

**Welcome to the
2013-2014 North Central Region
4-H Volunteer e-Forum!**



**Exploring the Science of
4-H Projects**

Session #4
Monday, February 3, 2014

**Congratulations to Lisa
Pfannensteil-Garrison, KS!**

Recipient of the National
and North Central Region
2013 Salute to Excellence
Volunteer of the Year Award



Congratulations to Mildred Waldren, KS!

Recipient of the National and North Central Region 2013 Salute to Excellence Outstanding Lifetime Volunteer Award





Science via Inquiry Learning

Do - Reflect-Apply

Tonight's E-Forum Program:



Cathy Johnston
University of Nebraska-Lincoln



Bonnie Malone
The Ohio State University



Dixie Sanborn
Michigan State University



Vicki Schwartz
The Ohio State University

Welcome Activity - Poll Question

- ▶ Science was my favorite subject when I was in school.



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Welcome Activity - Poll Question

- ▶ I feel comfortable teaching science to 4-H'ers.



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Welcome Activity - Poll Question

- ▶ I am already incorporating science in my clubs 4-H projects.



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Session Objectives

What is STEM?	Why teach STEM?
Horticulture	Animal Sciences
Idea Exchange	

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Poll Question:

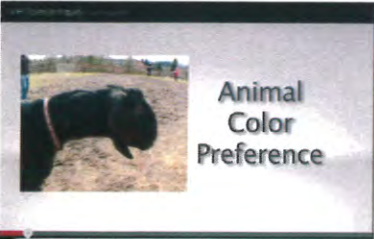
- ▶ Which is your preferred style of learning?
- ▶ A. Auditory
- ▶ B. Visual
- ▶ C. Tactile/Hands on



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YouTube: Oregon State University

4-H Science Inquiry series:
<http://www.youtube.com/watch?v=TAzWfD888g&list=PL3CF22C166D4EE17A&index=2>



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About this Session




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Poll Question:


Who should be teaching science:

- A. Schools
- B. 4-H
- C. Other youth organizations
- D. All of the above



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Inquiry Based Learning



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graph TD; A[Spark Interest] --> B[Develop Questions]; B --> C[Create a Plan]; C --> D[Investigate]; D --> E[Reflect]; E --> F[More Questions]; F --> A;
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Hands On – Horticulture



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Flower Dissection & Break

- ▶ Dissect your flower
- ▶ Discuss
- ▶ Return in 10 minutes

Why do we need flowers?
What is the function of each flower part?
Why do plants need flowers to reproduce?
Why are flowers important to our food supply?

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Welcome Back!

- ▶ What did you discover?

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Hands on – Animal Science

- ▶ Series of inquiry based animal science lesson plans available on The Ohio State University 4-H Animal Science website.
- ▶ Putting Science into Animal Science Projects: Lesson Plans for 4-H Professionals and 4-H Volunteers.
- ▶ <http://4hansci.osu.edu/livestock/livestockResources.php>
- ▶ Lesson Three: Understanding Feed Labels
 - Area: Feeding Livestock
 - Activity: Interpreting Feed Labels
 - Goal: Learn to read and compare feed labels

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Take time to consider the labels

- ▶ 2 minutes to explore

Pig Grower

Medicated
for pigs between 30 and 75 pounds

Administer to swine in complete feed for reduction of the incidence of several diseases, treatment of BACTERIAL SWINE ENTERITIS (SALMONELLA) or NECROTIC ENTERITIS caused by *Samonella choleraesuis* or *YERKINIC ENTERITIS*, maintenance of weight gains in the presence of ATROPHIC RENTIS.

Active Drug Ingredients
Chlortetracycline 1000/Ton
Sulfathiazole 0.0119/(1000/Ton)
Penicillin 500/Ton

Guaranteed Analysis
Crude Protein, min 18.00%
Lysine, min 1.10%
Crude Fat, min 6.50%
Crude Fiber, max 4.00%
Calcium, min 0.60%

SWINE TIME BMD

COMPLETE SWINE GROWER
FOR PIGS WEIGHING 125-190 LBS.
For increased rate of weight gain and improved feed efficiency.

ACTIVE DRUG INGREDIENT
Bistrachol Methylene Diisocytlate...30 grams/ton

GUARANTEED ANALYSIS
Crude Protein, Not less than 14.0 %
L-Lysine, Not less than 0.90%
Crude Fat, Not less than 4.5 %
Crude Fiber, Not more than 5.0 %
Calcium (Ca), Not less than 0.4 %
Calcium (Ca), Not more than 0.9 %
Phosphorus (P), Not less than 0.55%
Salt (NaCl) Not less than 0.30%
Salt (NaCl) Not more than 0.30%
Selenium (Se), ppm, Not less than 0.3
Zinc (Zn), ppm, Not less than 100

INGREDIENTS
Grain Products, Plant Protein Products, Animal Protein Products, Processed Grain By-Products, L-Lysine, Hydrolyzed Animal and Vegetable Fat, Calcium Carbonate, Monocalcium/Dicalcium Phosphate, Salt, Copper Sulfate, Basic Copper Chloride, Calcium Borate, Ferric Sulfate

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Reflection Activity – 5 Minutes

<div style="border: 1px solid black; padding: 5px; width: 60px; height: 60px; background-color: #f08080; margin: 0 auto;"> <p style="text-align: center; font-size: 8px;">Animal Science</p> <p style="text-align: center; font-size: 8px;">- Illinois - South Dakota</p> </div>	<div style="border: 1px solid black; padding: 5px; width: 60px; height: 60px; background-color: #808080; margin: 0 auto;"> <p style="text-align: center; font-size: 8px;">Foods</p> <p style="text-align: center; font-size: 8px;">- Indiana - Kansas</p> </div>	<div style="border: 1px solid black; padding: 5px; width: 60px; height: 60px; background-color: #800080; margin: 0 auto;"> <p style="text-align: center; font-size: 8px;">Natural Resources</p> <p style="text-align: center; font-size: 8px;">- Michigan - Nebraska</p> </div>
<div style="border: 1px solid black; padding: 5px; width: 60px; height: 60px; background-color: #000080; margin: 0 auto;"> <p style="text-align: center; font-size: 8px;">Water Environment</p> <p style="text-align: center; font-size: 8px;">- Minnesota - Ohio</p> </div>	<div style="border: 1px solid black; padding: 5px; width: 60px; height: 60px; background-color: #000080; margin: 0 auto;"> <p style="text-align: center; font-size: 8px;">Plant Science</p> <p style="text-align: center; font-size: 8px;">- Missouri - Iowa</p> </div>	<div style="border: 1px solid black; padding: 5px; width: 60px; height: 60px; background-color: #800000; margin: 0 auto;"> <p style="text-align: center; font-size: 8px;">Chickens</p> <p style="text-align: center; font-size: 8px;">- Wisconsin - North Dakota</p> </div>

Next Steps

- ▶ At your site discuss...



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CLICK 2 SCIENCE | ONLINE STEM PROFESSIONAL DEVELOPMENT FOR OUT-OF-SCHOOL PROVIDERS

- ▶ A place for you get science activities ready to go and to learn techniques to use inquiry based learning.

<http://www.click2sciencepd.org/>

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E-Forum Evaluation

- ▶ We welcome your feedback from tonight's e-Forum session.
- ▶ An electronic survey is available at: <https://www.surveymonkey.com/s/793H7BX>
- ▶ Your responses will help us to better plan future programs for 4-H Volunteers.
- ▶ Site facilitators, please compile your site's data and enter it into the survey link within 2 weeks of the session.

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E-Forum Resources

- ▶ To access resources presented in the e-Forum sessions, please visit:
<http://www.uwex.edu/ces/4h/ncrvd/eForum2013.cfm>
- ▶ A recording of this session is also available at this site and at: learn.extension.org



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2013-2014 North Central 4-H Volunteer E-Forum Sessions

▶ *Thank you for participating in this series of Volunteer E-Forum Sessions. We will be planning more soon.*



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