



Fairfax County Public Schools

Discovery Education
Professional Development Implementation Overview

Introduction

Discovery Education Professional Development (DEPD) is a comprehensive, research-based training and support model that has proven to **significantly improve** practice, and lead to dramatic gains in student achievement. From administrators, to instructional coaches, to teachers, and students DEPД helps participants integrate digital content and technology into classrooms, curricula, and administrative practices. Discovery Education is dedicated to partnerships that meet the needs of 21st century educators and learners as they strive to successfully integrate technology, digital content, and high yield instructional strategies.

Professional Development Partnership Goals:

- Academic Excellence for All Children
- Increase Student Engagement & Achievement
- Build Teacher Capacity & Preparedness

Instructional Goals:

- As a supplemental curriculum resource, enhance the existing science curriculum for Fairfax County Public Schools through the implementation of Discovery Education Science Techbook to promote increased teacher and student content knowledge, engagement and critical thinking
- Highlight and connect content area literacy routines and digital resources aligned to FCPS objectives, which begin to build the foundation for inquiry based learning
- Implement the 5E instructional model, a research-based, recognized framework that provides coherence to instruction and promotes deeper understanding of science concepts

Models of Delivery:

Multiple delivery options offer the flexibility schools and districts need to customize their professional development experience. Opportunities include traditional workshops, job-embedded approaches, conference-style events as well as online learning. They are designed to meet the needs of administrators and appeal to participating teachers.

- **In-Person Training:** Discovery Education Professional Development in-person learning opportunities empower participants with a rich and relevant learning experience. These learning experiences can be provided through a multi-day academy, a six-hour course, a half-day session or flexible scheduling customized around the complexity of the school day. One Discovery Education Professional Development Specialist can support the learning needs of up to 20 educators at any given time over the course of a 6-hour day.

In person support allows the Discovery Education Professional Development team to leverage the power of interaction, collaboration and observation. The team also incorporates the partner's instructional environment to provide a relevant and engaging learning experience. Each experience is carefully designed to meet the identified needs

of the group and can utilize direct instruction, guided exploration and model lessons to build a solid foundation of research based instructional strategies for each participant.

- **Conference-Style Days of Discovery:** A Discovery Education Day of Discovery consists of an informative and inspiring, conference-style day of professional development. Designed for larger audiences, Days of Discovery can provide an opportunity for educators to gain a broad view of innovative teaching and learning. Participants can choose from a variety of professional learning topics or focus on a specific content area.

Days of Discovery are designed to be flexible as well as dynamic. Our educational partners can choose to begin the day with an engaging keynote or dive right into conference sessions. A conference style event allows participants to design a day of learning that could be broad in scope, celebratory in nature, and interactive while still focusing on key educational goals.

- **Webinars:** Webinars or web conferencing provide an online forum for real time professional learning. Using high quality video and integrated voice conferencing, webinars offer both auditory and visual interactive experiences for all participants. Accessible from multiple locations, webinars could be organized for a single attendee, small groups of educators, or large audiences. Discovery Education webinars enable participants to learn specific processes, collaborate, consult or receive continuous support to enhance professional learning.
- **Classroom Demonstrations:** During Classroom Demonstrations a Discovery Education Professional Development Specialist spends the day in up to six classrooms delivering media enriched lessons and activities while teachers observe the Specialist using high yield instructional strategies. After the demonstration, teachers and the Specialist briefly discuss the lesson and implications for future lesson design and delivery.
- **Instructional Support:** Instructional Support is just in time, job-embedded support for teachers. Participants work directly with a Discovery Education Professional Development Specialist to apply knowledge and skills learned during whole group learning sessions. Instructional Support is a natural follow up to full-day, in-person learning sessions designed to bridge the gap between theory and practice, reduce implementation barriers, increase fidelity and reinforce efforts.

Instructional Support can be customized to meet the goals and needs of the teacher, students, and/or school. Typically, a DEPD Specialist can support four to five educators per day. It is recommended an educator participate in three or more follow up sessions over a six-month term for maximum results.

- **Model Lessons:** Model Lessons are a job embedded approach to professional learning which include four phases: planning, execution, reflection and application for up to ten participants. Educators begin by participating in the discussion of the lesson planning process during a pre-conference. Then participants will observe an engaging lesson that includes high yield instructional strategies, current core curriculum, and digital media delivered to a classroom of students. During the post-conference, participants will reflect on the experience and share feedback on effective instructional practices, tools, and student interactions.

Following the model lesson, educators will participate in a hands-on workshop that will focus on the application of high yield instructional strategies and the use of digital media to increase student engagement. Model lessons are not available with initial license purchase.

Professional Development Plan for Fairfax County Public Schools

Audience	Professional Development Components
<p>Administrators</p>	<p>Leading the Digital Conversion Through this hands-on experiential professional learning session, Fairfax County School District administrators will learn to support teachers, students and parents by managing and leading the digital conversion. As a result of professional development participants will be able to:</p> <ul style="list-style-type: none"> ▪ Lead, monitor, celebrate and support the implementation with fidelity ▪ Review reporting components to proactively support data driven decision making in the digital classroom transformation ▪ Manage and support educator questions and concerns about the implementation, such as bandwidth, equipment and instructional planning

Fairfax Teachers**Engage, Explore, Explain with Discovery Education's Dynamic Digital Content and Tools!**

Discovery Education's dynamic digital content and corresponding tools are built on the 5E instructional model, a constructivist learning cycle that helps students develop their own understanding from experiences and exposure to new ideas. During this professional development experience, educators will learn to utilize Discovery Education's dynamic digital content with a special emphasis on engaging students by providing opportunities for student exploration and elaboration. In addition, teachers will learn how to involve students in authentic oral and written activities that require students to explain their new understandings across the curriculum.

Professional development experiences are designed to simultaneously develop science content knowledge, pedagogy, and technology skills through presentation of theory, modeling, low-risk practice with feedback and collaborative dialogue. Our highly trained professional development specialists optimize the technology available in your classrooms.

A recommended sequence for activities includes three days of in-person training for each teacher:

Day One: Getting Started with Techbook

Let's get started! Participants will learn how to use the 5E model of science instruction to promote deeper levels of science understanding.

Participants will be able to:

- Utilize the key components of Discovery Education Science Techbook.
- Demonstrate the technical skills required to find and utilize assets found in DE Techbook.
- Identify at least three high leverage instructional strategies to use with media.

Day Two: Maximizing Student Engagement with DE Techbook

Uncover the power and potential of the Techbook Student Center! Participants will learn how to promote and differentiate student learning through the use of Discovery Education tools such as Writing Prompt, Assignment Builder and Assessment Manager.

Participants will be able to:

- Create a classroom of students for the purpose of assigning materials directly to individuals and classes.
- Create a media infused writing prompt.
- Create a media infused quiz, which can include both questions from a bank as well as those that are self-created.
- Create a digital assignment that aggregates several pieces of media together with instructions for each piece.

Day Three: Centers-Based Teaching & Learning in a DE Techbook Classroom

Experience the future now! Participants will be immersed in a Discovery Education Science Techbook experience. Using a center-based approach, participants will experience the 5Es of a model lesson first hand, by moving through a variety of stations designed to build student content knowledge. Directions, management, resources and planning techniques for centers are shared. Next, educators will create their own centers using materials, planning template and.

Participants will be able to:

- Explain how the 5E instructional model builds conceptual knowledge and deepens understanding.
- Learn management techniques for planning and implementing a centers-based instructional model.
- Select materials from DE Science Techbook and create a centers-based lesson.

Community and Family

Family Science Night Live!

All hands on deck for this informative, fun-filled, learning experience for parents, students and faculty. Hands-on science stations will be set up for students to engage in and explore while parents and guardians are presented with information regarding the use of Discovery Education Science Techbook as an instructional tool. Community members will learn how they can access Discovery Education’s rich digital resources at home and how they can support the use of these educational resources for homework and projects.

EVALUATION PLAN

Discovery Education formative online anonymous surveys administered throughout the professional development experience will include:

- Satisfaction with initial professional development experience
- Participant perception of use of new skills and content knowledge
- Participant perception of organizational support and need for further professional development
- Participant perception of increased student engagement and achievement

IMPLEMENTATION SUPPORT PLAN

The Discovery Education Science Techbook Instructional Implementation Team provides a rich variety of ongoing instructional supports to educators. The implementation support plan includes:

Product Update Releases

Access to product updates will ensure your school has access to the latest content, features and functionality as they become available.

Live Phone Support

Speak directly to Discovery Education technical and professional development experts to answer any question.

Webinars

Enhance your skills by attending one of many free webinars on topics like Making the Literacy Connection in Science and Reinforcing Process Skills with DE Science Techbook. Register today at links.discoveryeducation.com/sciencetechbook

Discovery Education Network (DEN) Science Blog

Learn integration ideas and best practices from our science specialists as well as other educators using the Discovery Education Science Techbook in their classrooms.

[Blog.discoveryeducation.com/science](https://blog.discoveryeducation.com/science)

Monthly Lab Report

Discover ways to use the Discovery Education Science Techbook from peers and learn about new content updates, promotions, contests and more.

Monthly Newsletter

The monthly Discovery Education Science Techbook Newsletter is designed to serve as an informational source for educators.

DEN SCIcon

Expand your professional community and learn new strategies for using digital content in science during this long, virtual conference.

Seasonal Science Streams

Expand your students in the wonders of hands-on science through live broadcasts with seasonal themes.

Summer Science Institute

Network with educators from all over the country during this intensive, hands-on professional development experience (attendance will be determined by a competitive application process).

ADDITIONAL IN-PERSON COURSES AVAILABLE TO SUPPORT TECHBOOK IMPLEMENTATION:**Driving Student Achievement with Robust Assessment & Timely Intervention**

Discovery Education Science Techbook includes a robust assessment management tool designed to help teachers create custom, standards-based, concept-based assessments. Teachers can assign concept-aligned practice items to one student, a group of students or an entire class. Teachers can also review class assessment results on one or multiple assessments to look for patterns in the data. Teachers can assign an assessment with items pre-selected from all the concepts within a unit they are teaching. Reporting features allow teachers to view assessment results for an individual student on a single or multiple assessments and assign recommended remediation resources. During this full day session, participants will learn to develop formative and summative assessments using the 5E model. Participants will also learn to use the assessment management tool to its fullest potential to drive instruction and student achievement.

- Create custom, standards-based assessments.
- Access and utilize a variety of assessment reports to reflect on instruction and identify patterns in the data.
- Use assessment data to drive resources to enhance, reinforce, and remediate instruction.

Science 2.0

This session is designed to increase student engagement and performance through purposeful integration of web 2.0 tools into a 5E lesson. Principles of universal design for learning are put into action, using web 2.0 tools in conjunction with digital media to provide multiple means for students to represent and express their scientific understanding. Participants will learn how to use basic collaboration tools to foster student critical thinking, engagement and science content knowledge acquisition using resources from Discovery Education Science Techbook. Sample projects and lesson examples will be shared. Time is provided for participants to create their own projects and lessons with support from a Discovery Education Professional Development Specialist.

- Explore a variety of tools to foster purposeful collaboration, creativity and critical thinking in a 5E science lesson.

- Download and manipulate resources from DE Science Techbook for incorporation in student projects.
- Select at least two tools and plan a media-infused student project incorporating both tools.

Read, Write and Think Like a Scientist (2 day course)

When approached from a stance of inquiry, reading and writing develop literacy skills as well as content knowledge and scientific thinking. One serves the other. This reciprocal relationship is fostered with rich text, digital media, interactive writing and high-yield reading strategies leading to critical analysis skills applicable to written text, science labs, media and more.

- Approach reading and writing in science from a stance of inquiry.
- Model scientific investigation with a variety of materials including reading passages, contemporary news articles, charts/graphs, hands on activities, science labs, and digital media.
- Embed content area literacy routines within each lesson.
- Cite specific textual evidence to support analysis of science and technical texts.
- Write scientific explanations, which include a scientific claim supported by multiple sources of evidence and tied together with logical reasoning.

Embedding Process Skills with DE Science Techbook

Scientific investigation is central to exemplary science instruction. Participants will develop instruction that builds students' scientific reasoning skills by utilizing the tools and resources in the model lesson. The skills and dispositions needed for scientific inquiry are emphasized. Participants will see how small changes in science instruction can allow students to grow their scientific reasoning and their research skills. Participants will leave the workshop with the skill set to continue to create stronger, inquiry-driven science instruction.

- Explain the importance of scientific investigation and process skills and why it needs to be embedded in every unit and concept.
- Identify critical skills for inquiry and explicitly address them in each unit or concept.
- Utilize tools in the process skills library effectively

Digital Storytelling in Science

Digital storytelling is a creative way for students to demonstrate understanding of a scientific concept. Digital storytelling allows you and your students to combine text, images, audio, and video to tell stories to make scientific concepts STICK. Learn why and how to engage your students in higher levels of scientific thinking as they create movies to show their level of understanding about a science concept. Digital Stories can come in a variety of formats (poetry, riddles, documentaries) and can be produced in a variety of tools. Use your PC, MAC or even a mobile device to create simple to sophisticated digital stories to save to the cloud. We will explore ways to plan, manage, and assess your students to ensure digital science storytelling success.

- Explore the art of digital storytelling and ways to use it can be used in a 5E lesson.
- Combine text, images, audio, and video to create movies using tools such as PhotoStory, iMovie, Movie Maker and more.

- Explore the literacy component of movie making through the use of storyboards, script writing, and recording narration.
- Able to plan, manage and assess student digital storytelling projects.