

# **2009-2010 East Central BOCES Science Clusters**

## **All Day General Science Clusters**

- 8:30 a.m. – 4:30 p.m.
- lunch provided
- 1 credit available

### ***1. Friday, September 11 –***

Caren Kerschner

#### **Tie-Dye and Other Science in Art Activities**

Engage your students in science through art activities! We'll explore the chemistry of tie-dye, the physics of Sumi Nagushi marbling, the various melting points of polymers, making perform predictions, and much more! Bring along a lab coat to tie-dye if you like, pre-washed 100% cotton works the best. The workshop will provide T-shirts for participants to tie-dye.

Suni Oljker

#### **Foldables**

Fold your way through any science subject. Foldables are great student organizers, can be as assessments, homework, and study guides.

Cherie Wyatt

#### **Real Teaching on the First Day of School**

Use short discrepant events to introduce students to the beginning of scientific thought while leaving time for rules and procedures! We will make and take some of the demonstration apparatus.

### ***2. Friday, October 23 –***

Teresa Higgins

#### **The 5E Model for Instruction**

Want more inquiry based instruction in your science classroom? Spend a day with Teresa Higgins exploring the aspects of the 5E Model for instruction. We'll model 5E teaching and learning through engaging science activities and "deconstruct" each phase from both the teacher and learner perspectives. Plus we'll explore the role of questioning in the 5E instructional models. Bring along a few lesson plans that you would like to modify into a 5E Model and we'll work together to help changing the way we teach! You'll leave with a broader understanding of inquiry and how to implement it in your classroom. This is a follow up session to last year's session, but attendance last year is not necessary to gain a lot from this popular speaker!

## **Evening Science Clusters**

- 5 p.m. – 8 p.m.
- Dinner provided
- \$25 stipend to participants/cluster attended
- 1 credit available

### ***1. Monday, September 14 –***

Linda Groat, Division of Wildlife

#### **Wildlife Critter Crates**

Make science fun with Division of Wildlife critter crates! Explore hands-on kits to learn about Colorado animals while practicing skills such as reading comprehension, measuring, calculating, etc. See our newest “Bird Box” with several activities and workbook designed for upper elementary grades. Experience other activities that are most useful for K-8.

### ***2. Monday, October 12 –***

Marilyn Achten, Aurora Public Schools

#### **Secondary Science Notebooks**

There is a lot of buzz about science notebooks at conferences lately, but they sure do seem intimidating! Science notebooks allow instructors to transform boring cookbook labs into meaningful and engaging experiences for students, and are powerful tools for content instruction and student sense-making. When used effectively they have been shown to significantly improve student achievement in science, math, and literacy. In this presentation you will:

- Learn about some of the research that supports notebooking as an instructional tool in science classrooms
- Set up a notebook and receive rubrics and other resources to support you in notebooking in your own classroom
- Experience a guided inquiry lab using the notebooking process to scaffold science understandings
- Receive ideas for practical strategies to implement, manage, and grade student notebooks
- View example student notebooks and brainstorm ways to use them in your classroom with you aren't doing labs

### ***3. Monday, November 9 –***

Courtney Willis, University of Northern Colorado

#### **The \$50 Wii Smartboard in the Elementary Classroom**

Don't have the finances for a smartboard in your classroom? We will learn how to use a Wii remote, whiteboard, Bluetooth dongle, free software and an infrared pen (along with the projector and computer which is also required separately for a smartboard) to put together a Wii smartboard. We will look at many internet resources that can be used as ready made plans and practice for the elementary reading, writing, math, and science classroom.

**4. Monday, January 11 –**

Sharon Stroud,

Weather All Around Us

We will use activities to discover what the H and L on weather maps mean to your upcoming weather. We will also explore other questions. Why do clouds form in bottles and the atmosphere? Why is the Coriolis Effect important to weather? In making weather forecasts, how does the topography of Colorado including the Palmer Divide affect our weather?

**5. Monday, February 8 –**

Cherie Wyatt, Kiowa High School

POGIL (Process Oriented Guided Inquiry Learning)

How can you introduce new topics in a way that is meaningful to students and meshes with how they actually learn? POGIL activities do just that! They provide constructivism with some student guidance so that learning is still student-centered yet the classroom is easily managed by the teacher. We will look at activities for chemistry, biology, and anatomy and physiology.