

TEACHING APPLICATIONS

The 1:1 Computer Learning System is a new online learning management system (LMS) that equips K-12 teachers to quickly engage in one-to-one computing and turn traditional classrooms into blended learning environments. The System enables teachers of any grade level to electronically prepare, assign, and score discovery based lessons, called Investigations, on topics of their choice. An Investigation engages the student in answering an *Investigation Question* by following a brief *Investigation Guide* that incorporates links to informational Web sites. The student provides a brief written answer to the Investigation Question, and the teacher electronically scores the answer against the lesson's pre-stated learning outcomes. Investigations can be used to teach any parcel of knowledge with assurance of student mastery.

In less than an hour, teachers at any K-12 grade level, regardless of technological proficiency, can learn to prepare Investigations for online delivery using the *EasyPrep* template, instantly send an Investigation to any student's *Electronic Work Page* using the program's *AssignExpress* component, and grade the work electronically using the *QUIXscore* assessment instrument. The System accommodates I-Pad learning and online instruction with other tablet computers.

Teachers can submit their lessons to the *National I-Trade Library* for use by other 1:1 Computer Learning System users anywhere and can instantly download from the Library's ever-expanding collection of Investigations across all curriculum subjects and grade levels. All Investigations submitted to the *National I-Trade Library* are screened for content suitability and editorial quality by teacher-editors at Internet Teaching Systems, Inc. Teachers need not submit lessons to the *I-Trade Library* in order to use its resources.

Use the 1:1 Computer Learning System accomplish these important teaching objectives:

Differentiate instruction by preparing or downloading Investigations from the *National I-Trade Library* to address the particular learning preferences or special needs of individual students.

Engage students at deeper levels by providing motivational background information in the Investigation Guide section of the lesson. Here's an example of an Investigation Guide prepared by a middle school teacher for a U.S. history lesson on the first black infantry unit to fight for the Union during the Civil War:

American flag held high and snapping in the wind, the 54th Massachusetts charged into a barrage of confederate gunfire -- and gained fame throughout the northern states. How so? You'll find out in this Investigation. Answer these key research questions along the way: What was unusual about the 54th Massachusetts? Why were people especially curious about this Union Army unit? What did the 54th Massachusetts do to earn the respect of people in the North? How did this group of soldiers help the Union Army's cause? Take notes and cite your Web sources in the data entry spaces in your Electronic Work Page. For a few note-taking suggestions or to see the correct form for citing your Web sources, click

the help buttons just outside the data entry spaces. One of the soldiers of the 54th Massachusetts, Sergeant William Carney, was awarded the Congressional Medal of Honor, our country's highest award for valor, long after he died. He received the award for something he did in one of the battles fought by the 54th Massachusetts. Before you answer your Key Research Questions read Sergeant Carney's Medal of Honor citation at <http://prweb0.voicenet.com/~lpadilla/carney.html>.

Build basic math skills by preparing or downloading Investigations that engage the student in researching and applying the steps to solve particular types of math problems, as in this example Investigation Question for an elementary grades lesson on averaging: *What are the three steps needed to compute average daily rainfall?*

Engage students in the exploration of real-world math applications, as in this Investigation Question for a high school lesson involving logarithms: *How do Seismologists express the intensity of an earthquake?*

Develop scientific literacy through explorations of science at work to improve our understanding of the world, as in this Investigation Question for a high school physics lesson: *Why is the theorized Higgs Boson sometimes called the "God Particle?"*

Develop critical thinking skills by challenging students to analyze information and draw conclusions, as in this example Investigation Question for a lesson aimed at engaging Jr. and Sr. high students in a deeper study of U.S. history: *What was the intent of Abraham Lincoln's Second Inaugural Address?*

Improve standardized test scores by preparing or downloading Investigations that engage students in the types of concepts likely to be included in the tests, as in this Investigation Question for a lesson aimed at increasing middle school students' knowledge of the U.S. Constitution: *What freedoms are guaranteed by the Establishment Clause and the Free Exercise Clause in the First Amendment to the U.S. Constitution?*

Focus Internet sites on specific teaching objectives: The *EasyPrep* template provides instant access to a variety of non-commercial Internet sources, including government archives of primary documents and collections of educational videos. Suitable Web sites can be embedded in the discovery based lesson with a single click. Students can instantly access the sites from their Electronic Work Page.

Improve students' research and writing skills: Discovery based lessons require students to take notes and cite their sources in the Electronic Work Page as they answer the Key Research Questions. They use their notes to organize a written answer to the Investigation Question, a process that improves both research skills and writing proficiency.

Provide remedial help: Prepare or download Investigations from the *National I-Trade Library* to provide extra help for students struggling with particular skills or curriculum content.

Assist students as they work: The 1:1 Computer Learning System enables you communicate with students online as they work on their discovery based lessons.

Make a valid assessment of the student's performance: The *QUIXscore* grading scale enables the teacher to quickly evaluate the student's written summary of what was learned against the Investigation preparer's pre-stated learning outcomes. Following is an example of the *QUIXscore* assessment instrument for a high school U.S. history Investigation of the American Revolution:

Investigation Question How did Thomas Paine's pamphlet, "Common Sense," help the American colonists in their struggle for independence?

Report Thomas Paine inflamed the colonists' passion for independence from England by blaming the British king for the economic troubles of the American colonies and by saying that America's struggle for independence was an example for all people in every nation wanting the freedom to govern themselves.

Citations –

Thomas Paine's Common Sense. Archiving Early America

<http://www.earlyamerica.com/earlyamerica/milestones/commonsense/>

S.E. Smith. What was Thomas Paine's Common Sense. Wise Geek. 2003.

<http://www.wisegeek.com/what-was-thomas-paines-common-sense.htm>.

Important Ideas

Scoring: Low 1 – 5 High

Clear

Thomas Paine's pamphlet "Common Sense" strengthened the resolve of the American colonists to declare their independence from England.

1 2 3 4 5

Paine blamed King George for the economic suffering of the American colonists.

1 2 3 4 5

Paine said that America's struggle for freedom was, in a way, the quest for freedom of every nation.

1 2 3 4 5

Track students' performances: Scores for Investigations are automatically posted to the teacher's 1:1 Computer Learning System confidential grade book. Grades can be instantly accessed at any time.

Advance your professionalism as an online teacher: Any time you download an Investigation from the *National I-Trade Library*, you can communicate via email with its preparer, and teachers who use your lessons can communicate with you in the same way. This information exchange enriches online teaching skills.

A New Teaching Dimension

The personalized learning approach offered by the 1:1 Computer Learning System helps teachers prepare their students for success in the 21st century. Investigations prepared using the *EasyPrep* template combine exploration, adventure, and technology to engage students in online learning experiences that help them become self-sufficient learners, effective problem solvers, and informed decision makers. For just pennies a

day this break-through teaching technology can help any teacher improve the academic performance of their students.