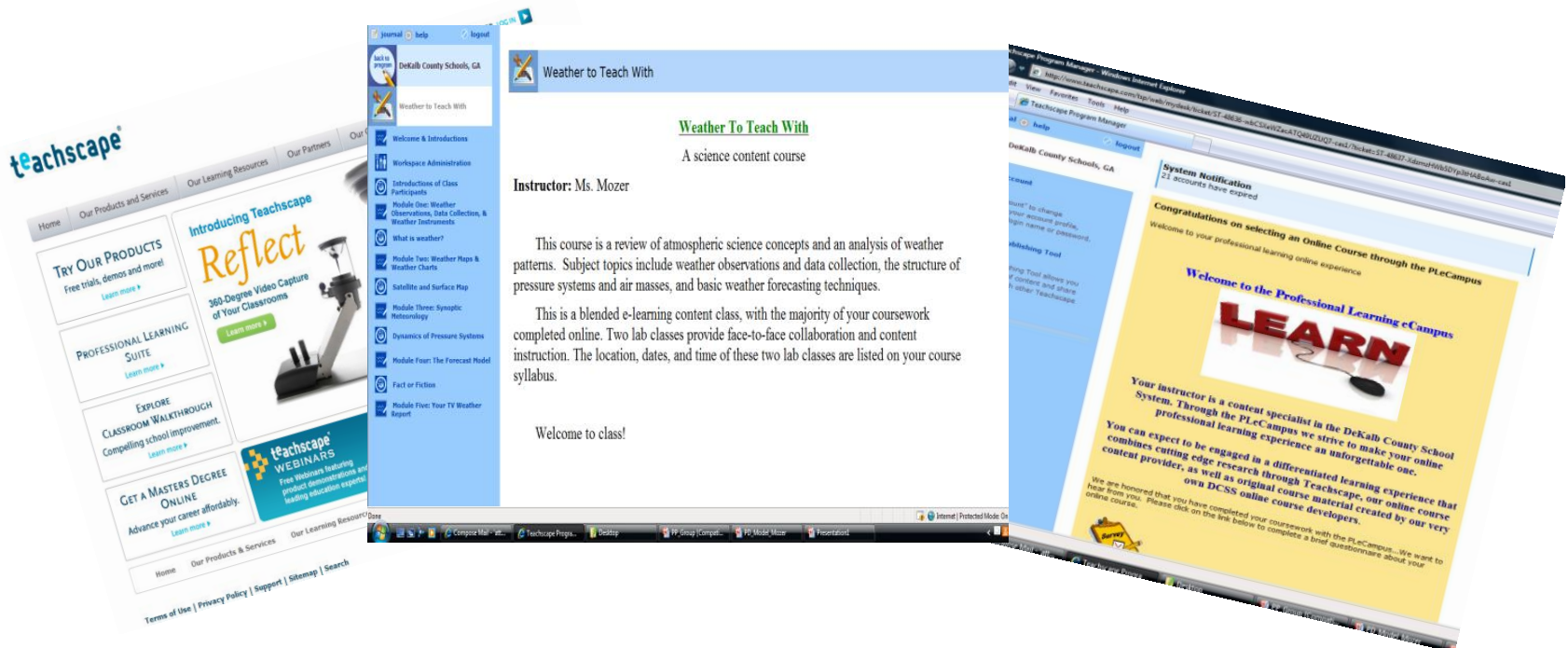
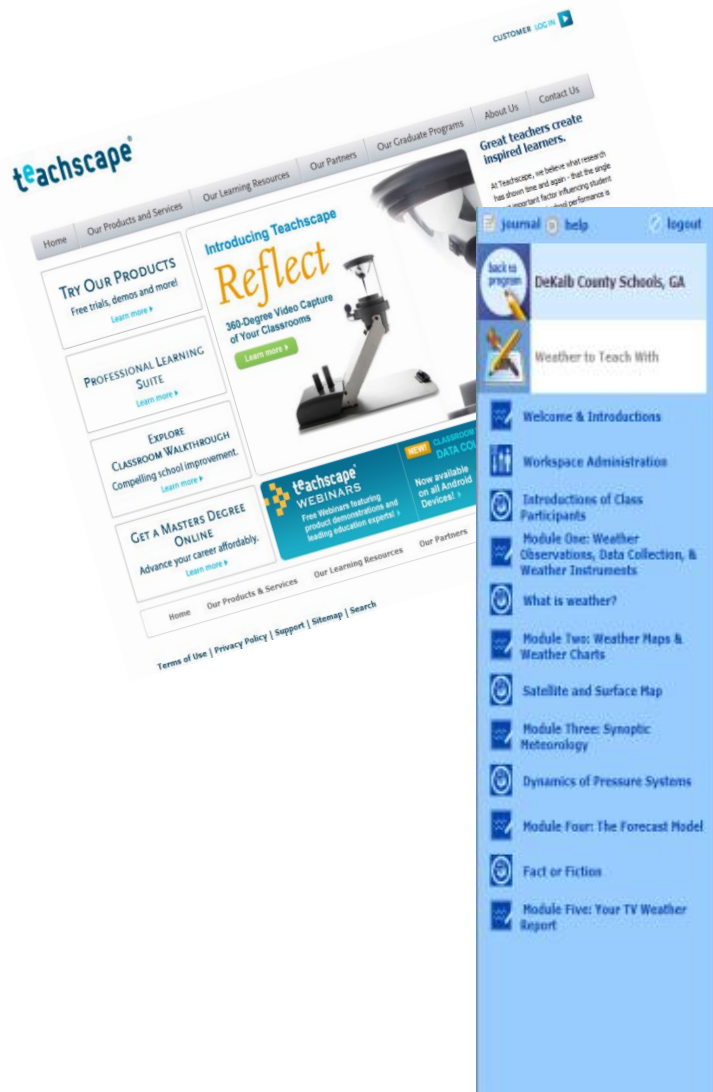


PD Model for PL Online Content

*the facilitation and learning of content and
use of a Web component*





Weather to Teach With

Weather To Teach With

A science content course

Instructor: Ms. Mozer

This course is a review of atmospheric science concepts and an analysis of weather patterns. Subject topics include weather observations and data collection, the structure of pressure systems and air masses, and basic weather forecasting techniques.

This is a blended e-learning content class, with the majority of your coursework completed online. Two lab classes provide face-to-face collaboration and content instruction. The location, dates, and time of these two lab classes are listed on your course syllabus.

Welcome to class!

Part B: Context

This eLearning PD program will be implemented each spring term as a service for middle (and elementary) grade level teachers. The first full program is modeled after a recently completed pilot program and will begin with a staff of five science content instructors (to instruct meteorology, climate, geology, astronomy and biology) to facilitate and develop online content.

- Duration

- Developers/facilitators/volunteers

- Content

- Participants

Each course will allow for 10 - 20 middle school teachers to volunteer/enroll, or be appointed, to participate in any of the five content classes.

- Credit

PLUs (Professional Learning Units) upon program completion by middle school teachers, and the possibility of stipends is being considered.

- Collaboration

face-to-face labs and electronic messaging, such as email, discussion boards and Webinars.

6th Graders

6,840 students tested

45 percent "Did Not Meet"

9 percent "Exceeded"

5,117 **Black** students tested

50 percent "Did Not Meet"

4 percent "Exceeded"

613 **Hispanic** students tested

49 percent "Did Not Meet"

7 percent "Exceeded"

8th Graders

6,962 students tested

36 percent "Did Not Meet"

13 percent "Exceeded"

5,398 **Black** students tested

58 percent "Did Not Meet"

3 percent "Exceeded"

503 **Hispanic** students

61 percent "Did Not Meet"

4 percent "Exceeded"

Part A: **Conceptual Framework**, CLE (Constructionist Hybrid Online Learning Environment)

The technology components are important in defining the media terms; however it is the pedagogy strategies that build the framework that will provide purposeful education. E-Learning enables unique individual learning that fits within the existing paradigms of face-to-face pedagogical practices (Nichols, 2003 & Gregor, 2002).

Learning approaches using Information and Communication Technologies (ICT) provides many opportunities for constructivist teaching (Oliver, 2002).

Bodies of researches indicated that constructivism theory is a suitable philosophy for online learning environments, ensuring the “learning among learners” (Koochang, 2009).

This online PL model reflects an andragogical approach theorized by (Knowles, 1980) in his four basic assumptions about learners:

- Learners’ self-concept moves from dependency to independency.
- Learners accumulate a reservoir of experiences that can be used to build learning.
- Learners’ readiness to learn is increasingly associated with the tasks and social roles.
- Learners’ time and curricular perspectives change “from postponed to immediacy of application and from subject-centeredness to performance-centeredness” (pp. 45).

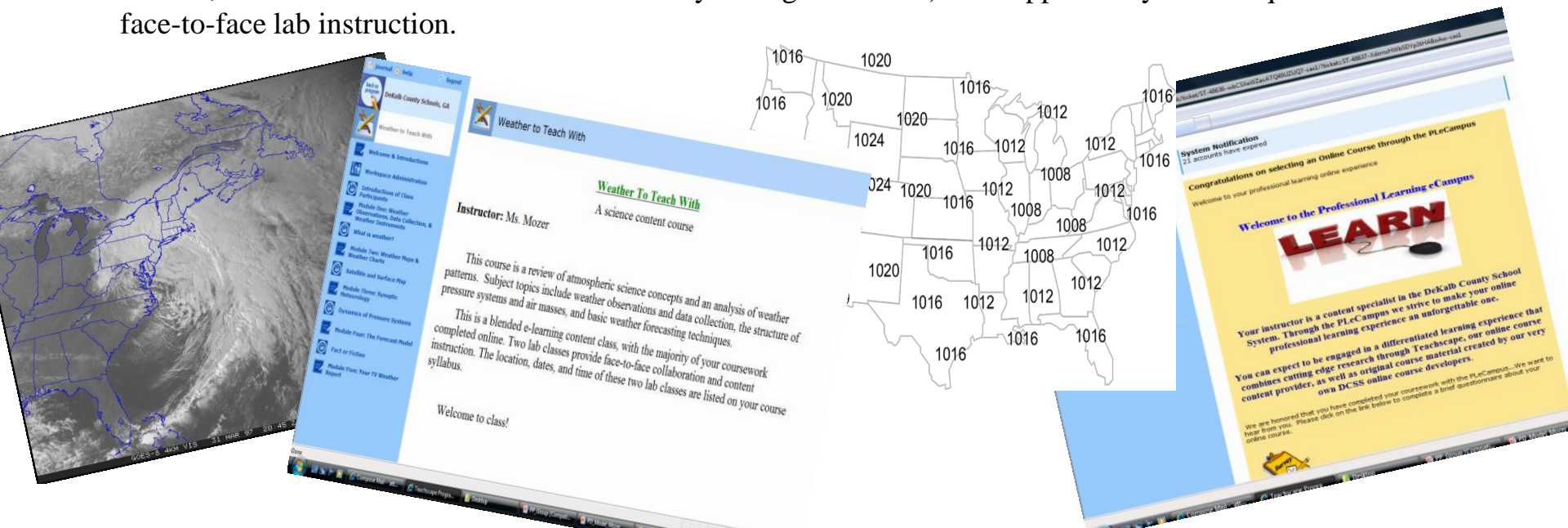
Knowles’ approach along with the theory of online learning prescribed by Nichols (2003) is employed here for several reasons. The basic belief is that “technology is pedagogically neutral.”

NCSD Standards

Learning Communities	A hybrid learning environment (face-to-face workshops and online, collaborations) a focus on middle school science content. The program will provide 2 to 4 PLUs for collaboration and participation online over a period of two to four months.
Leadership	The department directors of Prof. Learn. & the Sci. Ctr. Will join mission tasks and extend current efforts to this science PL innovation. Content instructors will complete the required platform course online and develop online modules according to their area of expertise.
Resources	Grant money has not been approved for participants (middle school teachers) as of yet, but this is considered a possible option. Teachers will be able to participate online at their convenience. Content facilitators will integrate online responsibilities as a part of the regular schedule.
Data Driven	Science CRTC assessment scores for 6 th and 8 th grade levels and subject benchmarks (standards) support model informing for the purpose of increased learning in science by all students (below and above assessed standards)
Evaluation	<p>In order to determine the anticipated higher student achievement :</p> <p>Participants/Teacher will participate in pre-survey and post-survey collections of content knowledge for the purpose of targeting subject material needs (formative evaluation).</p> <p>Surveying of student content knowledge is also suggested. This collection of data may be collected via teacher surveys.</p> <p>Data for Summative evaluation will include: PD evaluations of reflections of participation experiences (qualitative), journal/reflection online input during participation (qualitative) and online assessed knowledge gains (quantitative).</p> <p>See Part D: Evaluation, below.</p>
Research Based	Research indicates content learning achievement is similar to face-to-face learning, and research indicates increased learning of content is more likely from on-going programs. A pilot program was recently completed and the effective program aspects are being adopted for the broader program.
Design	Face-to-face workshops and an online mentoring/coaching design, this ongoing program (two to four months; depending on subject, materials, and participant needs) allows for practice changes during the school term, and follow up activities as well as feedback that addresses needed interventions.
Learning	<p>Content provides assignment with collaborative responses to enhance science knowledge and promote enhanced skills/practices for the classroom.</p> <p>Online constructivist and content Andragogy practices mirror classroom methods and expectations (engaging science content).</p>
Collaboration	Facilitators and participants will engage in the learning process, learn with and collaborating with online participants during each module period. Observing online networking, teachers utilize multiple digital Web based tools to communicate and provide information for content approaches and methods.
Equity	Differentiated module assignments allow for classroom practice needs (assisting teachers to meet the diverse needs of their students)
Quality Teaching	eLearning instructional methods, appropriate to science content, will utilize web applications that facilitate participatory information sharing, interoperability, and online assessments.
Family Involvement	Provide web based tools intended for student uses, real world applications will be widely integrated over the course of the class, to be shared and used at home.

Part C: Design & Implementation

- The program goal is to enhance teaching practices in science, increase science content knowledge of middle school science educators, currently teaching middle school science. In addition to increasing content knowledge, direct or provide Web-based tools for teachers to use in their middle school classrooms. By extending the reach of content expertise of the science center to the middle school community via PL eLearning; the overall goal is to increase student learning in science content.
- Workshops to train science content experts and to communicate the vision and energize the content instructors to serve as online developers, facilitators and mentors are the starting steps of program implementation. Content instructors will provide content instructions that are currently mission job embedded and apply strategies via researched based practices aligned to the program's conceptual framework (suited for the eLearning Teachscape online platform). As supported by online conceptual framework and online pedagogy practices, the program will allow facilitators to engage teachers in a pseudo one-on-one mentor-like relationship that is conveniently available online (instructions, lessons, and feedback will be available each day during the course) and supported by some required face-to-face lab instruction.



Part D. Evaluation

Survey to address level of need/skill and goals. Set goals that are measurable. Communicate and further amend implementation process, data, and topics. Reflections and quantitative data...