the discounted rate.

Make $165 check payable to **Ohio 4-H**

Include:
1. Club Name
2. County
3. Team Advisor Name
4. Contact Phone Number
5. Email Address

Mail to: Ohio 4-H Cloverbot Challenge
c/o Sally McClaskey
Nationwide & Ohio Farm Bureau 4-H Center
2201 Fred Taylor Drive
Columbus, OH 43210