

EDCompass newsletter

News and resources for educators using SMART products

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A NOTE FROM THE EDITOR

Welcome to the December issue of *EDCompass*[™] newsletter!

There has been a lot of talk lately of a decline in both the quantity and quality of students pursuing careers in science, technology, engineering and mathematics (STEM), by the media and policymakers. If you teach one of these subjects, you are tasked with approaching it in a way that keeps your students inspired to learn and keep learning. In this issue, read the [feature article](#) to find out about a dynamic program that is addressing this subject. You can also learn about a teacher who uses SMART products to reach her math students in the [SMART Showcase School profile](#), and find lesson activities to use in your science and math classes. We hope this issue will show you new ways to engage your students – sparking more interest in these areas and maybe even an increase in those who choose to pursue STEM careers.

As always, if you have any comments about the newsletter or any of the information featured in this issue, we'd love to hear from you. Please e-mail your feedback to newsletters@smarttech.com.

NANCY'S NOTES

Rich Imagery



They say a picture is worth a thousand words, and for me, that is so true. Like many people, I am constantly capturing images in my mind as my day progresses. Places I have been, people I have met and things I have done all can be vividly recalled with a bit of focus.

Not everything, of course, can be seen or done firsthand. Many of the things we experience today are on TV and online, or come from books and other publications.

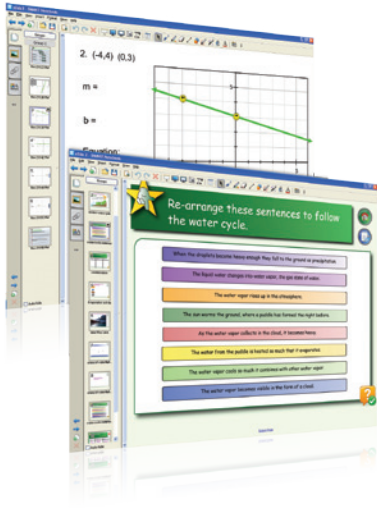
The SMART Document Camera is one of our more recent tools to encourage powerful visualization. Because of its tight integration with SMART Notebook[™] collaborative learning software, displaying any object for your students has never been easier. A simple touch on the software's document camera icon launches the capture function and a couple of simple, intuitive choices. When demonstrating a science experiment or a dissection, for example, teachers can capture a series of snapshots or videos to display in class so the focus is on helping students comprehend, not the live execution of the task. These images can then be made available for students to access after class.

At SMART, we think about how we can help you create a rich visual experience through all the tools and content we provide. SMART Notebook software supports all the popular types of file formats commonly in use so pictures, video and animation can be easily captured and shared.

Making words and images come alive is particularly important today. To see teachers using our education solutions to engage students with rich imagery – that truly is worth a thousand words.

Nancy Knowlton is the CEO of SMART Technologies.

SMART Notebook Lesson Activities



Find a comprehensive database of **K–12 lesson activities** on the SMART Exchange™ online community. The activities are correlated to local curriculum standards and created by classroom teachers or SMART’s team of curriculum resource developers.

Try one of the following SMART Notebook lesson activities during your next science or math class.

[All About Clouds](#)

Kindergarten and first-grade science students can learn about the three main types of clouds – cirrus, cumulus and stratus.

[Organizing and Displaying Data](#)

Third- and fourth-grade math students can learn how to analyze data.

[Water Cycle Review](#)

Fifth-grade science students can review the entire water cycle by labeling pictures and ordering sentences.

[The People on the Beach](#)

Sixth-grade science students can learn about the eruption of Mt. Vesuvius in AD 79.

[Writing Equations in Slope-Intercept Form](#)

Eighth-grade math students can practice writing the equation of a line in slope-intercept form when given two points on the line.

SMART Products Support STEM Instruction

SMART offers a variety of hardware and software products that help you make teaching and learning science, technology and mathematics more effective. Here are just some of the ways you can use SMART products in your STEM classes:

- Create multimedia lesson activities that make science and math concepts more memorable with **SMART Notebook software**. Develop themed science pages using a variety of background colors and images, or draw freehand shapes with the Shape Pen and have them instantly recognized and perfected.
- Engage your class with **SMART Notebook Math Tools software**, which includes math-specific features such as interactive graphing tools and handwriting recognition for equations
- Enable your students to easily create and share science and math reports using **SMART Notebook SE (Student Edition) software**. You can also use it to send them SMART Notebook files, allowing students to add their own comments to the lesson activity instead of spending time copying notes.
- Visually reinforce difficult math and science concepts and improve students’ retention of information with the **SMART Board™ interactive whiteboard**
- Assess understanding of STEM lessons instantly using the **SMART Response™ interactive response system**. You can prepare quizzes or exams in advance and ask spontaneous questions to gauge students’ comprehension at any point during a lesson.
- Use the **SMART Document Camera** to instantly display real-time images of any static or moving object onto a SMART Board interactive whiteboard for your entire class to see. Check out this month’s product spotlight for examples of how teachers are using the SMART Document Camera to teach STEM subjects.



Math Rap with Mr. Duey

What do you get when you combine long division with hip hop and the SMART Board interactive whiteboard? Student engagement, we’ve discovered.

Mr. Duey is a seventh-grade math teacher who uses the SMART Board interactive whiteboard to create educational rap music for students in elementary and middle school math classes.

Check out his latest **long division video** on TeacherTube – then you can share it with your students.

Join Us for a Webinar on 1:1 Learning Environments

On February 24, 2010, 3:00–4:00 p.m. ET, attend our webinar titled Create. Teach. Learn. Assess. Enhancing Teaching and Accelerating Learning with Technology in 1:1 Environments. You'll hear administrators talk about how they've taken student achievement to new heights in 1:1 classrooms – specific discussion items will include

- How to transform classrooms into centers of interactive learning where students are engaged and teachers are inspired
- How to improve collaboration between students through the effective use of SMART products
- How to increase student achievement by balancing teacher- and student-led learning

The webinar includes an expert panel discussion followed by an online Q & A session. Though it's designed for administrators and technology directors, teachers will find much in this session that is relevant to their practice. By taking part in this webinar, you'll receive front-of-the-line access to SMART virtual trade shows and the chance to register early for SMART's popular Learning Matters seminar at the [ISTE 2010 conference](#) (formerly known as NECC) in June.

Find registration information and details about all our webinars on our [website](#). And if you've missed any of our previous webinars, don't worry – you can watch them at your convenience with our complimentary [on-demand viewing](#).

FEATURE ARTICLE

Improving STEM Engagement



It's no secret that high school teachers throughout the United States are struggling to engage their students in science, technology, engineering and mathematics (STEM) education. As children get older, educators in many school districts across the United States witness a steady decline in student engagement and achievement in these subjects. In recent years, this trend has started to take its toll in the form of underemployment across a number of sectors. Despite the dramatic economic downturn, the U.S. Department of Labor lists advanced manufacturing, automotives, biotechnology, construction, geospatial technology, health care, hospitality and information technology as growth industries. All these industries require postsecondary education in STEM subjects. [Read the full article.](#)

SMART Response Question Sets



Find a database of [SMART Response question sets](#) on the SMART Exchange. Each set includes 10 questions that are correlated to state and provincial curriculum standards.

Try one of the following SMART Response question sets in your next science or math class.

[Variation](#)

K–3 science students can test their knowledge of variation in species using pictures of animals.

[Simple Probability](#)

Math students in grades 4–6 can test their knowledge of basic probability.

[Transport in Plants](#)

Science students in grades 4–6 can test their knowledge of transport in plants.

[Equations and Inequalities Involving Absolute Value](#)

Math students in grades 7–9 can test their knowledge of absolute value in equations and inequalities.

[Homeostasis – the Skin](#)

Science students in grades 10–12 can test their knowledge of our skin and how it functions.

SMART PD Plus



If you're based in Worcester, Massachusetts, or Atlanta, Georgia, and would like training on SMART Notebook software and our wireless slate, we are hosting a full-day professional development event just for you. The session will provide you with tips on how to integrate this product into your curriculum, add interactivity to your lessons and create engaging content. Plus, you'll receive a wireless slate for your classroom.

These PD Plus sessions will be held on February 18, 2010, in Worcester and February 25, 2010, in Atlanta. Visit our [website](#) for more information on these and other upcoming events in your area.

Coming soon

In the new year, we'll be introducing many professional development opportunities for you and your peers. To learn more, be sure to read the March issue – the pages will be packed with articles and tips for finding new ideas and inspiration for your teaching.

This Month's Poll

Which learning tools are on your most wanted list for teaching STEM subjects?

SMART Notebook Math Tools Ready to Order

If you teach math, you'll be excited to learn that SMART Notebook Math Tools software is now available to order. This add-on to SMART Notebook software allows you to create, explore, evaluate and solve interactive math lessons all within a single application, making math lessons more effective and engaging. The new software has a large selection of dynamic math tools, including an advanced equation editor and a custom graph builder. You can manipulate shapes, use interactive measurement tools and even launch your Texas Instruments brand emulator from within the software.

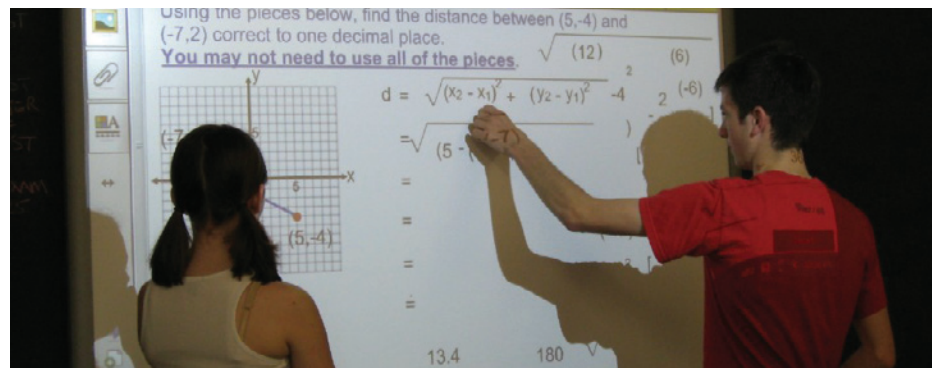


Dawn Lunt, lead teacher and math specialist at the School of Business, Finance and Entrepreneurship in Rochester, New York, spent the past few months trying the SMART Notebook Math Tools beta. When asked about her experience, she said, "SMART Notebook Math Tools is unbelievable – I absolutely love it. The equation editor is what I've been wanting for the past three years and I can't wait to start using it."

To find out more about how SMART Notebook Math Tools enables you to create and explore interactive math content within your SMART Notebook lesson activities, visit the [product page](#).

SMART SHOWCASE SCHOOL PROFILE

Math Is Something to Sing About at Port Hope High



Sandy Fischl knows that when students can sing a quadratic equation, she's done her job. Singing isn't exactly a requirement in Fischl's math classes at Port Hope High School in Ontario, Canada, but learners have to be prepared to be creative, do a little experimenting and get interactive. Because that's how Fischl thinks students learn math best. [Read the full article.](#)

Teachers Love Their SMART Document Cameras



Whether they are demonstrating a detailed frog dissection or maneuvering math manipulatives, teachers are raving about the things they can do with the **SMART Document Camera**. What makes the SMART Document Camera such a great teaching tool? That's simple – supreme functionality and ease of use.

With the SMART Document Camera, teachers can project any static or moving object onto a SMART Board interactive whiteboard for the entire class to see. And because the document camera integrates with SMART Notebook software, teachers can also capture images directly into the software, creating digital content they can add notes to, manipulate and save for later use – all without leaving their lesson activity.

This unique functionality is what makes the SMART Document Camera a product that Oak Park Unified School District teacher Winnie Litten uses every day.

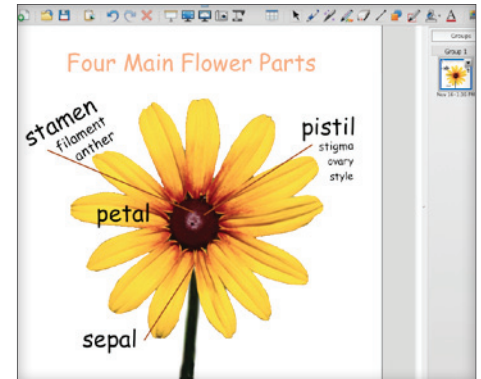
“The beauty of the camera is that I can share whatever I want as soon as I want to share it. We all can have our eyes on the same object at the same time, reaching conclusions together through discussion of a shared experience. It is a powerful way to increase the rate of comprehension, which then allows me to teach them more or at a deeper level.”

Litten, who has been teaching biology for 21 years, loves that class dissections are easier now. “As we were dissecting fetal pigs, if students isolated different organs well, they would bring them up and I would put them under the camera so that other students would know what to look for or would see an excellent example. I could demonstrate the proper cut across the heart or kidney so that they would dissect it correctly.”

James Maxlow, lead technology curriculum integration specialist (TCIS) for Newport News Public Schools, shares Litten's enthusiasm for the SMART Document Camera. He particularly appreciates how the product provides students with large, real-time video of demonstrations and enables them to model processes and activities for their peers.

With benefits like these, what teacher wouldn't love the SMART Document Camera?

SMART Document Camera Tips



James Maxlow, lead TCIS for Newport News Public Schools, is overflowing with ideas for using the SMART Document Camera to teach math, science and many other subjects. He shares some of his favorites here – try them out in your classroom:

- Analyze and label the parts of a flower or another scientific object – then save the image for students to use when they review materials
- Model math manipulative usage using the document camera while students follow along at their desks using their own manipulatives
- Have a student write on the SMART Board interactive whiteboard while the document camera displays another student's math paper, showing multiple ways of solving a single math problem
- Allow students to edit each other's writing digitally, creating a whole-class learning experience
- Examine the characteristics of historical artifacts, such as coins, sculptures, tools or documents
- Highlight and annotate passages in books for the whole class to see
- Demonstrate artistic techniques, such as specific kinds of brush strokes or clay modeling methods
- Turn any book into a big book for whole-class reading

SMART Document Camera Keeps Getting Better

Soon, teachers will have even more to love about their SMART Document Cameras. We're working on some improvements and new features you'll learn about in the February edition of *EDCompass* newsletter.

We can tell you now that the new SMART Document Camera will have even higher resolution and a faster frame rate to give your lessons more impact. It will also be better integrated with SMART Notebook, making it even easier for you to use it in your lessons, and will feature a new USB hub that enables you to connect your document camera to additional accessories. The SMART Document Camera will also introduce a whole new way for you and your students to interact with content. We look forward to sharing these new features – and more – with you in February.

Up Next

Watch for the next issue of *EDCompass* newsletter where we highlight SMART's content and resource offering. We'll also tell you more about SMART Notebook Express™, our new web-based application that allows anyone to view SMART Notebook software files and use some of the most popular features of SMART Notebook – without having to download any software.

Why Teachers Choose the SMART Document Camera

Oak Park Unified School District offers an initiative through which participating teachers are supplied with a SMART Board interactive whiteboard, a SMART Response interactive response system, an AirLiner™ wireless slate (now called the SMART Slate™ wireless slate) and a SMART Document Camera. Before standardizing, Oak Park asked teachers to choose their favourite document camera from three different brands. Sixty-four participating teachers voted and unanimously chose the SMART Document Camera for their classrooms. We spoke with Jane Mintz, director of educational technology for Oak Park, to learn more about this choice.



EDCompass How did the district decide to buy the SMART Document Camera?

Jane We had a showdown between the document cameras. There were three models competing, one of which was the SMART Document Camera. Each model was demonstrated, and teachers had the opportunity to come up and play with them. We had people bring science manipulatives, math manipulatives – they really wanted to run these three document cameras through the paces. Then each teacher went to a station, without conferring with other teachers, and had to say what their choice was and why. It was 100 percent unanimous for the SMART Document Camera.

EDCompass Why did teachers prefer the SMART Document Camera?

Jane The number one reason cited was that the software is built into Notebook. SMART Notebook is their meat-and-potatoes, go-to application that is on in their classrooms pretty much all day long. Plus, they like the fact that, on the fly, if they want to put a student work sample under the camera, all they have to do is click that nifty icon. They also like that they can operate the camera from the on-screen tools – that was huge for them.

EDCompass How are teachers using their document cameras?

Jane Teachers are using them to show three-dimensional objects, live demonstrations and still documents, and to capture worksheets into Notebook. For example, in a lesson on rock types, teachers actually took the rock samples, put them under the cameras, captured them and saved them – now they're used as part of interactive lessons like matching games.

EDCompass Are teachers happy with their choice?

Jane They totally and completely love them. It comes back to ease of use and the power of being able to have an example on a 77" board. It is a very powerful tool for our teachers. It's probably – next to the SMART Board – the tool that they love the most.