ORANGE COUNTY
BOARD OF EDUCATION

AGENDA ITEM ABSTRACT

Meeting Date: July 9, 2012

AGENDA ITEM No. 12-07-10

ACTION ITEM: (Y/N) Y

SUBJECT: Discovery Education Science Techbook Software Purchase Approval

INFO. CONTACT: Dr. Denise Morton, Angie Veitch **PHONE:** (919) 732-8126

ATTACHMENTS:

1. Techbook Background Information
2. Comparison of Science Textbook versus Digital Resource purchase
3. About Discovery Education
4. Supporting Teacher Success: Resources for Administrators

PURPOSE: To provide the Board of Education for their review and discussion, a recommendation for approval of the purchase of Discovery Education Science Techbook software to support grades K-12 science instruction as part of the Orange County Schools digital conversion.

BACKGROUND:
The Science Techbook was developed by Discovery Education to address the North Carolina Standard Course of Study and specifically the new common core standards. It provides a real time assessment component that measures student progress and it recommends individualized resources for students to help reinforce classroom science instruction.

In May of 2012, Orange County Schools elementary, middle and high school science teachers were asked to participate in a focus group to hear information about the newly developed Discovery Education Science Techbook.

The Discovery Education presentation provided a visual overview of the software to the teachers and responded to questions on the software, training components, virtual and hands on labs as well as describing specific details of the techbook. The response from the teachers was extremely positive and in their feedback to district staff overwhelmingly indicated they would like for the district to purchase the science techbook to provide K-12 science instruction.

According to Discovery Education, five school systems in North Carolina have purchased the Discovery Education science techbook to begin using the 2012/2013 school year. For more information on Discovery Education and Techbook, please visit www.discoveryeducation.com.

FINANCIAL IMPACT: Total price for six year purchase agreement for the K-12 Science Techbook is $242,599. The cost of the software will be paid from the following sources: textbook dollars, and instructional supply dollars. The price below is for the first year with the remaining balance paid the following two years.

Year 1 2012-2013	Textbook funding:	$53,678.00
	Instructional supply funding:	$30,000.00
	Total:	$83,678.00

Year 2 2013-2014: $79,460.50 (due August 1, 2013)

Year 3 2014-2015: $79,460.50 (due August 1, 2014)

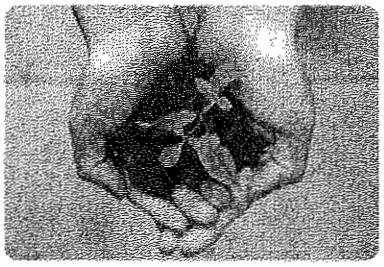
- Costs per student for the Science Techbook is $5.61 per student per year or $33.70 over six years.

The attached analysis shows a comparison between purchasing traditional textbooks as compared to purchasing digital resources. It is evident that purchasing digital resources instead of the traditional textbook is a more cost effective approach.

RECOMMENDATION: The Superintendent recommends that the Board of Education review, discuss and provide guidance to staff on the purchase of the Discovery Education Science Techbook. The Superintendent is recommending the purchase of the software package known as Techbook.

Techbook Background Information

It's How Students Learn, It's Easy to Implement, It Gets Results



Built from the ground up to address state and Core Standards, Discovery Education SCIENCE TECHBOOK is the new primary instructional resource for elementary and middle schools. Dynamic, interactive resources support the 5E Model of Instruction and capture digitally native students' attention.

- Lively, interactive resources that capture the attention of students
- Custom, in-person professional development builds capacity to ensure effective implementation
- Cost-effective and efficient
- Organized around the teacher-friendly 5E Instructional Model and integrates the nature of science and inquiry into every phase of learning
- Designed around big ideas and essential questions
- Customized to your state standards
- Student resources for ALL learning styles
- Key teacher resources
- Up-to-date content
- Real-time feedback

Comprehensive resource list designed to meet all state and core standards

Teacher Resources

- Printed Teacher's Guide
- Lesson Plans
- 5-Minute Preps
- Hands-On Activities
- Best Practices Videos
- Assignment Builder
- Assessment Manager
- Virtual Lab Teacher's Guide
- Companion DVD
- Trainer's Toolkit
- Professional Development

Additional K-2 Student Resources

- Videos like Sid the Science Kid
- Fun-damentals
- Reading Passages and eBooks
  - (Read Alones and Read Alouds)

Student Resources

- Leveled Reading Passages
- eBooks with Audio Support
- Spanish-Language Reading Passages
- Interactive Science Simulations
- Hands-On Labs and Activities
- Video Library
  - Video Segments
  - Full-Length Videos
- Interactive Glossary
- Assessments
  - Unit Level
  - Concept Level
  - Brief Constructed Response
- Take-Home Review
- Assignments

For additional information visit: www.discoveryeducation.com

COMPARISION OF PURCHASING SCIENCE TEXTBOOKS VS DIGITAL SCIENCE CURRICULUM				
Traditional Science Textbooks and Kits				
Cost of Science Textbooks and Kits	Copies	Cost	Total	
Elementary School Textbooks	0	0	0	
Middle School Textbooks	1800	$74.00	$133,200.00	
High School Textbooks	1800	$75.00	$135,000.00	
		Textbooks Total	**$268,200.00**	
Middle and Elementary Schools Science Kits	Per Year		$60,000.00	($360,000 for 6 years)
		Total K-12 Traditional Science Textbooks and kits	**$328,200.00**	
Digital Science Curriculum				
Cost of Discovery Education for 6 years K-12			**$242,599.00**	

ABOUT DISCOVERY EDUCATION

Who We Are

Discovery Education transforms classrooms, empowers teachers and captivates students by leading the way in providing high quality, dynamic, digital content to school districts large and small, rural and suburban and everything in between.
Accelerate student achievement in your district by capturing the minds and imaginations of students with the fascination of Discovery, tapping into students' natural curiosity and desire to learn. Discovery Education offers a portfolio of opportunities for districts to meet students where they want to learn in the digital age. With award- winning digital content, interactive lessons, real time assessment, virtual experiences with some of Discovery's greatest talent, classroom contest & challenges, professional development and more - Discovery is leading the way in transforming classrooms and inspiring learning.

"It is essential for students to have multiple and varied exposures to content in order for them to truly learn and understand it. Discovery Education is an invaluable resource in this respect, helping me to provide interactive media, visuals and videos that depict things that these students may never be able to see or be exposed to otherwise."
Nicole Wagner, Teacher, Tavan Elementary

Our Products & Services

Discovery Education offers a breadth and depth of digital media content that is immersive, engaging and brings the world into the classroom to give every student a chance to experience fascinating people, places, and events. All content is aligned to state standards, can be aligned to custom curriculum, and supports classroom instruction regardless of the technology platform. Whether looking for a digital media library service, an implementation to help you transition your classroom to a 21st century environment or to move completely to replace textbooks with digital resources, Discovery Education offers a continuum of solutions to meet your district's specific needs. In addition, we offer real-time assessment services and a variety of professional development to ensure effective implementation in the classroom. You know your needs. We know our services. Together we can create an effective solution.
And, add the vast number of additional classroom instruction opportunities available such as virtual experiences, compelling Discovery talent, free lesson plans and materials, and a variety of contests and challenges and with Discovery Education teachers are truly able to give students opportunities to soar beyond the traditional textbook for endless possibilities.

Learn More:

- Interactive digital textbooks
- Engaging standards-aligned content
- Comprehensive professional development
- Assessment Services
- Virtual Experiences
- Learning Communities

"They are always thinking about what are your needs first. It's not about trying to push any agenda on the district at all. It's really about what are the district's needs."
Neva Moga, Instructional Technology Specialist, Milwaukee Public Schools

What We Achieve

Implementation of Discovery Education impacts the way an educator teaches, providing them the digital content and the professional development to transform classroom instruction into an immersive, experience that inspires a student's natural curiosity. Discovery Education impacts the way students learn, breaking down barriers and moving beyond static textbooks to a digital delivery they already embrace. However, accelerating student achievement is the ultimate result we all want to reach. Discovery Education has worked with school districts across all sizes and demographics and consistently delivers results. We evaluate our services on both the qualitative (student engagement, teacher satisfaction and impact) and quantitative measures (test scores). For example:

- Charlotte Mecklenburg School District (CMS): Dr. Peter Gorman's (Superintendent CMS) goal was a 3-5% gain in science scores over a very short time frame. A pilot program using Discovery Education Science led to double-digit gains in science scores year-over-year in CMS. Composite retest scores on North Carolina's science end-of-year exam for grades 5 and 8 increased by 26 points.

Hear from your peers

"We have really transformed the environment of the classroom and the processes of instructional delivery. We have moved it to the next level."

Dr. Willie Giles, Deputy Superintendent, Indianapolis Public Schools

Supporting Teacher Success: Resources for Administrators

Many teachers embrace Discovery Education Science Techbook and implement with ease. However, questions and concerns can surface leaving a Building Principal or Assistant Principal on the front line to respond. Below are a list of frequently asked questions, background information and potential probing question(s) that may be appropriate to probe deeper into the question or concern and begin the process of resolution.

Question or Concern	Background Information	Potential Probing Question(s)
We do not have the bandwidth to implement Discovery Education Science Techbook.	There are two options for viewing assets: streaming or downloading. Streaming live from the site does run the risk of encountering buffering issues during play. Similar to what is experienced playing a YouTube video. During full, day one training, a Discovery Education Professional Development Specialist models and provides hands-on support on how to download assets, which helps them avoid buffering issues. Reporting tools in the Admin Account shows the number of assets downloaded Vs streamed, but building and by individual teacher. Webinars on how to generate and use the reports is offered twice a month at no charge. Follow this link to join one - http://teachers.discoveryeducation.com/professionalDevelopment/	How are you viewing or playing the assets? Did you download the assets in advance?
We do not have enough computers to implement Discovery Education Science Techbook.	Teachers can successfully implement Techbook with a wide range of technology access from presentation computer (1 computer with LCD projector) to one-to-one computing and everything in between. During the second full day of training we walk participants through implementing Techbook with a variety of technology access. Subsequent days of training also address how to use Techbook as station rotation, which includes hands-on activities and much more. Videos of classroom implementation with a variety of technology usage can be found at the Techbook website. Click the link below and scroll down to the Mr. Lance videos: http://www.discoveryeducation.com/administrators/curricular-resources/science-techbook/	How can you be successful with what you have? How are you using cooperative learning in your lesson planning? Would professional development focused on the exact technology scenario in your classroom be of interest to you?
The same video is used in more than one concept or unit.	Our content team sifts through an enormous amount of curriculum materials in an effort to find THE BEST asset to teach a concept. Occasionally an asset is so good we can repurpose it in another lesson or unit. Viewing an asset again with a different purpose can be a powerful instructional opportunity building on	How is the asset used in multiple places? What is the quality of the asset? Is it engaging to students? What is the intention or purpose

Question or Concern	Background Information	Potential Probing Question(s)
	background knowledge and re-engaging students with an explicitly stated goal for reuse. It's all about the instructional strategy being used in conjunction with the digital asset, not the asset itself. Caution: sharing an asset without a purpose or goal can result in reduced engagement.	given for the asset?
There is not enough content area reading embedded in the Discovery Education Science Techbook.	Content in Techbook is provided through multiple means including reading passages, images, videos, virtual labs, animations, simulations, explorations, songs and much more. Rather than one author or voice found in a traditional textbook with information laid out in a linear fashion, Techbook requires students to synthesize and apply information from multiple sources. It strips away the traditional structures of textbooks and creates a three dimensional learning environment with deeper, richer opportunities for critical thinking which is the heart of content area literacy. During the first full day of training, the Process Skills Library found in the Teacher Center is emphasized. The Library is a powerhouse of resources for critical thinking and application of science content.	What is our vision for science instruction in the 21st century? What is the level of critical thinking involved the instructional activity? Have you used any of the materials from the Process Skills Library? How can the multi-media resources available build student background knowledge and vocabulary to tackle complex text?
Why are PowerPoint presentations (PPT) not built out for me?	Techbook includes a brief PPT called the 5-Minute Prep, which is intended for teachers to assist them in reviewing/developing their scientific knowledge prior to lesson planning. However, it has come to our attention that teachers need a quick and fluid way to demonstrate or share multiple assets. Jumping into the Techbook or a folder on their desktop for an asset disrupts fluid, whole class instruction (which is where most teachers begin to implement Techbook.) Possible Supports: • The district has internal staff creating PPTs that will be shared with teachers. • Teachers need professional development in creating multi-media presentations.	Would additional professional development and/or time to create a PPT for a future unit be helpful? Have you investigated the resources being developed by the Brevard Science Department?
There are too many resources to use and planning takes too much time.	Good planning is a part of effective instruction. Assets should be reviewed and downloaded before use, which does take time. However, the Model Lesson, a ready-made lesson following all of the five Es, is available. Teachers new to Techbook are encouraged to use the Model Lesson and customize later as they become more familiar with this fabulous tool. Secondly, working collaboratively can dramatically reduce planning time. Teachers can share assets in their My Content, a favorites or bookmarking tool making it easier to download the assets.	Are you using the Model Lesson? How could you work collaboratively to reduce the work load? How are you using your planning time in Techbook?

Question or Concern	Background Information	Potential Probing Question(s)
	Given that some teachers want PowerPoints with embedded media in them for whole class instruction, teachers can each take a unit or concept and share. Again dividing the work. Finally, it is easy to become lost in any digital resource. Navigating and clicking as items of interest pop up. It is helpful to create boundaries and clear goals. For example, I am going to look at digital resources for 15 minutes and select an asset to engage my students and stop.	
Where can I get help?	Discovery Education is committed to high-quality customer service. Teachers can speak directly with a customer support specialist to receive technical support by calling 1-800-323-9084 #1. In addition there are video tutorials under the Help Menu within the Techbook. Click http://help.discoveryeducation.com/support/?code=HUB	Have you tried calling customer support? (Be prepared to share your username and password.) Is there a Help feature built into Techbook?