

## **BEACON LEARNING CENTER: ONLINE LEARNING FOR K-8 STUDENTS**

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The State of Florida has demonstrated a commitment to increasing the academic achievement of each student through a number of educational initiatives over the last few years. Florida's Goal 3 Standards describe broad areas of knowledge and competence that high school graduates are expected to know as they enter the workplace. The Sunshine State Standards define what students should know and be able to do at various learner levels in specific content areas. Florida's Curriculum Frameworks further describe what schools will be held accountable for attaining, as measured on the Florida Comprehensive Assessment Test (FCAT) and Florida Writes.

Making the transition from a tradition of minimum competencies and selected-response assessment measures to more rigorous standards and performance-based assessments challenges Florida's teachers. To help students demonstrate higher achievement as envisioned in reform efforts, teachers need resources of innovative instructional tools and strategies. This is where technology fits perfectly.

Numerous studies on the use of technology for impacting educational reform herald the same message: Technology is most effective when clearly tied to curriculum, assessment, and instructional goals (Means, et al., 1983). These findings are consistent with the message of many reform efforts and provide the basis for all activities of the Beacon Learning Center, an online curriculum resource center for students, teachers, and parents. The Beacon Learning Center, which is the focus of this paper, utilizes the best features of technology to improve student achievement.

### **BACKGROUND**

The Beacon Learning Center ([www.BeaconLC.org](http://www.BeaconLC.org)) began in November 1997 with a grant from the Technology Literacy Challenge Fund to develop Web-based curriculum activities for students of grade 3 mathematics. With the addition of Goals 2000 funding the following year, the purpose of the project grew to develop model lesson plans for teachers in grades K-8 in mathematics, health and social studies. The focus of development since that initial year has broadened to include more Web-based student activities for students of grade 3-8 in mathematics and language arts, and lesson plans for all subjects, K-12. As the Beacon project begins its third year, a new component will be added. Unit plans will provide a structure in which related lesson plans and students activities will be grouped.

An intense validation process ensures that all content meets stringent quality standards and tightly aligns the curriculum, assessment and instructional efforts. In addition, feedback from pilot teachers provides further suggestions for improvements to student activities and teacher lesson plans. By August of 1999, over 100 online student activities and approximately 250 teacher lesson plans had been approved and posted to the Beacon Website.

A major goal of the Beacon Learning Center has been to create a user-friendly resource tool for both developers and users. A master database of all validated curriculum resources can be searched by keyword, Sunshine State Standard, Goal 3 Standard, or resource title. This feature makes it easy for the classroom teacher to quickly identify quality resources to match specific curriculum needs. The intuitive interface and descriptive features included throughout the Website help users easily navigate the site. Educators, parents, and students can choose to browse the site by audience or by content.

## CONTENT

### Teacher Lesson Plans

The Beacon Learning Center provides high quality model lesson plans tied to specific Sunshine State Standards. For example, a teacher interested in ideas for teaching benchmark MA.C.2.2.1--Understands the concepts of spatial relationships, symmetry, reflections, congruency, and similarity—searches for lesson plans by typing in the keyword “symmetry” or by selecting the exact benchmark identifier from a drop-down list. A list of related lesson plans appears, with a brief descriptor of each activity. “Boarding of Symmetrical Shapes,” one of the lesson plan choices, begins with the students using the “Let’s Learn Symmetry” online lesson, then provides a number of related activities that teachers can do with students individually, in small groups, at learning centers, or in whole-group sessions. The lesson plan concludes with a brief descriptor of how the teacher might formatively assess each student’s progress toward mastering the benchmark.

### Online Student Activities

Students using the Beacon Learning Center enjoy the benefits of computerized, individual instruction on content tied to the Standards. For example, one typical lesson introduces the concept of symmetry. The lesson begins with a graphic of a brightly colored butterfly, an image students can immediately recognize. The second screen displays the same butterfly with a line of symmetry drawn in, and accompanying text defines the concept of symmetry. On subsequent screens, the lesson presents additional information, accompanied by clear, colorful graphics. The lesson checks students’ understanding as they progress through the screens; navigation is controlled to introduce new ideas by building on previous information.

A key feature of the online student activities is their strong similarity to FCAT and Florida Writes. In the symmetry lesson, for example, two types of questions are used: multiple choice and short response, as recommended in the FCAT Item Specifications Guide (p. 65). Multiple-choice answers appear in the form of drop-down boxes. Each choice is a “believable answer for someone who does not really know the correct answer,” another requirement for FCAT items. Short response items are featured with open text boxes in which students actually type in their responses. The program uses a text search to look for keywords that were used to explain students’ answers. Based on the presence or absence of any keywords, specific feedback is generated. The feedback provides suggestions or

additional questions to help students re-think their selections. In this way, Beacon lessons foster continuous improvement for students.

Responses to student choices do more than simply mark the choices right or wrong. Specific suggestions or additional explanations are provided for incorrect answers, and the student must try the item again. Correct answers also receive responses that reinforce the concept in question. Simply telling students that answers are correct or incorrect is not enough. Students need immediate and specific guidance to help them work through new ideas, and the individualized environment provided by the lessons places even more importance on that immediate guidance.

#### Unit Plans

As mentioned earlier, a new component of the Beacon Learning Center will be the inclusion of unit plans to connect various lesson plans and online student lessons into summative learning experiences and assessments. Specific academic and process goals, as detailed by the Sunshine State Standards and Goal 3 Standards will be taught and assessed. At least two authentic assessment tools will be provided to summatively measure student performance according to the Grade Level Expectations for the selected Sunshine State Standards. The instructional section of the plan will list the lesson plans, student online lessons, and other related Internet links integral to the development of the unit.

#### Other Features

When visiting the Beacon Learning Center, users can also take advantage of the Software Evaluation Library, a Website Review Library, Instructional Websites, Software Training Manuals, professional growth Training Modules, and a Guided Learning Center for directing student use and progress while using the online student lessons.

Striving to be a user-friendly, one-stop resource for educators, parents, and teachers, has required the Beacon Learning Center to maintain a dynamic process of growth and development. In keeping with the findings of the studies discussed in the Means report, each resource of the Beacon Learning Center clearly identifies and supports the curriculum, assessment, and instructional components being emphasized by the State of Florida. As student achievement takes center stage on the platform of educational reform, the Beacon Learning Center is there to spotlight the innovative and technological tools that can be implemented in the instructional process to help students demonstrate higher achievement.

Means, B., Blando, J., Olson K & Middleton, T. (1983). Using Technology to Support Education Reform. Washington, DC: U.S. Government Printing Office.