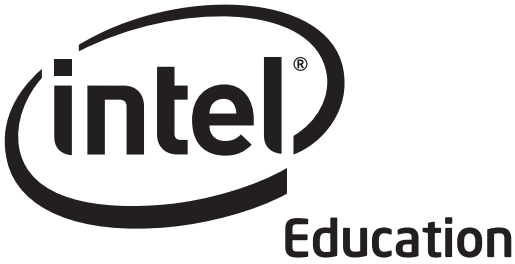

Intel® Teach Program
Leadership Forum

Version 3.5

Welcome to the Intel® Teach Program Leadership Forum.

From innovative approaches and pedagogy to integrating new technologies, school leaders like yourself are a critical component of educational improvement, preparing the next generation to succeed in today's knowledge economy. Research underscores the important role leadership plays in the successful integration of technology into teaching and learning. Therefore, on behalf of Intel, I thank you for taking part in the Intel® Teach Leadership Forum.

Since 1999, the Intel® Teach Program has helped over 5 million educators in more than 40 countries gain essential skills in using technology to enhance student learning and higher-order thinking skills. Designed by educators and offered in collaboration with governments, our programs give you critical tools for teaching 21st century skills.

As a fellow leader, I know that innovation involves taking calculated risks but yields big rewards. Your participation in the Intel Teach Program brings that same spirit to your schools, where I know your teachers and students will be the true winners.

Best regards,

Paul Otellini
Chief Executive Officer
Intel Corporation

Introduction

Welcome to the Intel® Teach Leadership Forum

Like you, Intel is passionate about education; we know education is the foundation for innovation and opportunity. On behalf of Intel, we appreciate your commitment to the future of your teachers, students, and profession as an educational leader.

Districts and schools today, more than ever, need to use technology as a tool to enhance teaching and learning. This forum helps you plan, promote, model, and support the effective integration of technology as a learning tool. We thank you for investing your time and energy into this forum, and for your commitment to preparing your teachers and students to be successful in today's world.

Intel® Education Initiative

Working with educators from around the world, Intel is preparing today's young people to flourish in the knowledge-based economy of the 21st century. Dedicated teachers nurture the innovative potential in students—preparing young people to step into a world where understanding technology can help shape success. Young people today are entering a global economy where they will be challenged to analyze information, collaborate, and communicate ideas using an ever-changing array of technology. Our goal at Intel is to help K–12 teachers be more effective educators by training them to integrate technology into instructional planning and teaching.

As part of our network of educational leaders, your involvement and support of teachers play an integral role in helping teachers prepare students to succeed in today's global community. The Intel Education Initiative consists of several programs that serve teachers in elementary and secondary education, higher education, and community education:

- Intel® Education Web site
- Intel® Teach Program
- Intel® Learn Program
- Intel Computer Clubhouse Network
- Intel Sponsored Science Competitions:
    - Intel Science Talent Search (Intel STS)
    - Intel International Science and Engineering Fair (Intel ISEF)

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Module 2: Exploring Best Practices and Resources

Module 3: Introducing Web 2.0 and New Technologies

Module 4: Developing Your Action Plan

Appendix

Use of the Curriculum and Resource CD

In the Intel® Leadership Forum curriculum manual, icons provide guidance throughout the activities. A glossary of educational and technical terms is also available on the Resource CD.


Save your work


View resources on the Resource CD


View resources on the Web


Note a helpful hint, idea, tip, or warning


Discuss or share with your colleagues


The Resource CD is an integral part of the training and is used throughout the forum. Forum tools, files, and the Intel® Education Web site can be accessed through the CD Index or directly through the folder structure.

Logon Information

Use this page to write down the logon information for Web sites used in the Forum. Refer to the list as needed.

Blogging Site

My blog URL: _____

Logon ID: _____

Password: _____

Wiki Site

Forum wiki URL: _____

Logon ID: _____

Password: _____

Online Collaborative Web Site

Collaborative Web site URL: **http://docs.google.com**

Logon ID: _____

Password: _____

Intel® Education Initiative: K-12 Teaching Tools

Thinking Tools URL: **www.intel.com/education/tools**

Visual Ranking Tool URL: **www.intel.com/education/visualranking**

Teacher ID: _____

Password: _____

Intel® Teach Course Updates Site: Leadership Forum v. 3.5

Course Updates site URL: **http://teachonline.intel.com/courseupdates**

Login ID: _____

Password: _____

Getting Started

Introducing the Forum

The Intel® Teach Leadership Forum helps education leaders plan, promote, model, and support the effective integration of technology as a learning tool. The Intel® Teach program presents a major focus shift from simply using technological tools for integrating technology to improving teacher effectiveness in support of improved student achievement. The Leadership Forum focuses on specific, concrete steps you can take to support this initiative and gives you hands-on experiences with technology, resources, and standards.

Essential Question

How can educational leaders support teacher effectiveness to improve student achievement?

Objectives

- Registering on the Course Updates page
- Introduce yourself and meet other forum participants
- Understand the forum's goals, purpose, expectations, and scope
- Preview the Action Plan

Tools

- Action Plan Template

Activity 1: Registering on the Course Updates Site

The Course Updates Site is an online, self-guided training environment that supports the Intel® Teach Program's training initiatives. Throughout the Leadership Forum, you will visit this site to access necessary resources, including a curriculum overview and files used in the forum.

Registration and Enrollment

To register and enroll in the Leadership Forum course:

1. Go to: **http://teachonline.intel.com/courseupdates**
2. Click **Register**.
3. Complete the new account form.
4. Click **Create my new account**.
5. Access your e-mail inbox, open the confirmation e-mail, click the link in the message to confirm your account, and log on to the site.
6. In the list of courses, click **Leadership Forum v. 3.5 Overview**, and follow the prompts to enroll in the course.

7. Write down your logon information on page vi.

   Note: For each subsequent visit, you will only need to enter your logon ID and password to enter the Leadership Forum v. 3.5 Overview site.

Activity 2: Introducing Yourself

In this activity, you introduce yourself and meet other forum participants. Use the lines below to note points you want to share about yourself, including your name, role, school or district name, and school or district size.

Activity 3: Identifying the Essential Question and Goals

Essential Question

The Intel® Teach Leadership Forum is based on the following Essential Question:

How can educational leaders support teacher effectiveness to improve student achievement?

Forum Goals

The Leadership Forum helps instructional leaders promote and support technology integration to improve teacher effectiveness and enhance student achievement.

In this forum, you will:

- Examine the critical role educational leaders play in promoting, modeling, and supporting effective integration of technology
- Identify, access, and use available resources and technology tools to support professional development, educator practice, and student learning
- Create a prioritized list of specific leadership behaviors that promote the integration of technology as a tool to improve student learning
- Review, analyze, and apply the ISTE Essential Conditions and ISTE National Educational Technology Standards for Leaders/Administrators (NETS-A)
- Synthesize understanding and begin to develop an Action Plan to implement in your school or district

Defining Technology Integration

For the purpose of this forum, *technology integration* is defined as:

The process of teachers and students routinely and seamlessly using technology resources and technology-based practices to enhance learning.

Activity 4: Previewing the Action Plan

Developing an Action Plan enables you to proactively plan specific actions you can take to promote and encourage the effective integration of technology to improve teaching and learning.

In Module 4, you will consider how to support technology integration over time and how to align your actions with national leadership standards. The Action Plan Template serves as a framework for thinking and decision making. In the template, the ISTE NETS-A standards are referenced, and suggested time frames are included for your consideration.

As you work through the forum, think about the following questions, which you will revisit in Module 4 when you begin developing your Action Plan:

- Where is your school's or district's technology focus?
- What are your priority areas for school- or district-wide technology integration?
- What specific areas will be the focus for school- or district-wide technology professional development?
- Do you need to consider equitable access when identifying short-, medium-, and long-range goals?

Whatever your particular needs are for yourself, your school, and your district, you are more likely to successfully address your priorities if you have a plan.

Previewing the Action Plan now sets the stage for future work in the forum. Research shows that if you use relevant and meaningful professional development materials during your training, your chances of implementing the materials greatly improves and you are more likely to attain your daily and long-term goals.

Evaluating Professional Development: An Approach to Verifying Program Impact on Teachers and Students
www.nsdc.org/library/publications/research/shaha.pdf (PDF; 18 pages)

Research Points: Essential Information for Education Policy
www.aera.net/uploadedFiles/Journals_and_Publications/Research_Points/RPSummer05.pdf (PDF; 4 pages)

Summary

Review the Essential Question and key points. Think about the forum's goals and objectives. In the upcoming modules, you will learn about and discuss ways to support, model, and promote effective integration of technology.

Essential Question:

- How can educational leaders support teacher effectiveness to improve student achievement?

Key Points:

- Technology integration is the process of teachers and students routinely and seamlessly using technology resources and technology-based practices to enhance learning.
- The Leadership Forum will help you plan, promote, model, and support the effective technology integration.
- Developing an Action Plan enables you to proactively plan specific actions that you can take to promote and encourage the effective integration of technology to improve teaching and learning.

Notes:

Module 1

Examining Leadership Behaviors and Standards

In this module, you examine the critical role leaders play in integrating technology into instruction. You also reflect on your beliefs and review the ISTE Essential Conditions and NETS-A (National Educational Technology Standards for Administrators) as you explore strategies for leveraging technology to support educator practice and student learning.

Essential Question

How can educational leaders support teacher effectiveness to improve student achievement?

Module Questions

- What leadership behaviors do you believe are essential in supporting technology integration?
- What are the national standards for administrators and what essential conditions are necessary to support effective technology integration?

Module Objectives

In this module, you:

- Identify the leadership behaviors that impact student achievement when technology is integrated into the classroom
- Understand the significance of the ISTE NETS-A standards as a resource for leaders
- Understand the importance of leaders modeling the use of technology for teaching and learning
- Understand the relevancy of the ISTE Essential Conditions and how they can assist leaders in effectively leveraging technology to support educator practice and student learning

Tools

- Internet Browser
- Course Updates Site or Resource CD
- *Visual Ranking Tool*
- Essential Conditions Checklist
- Google* Documents

Module 1

Examining Leadership Behaviors and Standards

Activity 1: Previewing ISTE Standards

As an educational leader, your role in promoting, modeling, and supporting effective practices for technology integration practices is essential to the overall success of teacher practice and student achievement. To gain a better understanding of ISTE NETS-A and Essential Conditions, preview the standards prior to the *Visual Ranking* activity.

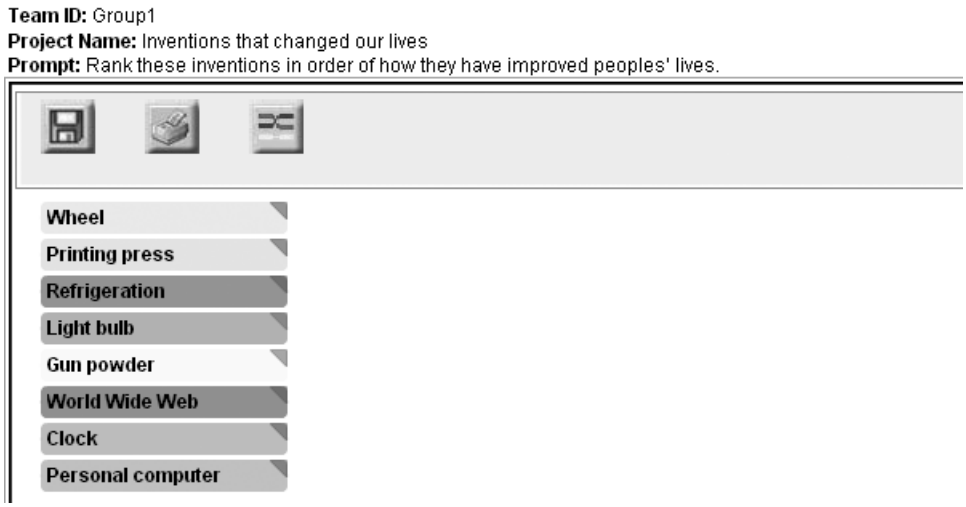
In this activity, you preview the standards as a whole group. Later in this module, you have time to access and preview the standards on your own. To access the standards, use your Resource CD or the Course Updates site. The ISTE NETS-A standards are located in the *Forum Tools* folder.

Activity 2: Learning through Ranking

This activity provides a framework for examining leadership behaviors that promote, model, and support effective technology integration. In the upcoming steps, you use an online ranking tool to sort specific administrator behaviors in order of importance to you in your current leadership role.

Step 1: Introducing the Visual Ranking Tool

The *Visual Ranking Tool* is a free online thinking tool from Intel® Education designed for ranking and comparing lists. The interactive tool facilitates discussion and fosters the development of 21st century skills, such as collaboration and critical thinking, as lists are created and evaluated. *Visual Ranking* can be used in a variety of ways—to make a simple list of ordered events: to create an evaluated list to aid in decision making; or to analyze, compare, and discuss complex lists with others.



Intel Education created *Visual Ranking* as a free resource for students and teachers. Students can work on their rankings from home or school, and they can compare their ideas with students located in distant classrooms. No special software is needed to use *Visual Ranking*—just the Internet and a free plug-in (Macromedia Flash*).

Note: More information on the *Visual Ranking Tool* and professional development opportunities for your teachers is available in Appendix A.01 and Appendix B.01

Leaders Behaviors Supporting Effective Technology Integration

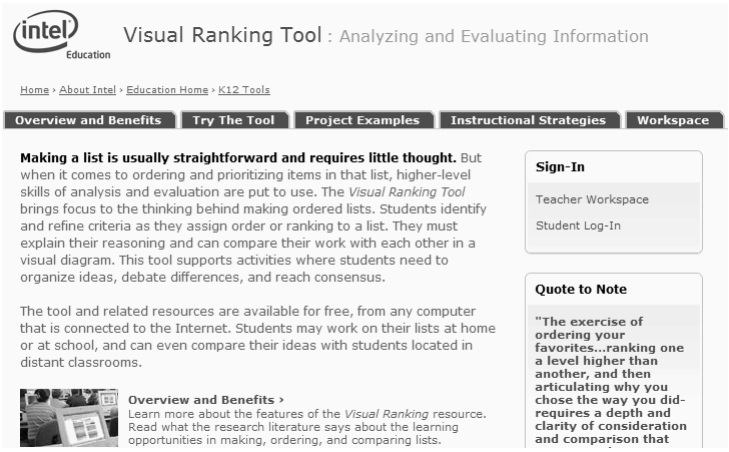
The following leader behaviors have been selected from the NETS-A standards as they relate specifically to technology integration. In this activity, you use *Visual Ranking* to categorize and compare leader behaviors used to support effective technology integration. Review the following table before moving on to Step 2.

Leader Behaviors Supporting Effective Technology Integration
Facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision (Ia)
Advocate for research-based effective practices in use of technology (Ie)
Facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning (IIb)
Facilitate the use of technologies to support and enhance instructional methods that develop higher-order thinking, decision making, and problem solving skills (IId)
Provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology (IIe)
Model the routine, intentional, and effective use of technology (IIIa)
Allocate financial and human resources to ensure complete and sustained implementation of the technology plan (IVc)
Assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions (Vc)
Ensure equity of access to technology resources that enable and empower all learners and educators (VIa)
Promote and enforce privacy, security, and online safety related to the use of technology (VIc)

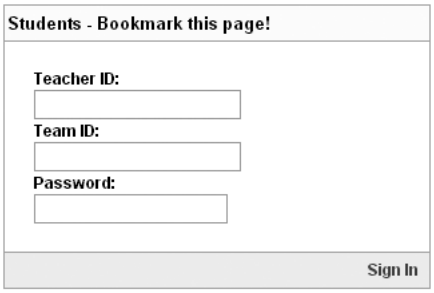
Step 2: Logging On

To begin using the *Visual Ranking Tool*, follow the steps to log on to the *Visual Ranking* site and sign in:

1. Go to the *Visual Ranking Tool:* **www.intel.com/education/visualranking**



2. In the Sign-In box, click **Student Log-In**.
3. Type your Teacher ID, Team ID, and Password (provided by your facilitator), and then click **Sign In**.

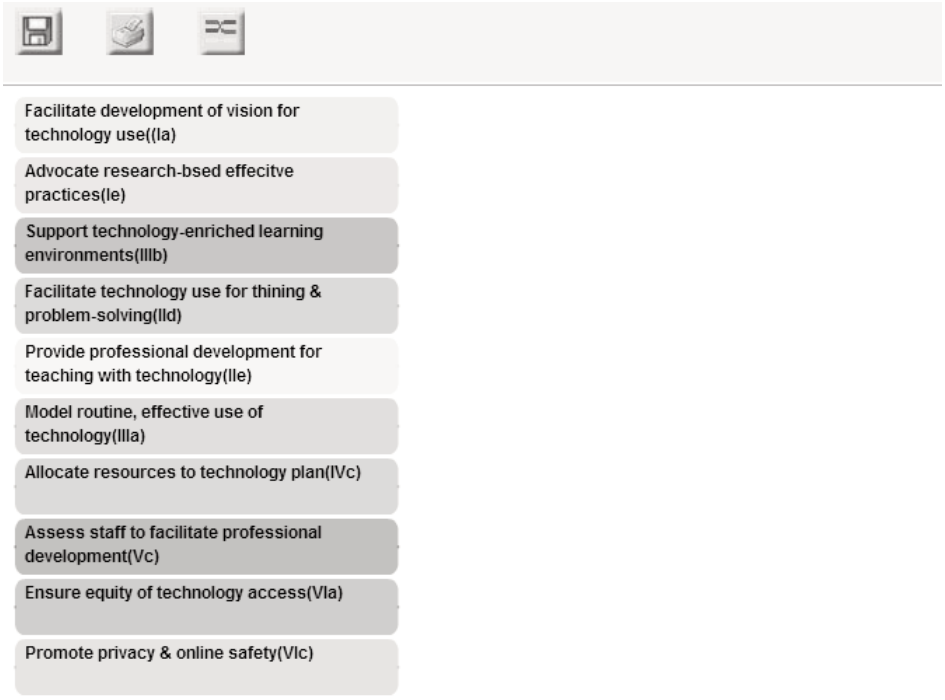


Note: You might want to write down your Teacher ID, Team ID, and Password on Overview vi so you can revisit your ranking later.

4. On the Student Workspace page, find the *Visual Ranking* Projects table.
5. Click the project named, **Leader Behaviors for Effective Technology Integration**.

6. View the *Visual Ranking* project that contains the list of 10 leader behaviors.

   Note: The leader behaviors are shortened to accommodate the tool.

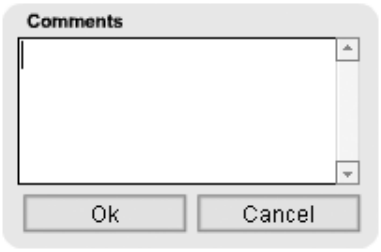


Step 3: Sorting and Ranking the Standards

In this step, you rank the leader behaviors in order of importance to facilitate technology integration for student learning in your classrooms.

Note: The top item in the list indicates the highest importance to you.

1. Click and drag an item to the location where you want it to appear in your list.
2. To add rationale to your ranking, double-click an item and type in the item's Comments box. The ability to capture rationale for your rankings is helpful in organizing and prioritizing your list.



3. After you type your comments, click **OK**. Point to any red triangles attached to items in your list to read your comments.

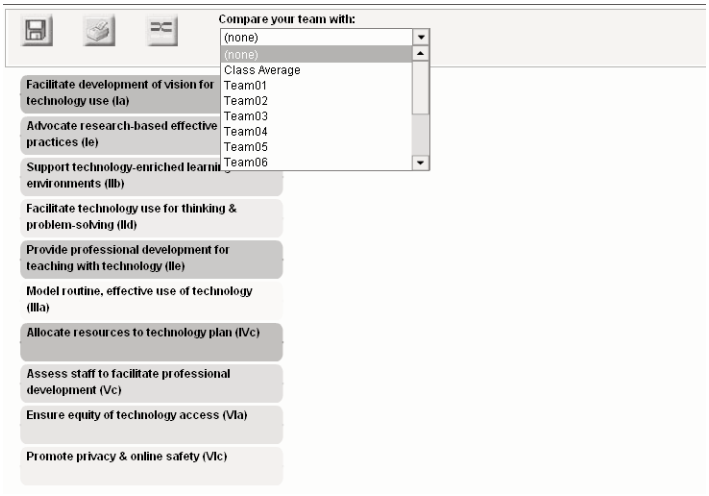
4. When you finish ranking your list, click **Save**.

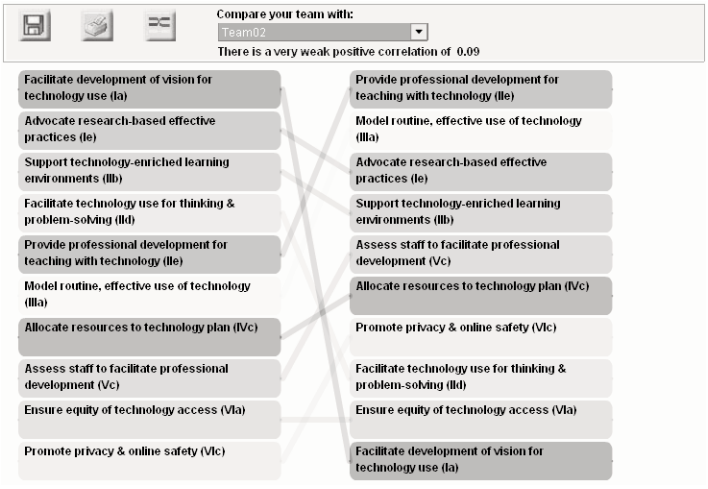
You can use the lines below to make notes before you complete the ranking online.

Step 4: Comparing and Discussing Rankings

In this step, compare and discuss your list with a partner. This will help you experience the true power of the tool, which comes from comparing rankings and discussing rationales.

1. Click the **Compare** button to display the *Compare your team with* drop-down box.
2. Click the *Compare your team with* box, and select a Team ID. You can also compare your list with the group average.





3. When comparing lists, lines connect like factors to visually represent how the lists compare. Notice that information about correlation between the two lists appears in the toolbar below the *Compare your team with* box. The correlation number tells how closely the two lists compare. A +1 correlation indicates a very strong positive equivalence between lists, and a –1 correlation indicates a very strong negative equivalence between lists.

4. Point to any red triangles attached to items in the lists and read the comments.

5. Discuss your rankings. Review and reflect on the following questions:

   a. What factors did you consider when evaluating the behaviors?

   b. Why might others rank the behaviors differently?

   c. What made one behavior more important than another?

   d. Why is the highest ranked behavior so important?

   e. What are the implications to you, your teachers, and your students?

Share some of the reasons that impacted how you ranked the behaviors. Write down any ideas you may want to share with the entire group.

Activity 3: Understanding Standards for Administrators

This activity helps you to better understand the leadership behaviors that lead to promoting and supporting effective technology integration. In this activity, you explore the International Society for Technology in Education (ISTE) National Educational Technology Standards for Administrators (NETS-A). These standards and performance indicators identify the core knowledge and skills that administrators need to know about technology integration.

Step 1: Reviewing the ISTE NETS-A

As you review the ISTE NETS-A standards in this step, consider the standards you identified as being most important to you in your *Visual Ranking* project for leadership behaviors. Read through the standards, and then select one near the top of your ranked behavior list and explore its components.

ISTE NETS for Administrators

Educational Technology Standards and Performance Indicators for Administrators

I. LEADERSHIP AND VISION—Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.

Educational leaders:

A. Facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision

B. Maintain an inclusive and cohesive process to develop, implement, and monitor a dynamic, long-range, and systemic technology plan to achieve the vision

C. Foster and nurture a culture of responsible risk-taking and advocate policies promoting continuous innovation with technology

D. Use data in making leadership decisions

E. Advocate for research-based effective practices in use of technology

F. Advocate on the state and national levels for policies, programs, and funding opportunities that support implementation of the district technology plan

II. LEARNING AND TEACHING—Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.

Educational leaders:

A. Identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement

B. Facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning

C. Provide for learner-centered environments that use technology to meet the individual and diverse needs of learners

D. Facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills

E. Provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology

III. PRODUCTIVITY AND PROFESSIONAL PRACTICE—Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.

Educational leaders:

A. Model the routine, intentional, and effective use of technology

B. Employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community

C. Create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity

D. Engage in sustained, job-related professional learning using technology resources

E. Maintain awareness of emerging technologies and their potential uses in education

F. Use technology to advance organizational improvement

IV. SUPPORT, MANAGEMENT, AND OPERATIONS—Educational leaders ensure the integration of technology to support productive systems for learning and administration.

Educational leaders:

A. Develop, implement, and monitor policies and guidelines to ensure compatibility of technologies

B. Implement and use integrated technology-based management and operations systems

C. Allocate financial and human resources to ensure complete and sustained implementation of the technology plan

D. Integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources

E. Implement procedures to drive continuous improvement of technology systems and to support technology replacement cycles

V. ASSESSMENT AND EVALUATION—Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.

Educational leaders:

A. Use multiple methods to assess and evaluate appropriate uses of technology resources for learning, communication, and productivity

B. Use technology to collect and analyze data, interpret results, and communicate findings to improve instructional practice and student learning

C. Assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions

D. Use technology to assess, evaluate, and manage administrative and operational systems

VI. SOCIAL, LEGAL, AND ETHICAL ISSUES—Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues.

Educational leaders:

A. Ensure equity of access to technology resources that enable and empower all learners and educators

B. Identify, communicate, model, and enforce social, legal, and ethical practices to promote responsible use of technology

C. Promote and enforce privacy, security, and online safety related to the use of technology

D. Promote and enforce environmentally safe and healthy practices in the use of technology

E. Participate in the development of policies that clearly enforce copyright law and assign ownership of intellectual property developed with district resources

Now that you have explored the standards in greater depth, the next step is to view the ISTE Essential Conditions and consider how they correlate to leader behaviors that support effective technology integration.

Step 2: Using the ISTE Essential Conditions Checklist to Rate Progress

The ISTE Essential Conditions serve as a framework to assist you in effectively leveraging technology to support educator practices and student learning. The focus is on the importance of your personal needs or goals for moving forward with your plan of action for successfully leveraging technology integration into teaching practices and student learning. In this step, you access and review the Essentials Conditions Checklist.

1. Insert and open your Resource CD.
2. Open the Start_Here file.
3. Click the **Start the CD** button.
4. Click **Forum Tools**.
5. Click **ISTE Essential Conditions Checklist**.
6. Using the **Essential Conditions Checklist Template** and the scale provided, click a condition in the navigation bar to begin indicating your level of progress.
7. Think about your school's or district's current level of progress with integrating technology into teaching and learning as you begin to rate your level of progress.

After reviewing the standards and essential conditions, you might decide that some behaviors in your *Visual Ranking* project warrant higher or lower rankings. Write down any changes you may want to make to your ranking.

Activity 4: Effectively Leveraging Technology

To ensure that integration of technology is occurring, educational leaders must support productive systems for learning and administration. In this activity, participants discuss questions specific to leadership behaviors that leverage technology to support effective integration. An online collaborative Web tool is used for participants to share information with each other.

Step 1: Reviewing the Questions

Each group is assigned one of the following questions:

a. How can you shift priorities and time to support integration of technology into instruction?

b. What evidence will you accept that integration is occurring, keeping in mind that use and integration are separate?

c. What helps a leader move to higher levels of comfort and knowledge relative to technology integration?

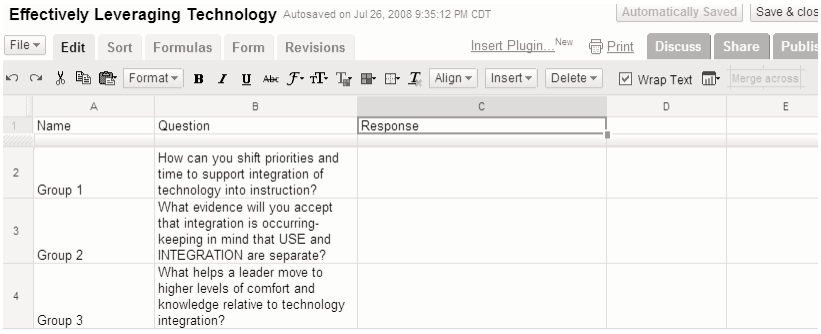
Step 2: Discussing the Questions

After the groups are formed, work with your group to explore your question:

1. In your group, assign a scribe to take notes and a reporter to share the groups' ideas.
2. Log on to Google* Documents at **http://docs.google.com** or use the TinyURL* provided by your facilitator.

   Note: Your facilitator configured a spreadsheet in Google Documents and granted rights to all participants to view and edit it.

3. Open the **Effectively Leveraging Technology** spreadsheet.



4. Discuss your assigned question. Have your scribe record your group's response in the spreadsheet.

Step 3: Sharing Your Information

After recording your group's response to your question in the online spreadsheet, share your group's information with the whole group. Discuss your group's findings as well as the firsthand experience participants shared using a collaborative Web tool.

Use the lines below to note ideas or thoughts you want to revisit later.

Activity 5 (Optional): Revisiting Your Ranking

Once you have reviewed the ISTE Essential Conditions and the NETS-A standards, revisit your original leadership behaviors ranking. Open your *Visual Ranking* project and think through any changes you may want to make. If you closed the Internet browser that you used for your original ranking, follow the steps below to log on to *Visual Ranking* and revisit your ranking. If you are already logged on, begin at step 7 below.

1. Go to the *Visual Ranking Tool:* **www.intel.com/education/visualranking**
2. In the Sign-In box, click **Student Log-In**.
3. Type your Teacher ID, Team ID, and Password.

   Note: You may have recorded your login information on Overview vi.
4. Click **Sign In**.
5. On the Student Workspace page, click **Leadership Behaviors for Effective Technology Integration** in the *Visual Ranking* Projects table.
6. View the *Visual Ranking* project, which contains the list of 10 leader behaviors that you ranked in Activity 1.
7. Click and drag items to move them to new locations.
8. To modify any of your previous ranking rationale, double-click an item, edit the text in the Comments box, and click **OK**.

9. When you finish revising, click **Save**.

You can use the lines below to make notes before you modify your ranking online.

Module 1 Summary

Review the critical role leaders' play in integrating technology into instruction. Reflect on your own beliefs as well as the ISTE Essential Conditions and NETS-A standards that will help you move forward with effectively leveraging technology to support educator practice and student learning.

Essential Question:

- How can educational leaders support teacher effectiveness to improve student achievement?

Key Points:

- Leadership behaviors impact student achievement when technology is integrated into the classroom.
- The ISTE NETS-A standards and performance indicators identify core knowledge and skills leaders need to know about technology integration.
- Leaders play a pivotal role in determining how well technology is used in their schools.
- The importance of leaders modeling the use of technology for teaching and learning have a positive impact on teacher practice and student achievement.
- The ISTE Essential Conditions are key to helping leaders effectively leverage technology to support educator practice and student learning.

Module 2

Exploring Best Practices and Resources

In this module, you learn about the Intel® Teach Program, view tools and resources on the Intel® Education Web site, and explore best practices for integrating technology into teaching and learning. With this exploration, you see how teachers and administrators around the world use technology effectively to support student learning.

Essential Question

How can educational leaders support teacher effectiveness to improve student achievement?

Module Questions

- How is technology most effectively used as a tool to engage students, develop 21st century skills, and enhance standards-based teaching and learning?
- What actions do leaders take in supporting, modeling, and promoting technology integration?
- What do exemplary technology-integrated unit plans and assessment tools look like?

Module Objectives

In this module, you:

- Learn about the Intel Teach Program
- Explore examples of technology integration practiced by teachers around the world
- Learn about student-centered, inquiry-based instruction that engages students in meaningful projects by reviewing a collection of exemplary unit plans that integrate technology
- Understand the importance of ongoing assessment and 21st century skills that are integral to successfully completing student projects
- Learn ways leaders support and promote teacher effectiveness, student achievement and technology integration

Tools

- Internet Browser
- Course Updates Site or Resource CD

Module 2

Exploring Best Practices and Resources

Activity 1: Understanding the Intel® Teach Program

Overview

The Intel® Teach Program offers proven professional development supporting 21st century skills. Intel Teach promotes standards-aligned, project-based approaches to learning. Courses help teachers transform instruction to engage students in deeply relevant ways with appropriate use of technology for learning, creativity, and communication. Master Teachers receive free instruction and resources enabling them to lead sessions for their colleagues.

Program Overview

To date, the Intel Teach program has trained over 5 million teachers in more than 40 countries, and is committed to reaching 13 million teachers by 2011. Intel Teach is the largest, most successful professional development program of its kind.

The following Intel Teach professional development offerings are available to K–12 teachers, schools, and districts:

- Intel® Teach Essentials Course: A face-to-face course providing teachers with a foundation of skills to fully integrate technology into existing curricula to promote student learning (32 hours face-to-face + 20 hours homework)
- Intel® Teach Essentials Online Course: A hybrid face-to-face and online delivery of the same core curriculum as the Essentials Course (12 hours face-to-face + 46 hours online, facilitated)
- Intel® Teach Thinking with Technology Course: A face-to-face course providing practice in building effective technology integration skills using online thinking tools to enhance students' higher-order thinking (32 to 40 hours face-to-face + 20 hours homework)

Teachers leave each of the Intel Teach courses with a unit plan in the subject they teach. As a result, students engage in standards-aligned, technology-supported projects that integrate 21st century skills.

Program Research

Intel enlisted the participation of the Center for Children and Technology (CCT), part of the Education Development Center (www.edc.org/cct), to study the impact of the Intel Teach Program on educators and classrooms. CCT's evaluation report covering U.S. participants in the Intel Teach Essentials course from 2000–2006 found teachers' responses to the course to be extremely positive. Highlights include:

- 98.6% of teachers surveyed responded that they agreed that the training prepared them to implement methods of teaching that emphasized integrating technology into their teaching.

- 98.2% of teachers surveyed responded that they agreed that the training prepared them to evaluate technology-based work produced by students.
- 96% of teachers said they would recommend the course to a friend or colleague.
- 98.4% of teachers surveyed responded that they agreed that the training prepared them to align their teaching and assessments with required curriculum content.

In addition, when participants were asked if the ideas and skills they learned from the Intel Teach training helped them successfully integrate technology into their students' activities, 96.6% responded yes.

Learn more about the Intel Teach Program and obtain the complete evaluation and research reports at **www.intel.com/education/teach**.

Note: More information about how to get your teachers involved in the Intel® Teach In-Service Program is available in Appendix A.01

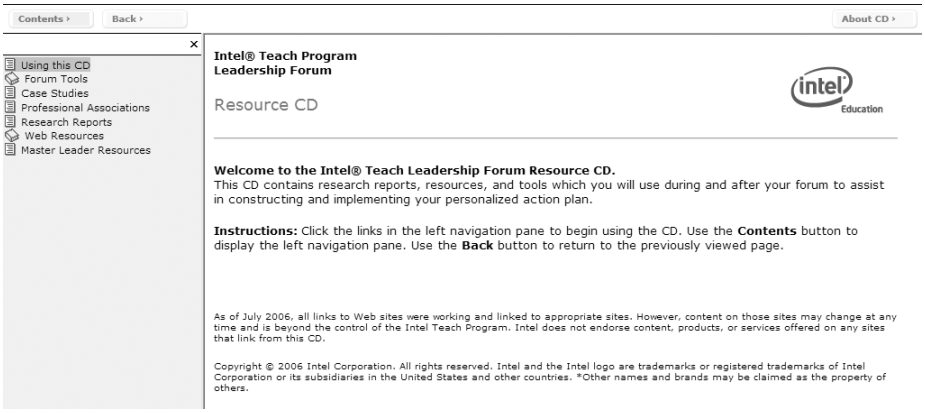
Activity 2: Reviewing Available Resources

In this activity, you deepen your understanding of effective technology integration by exploring the Resource CD. The Resource CD provides resources relevant to improving effective technology integration. The CD also contains all of the resources used throughout this forum.

Identifying Available Resources

The Resource CD is arranged categorically by resource type (as shown in the image). With an understanding of the CD organization, you can quickly locate what you need. The CD contains the following sections:

- **Forum Tools:** The Action Plan Template, ISTE NETS-A standards, ISTE Essential Conditions Template, and URLs for all Web sites in the forum
- **Case Studies:** The case studies that represent real-world experiences from educational leaders
- **Professional Associations:** Web links to professional associations with useful resources for instructional leaders
- **Research Reports:** Complete research articles and reports about effective technology integration, technology leadership, and instructional improvement
- **Web Resources:** A listing of Web resources on different topics to assist administrators in planning and implementing technology integration, including 21st century skills, education and technology, research, and search engines



In Module 4, you will refer back to the resources used throughout the forum, and you will have more time to explore the Resource CD.

Activity 3: Exploring Web Resources for Technology Integration

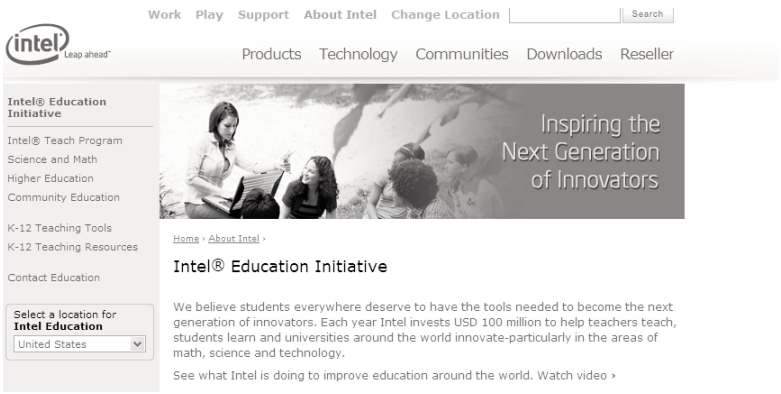
In this activity, you explore resources, strategies, and project ideas that support, model, and promote technology integration. This activity helps you understand what effective technology integration looks like and provides you with ideas to bring back to your school or district. As you view the Web resources, consider the following:

- What technology tools and resources do you think your teachers could use?
- What actions will you take to promote technology in your school or district?

Step 1: Viewing the Intel® Education Web Site

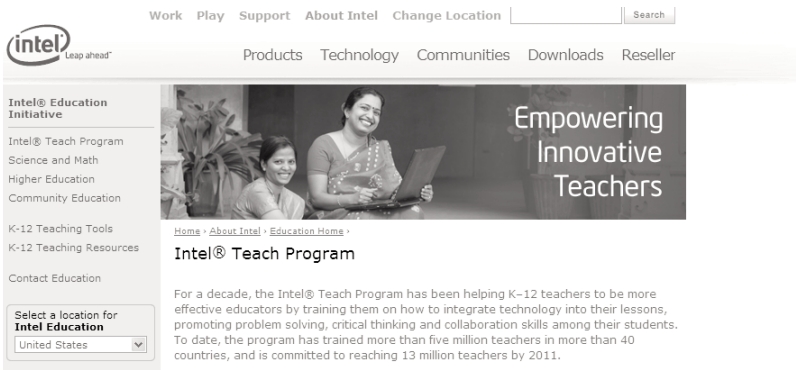
The Intel® Education Web site (**www.intel.com/education**) provides resources, tools, and strategies that support effective practices in technology integration. The Web site is a free resource for educators, developed by an extended team with expertise in education, technology, and innovation.

1. Open the Intel Education Web site: **www.intel.com/education**



2. Click links on the left navigation bar to access information about the Intel® Education Initiative and the many resources available to support and promote technology integration.

3. Click **Intel® Teach Program**.



4. Click **Learn more** in the Intel Teach Program portfolio area to view available program offerings and resources to support effective uses of technology.

Intel Teach Program portfolio
A range of face-to-face and online offerings designed to enable teachers to introduce, expand and support 21st century learning

Learn more ›

For Classroom Teachers	
Course Name	**Description**
Getting Started Course	Introduction to classroom software productivity tools and student-centered approaches to learning.
Essentials Course	Face-to-face training on how to integrate technology into existing classroom curricula to promote student learning.
Essentials Online Course	Training on the same skills as the Essentials Course, through a blend of face-to-face and online training.
Thinking with Technology Course	Training on effective technology integration skills using online thinking tools to enhance students' higher-order thinking.
Advanced Online Course	Training that enables teachers to build communities to advance the integration of technology and 21st century learning through a blend of face-to-face and online training.
For ICT Teachers	
Course Name	**Description**
Skills for Success Course	Training on a student curriculum that develops digital literacy, critical thinking, problem solving, and collaboration skills.
For School Administrators	
Course Name	**Description**
Leadership	Interactive forum focused on

5. Click **K–12 Teaching Tools** to access the Thinking tools section, which provides interactive tools for teachers and students.

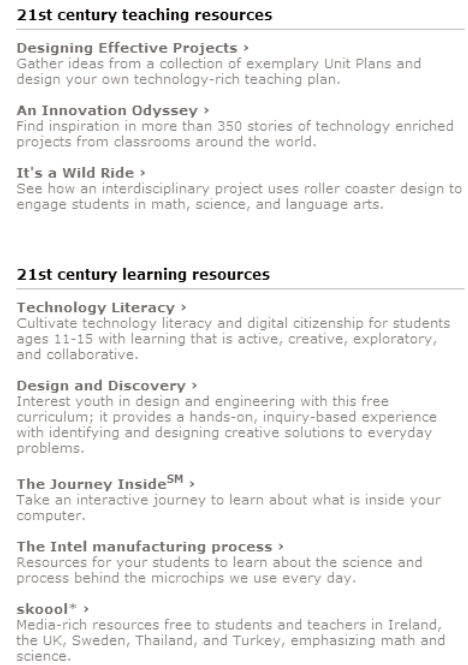
Thinking tools

Visual Ranking Tool ›
Identify and refine criteria for assigning ranking to a list; and then debate differences, reach consensus, and organize ideas.

Seeing Reason Tool ›
Investigate relationships in complex systems, creating maps that communicate understanding.

Showing Evidence Tool ›
Construct well-reasoned arguments that are supported by evidence, using a visual framework.

6. Click **K–12 Teaching Resources** to access 21st century teaching and learning resources.



21st century teaching resources

Designing Effective Projects ›
Gather ideas from a collection of exemplary Unit Plans and design your own technology-rich teaching plan.

An Innovation Odyssey ›
Find inspiration in more than 350 stories of technology enriched projects from classrooms around the world.

It's a Wild Ride ›
See how an interdisciplinary project uses roller coaster design to engage students in math, science, and language arts.

21st century learning resources

Technology Literacy ›
Cultivate technology literacy and digital citizenship for students ages 11-15 with learning that is active, creative, exploratory, and collaborative.

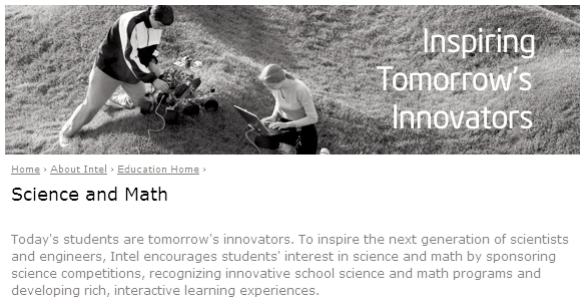
Design and Discovery ›
Interest youth in design and engineering with this free curriculum; it provides a hands-on, inquiry-based experience with identifying and designing creative solutions to everyday problems.

The Journey Inside℠ ›
Take an interactive journey to learn about what is inside your computer.

The Intel manufacturing process ›
Resources for your students to learn about the science and process behind the microchips we use every day.

skoool* ›
Media-rich resources free to students and teachers in Ireland, the UK, Sweden, Thailand, and Turkey, emphasizing math and science.

7. Click **Science and Math** in the left navigation bar for information on prestigious science competitions and resources focused on engaging young people in the study of science and math.



Home › About Intel › Education Home ›

Science and Math

Today's students are tomorrow's innovators. To inspire the next generation of scientists and engineers, Intel encourages students' interest in science and math by sponsoring science competitions, recognizing innovative school science and math programs and developing rich, interactive learning experiences.

8. Click **Community Education** to read about after-school community technology programs and to obtain curriculum designed to interest youth in design and engineering.

Note your thoughts about the resources you reviewed and ones you would like to explore further.

Step 2: Exploring An Innovation Odyssey

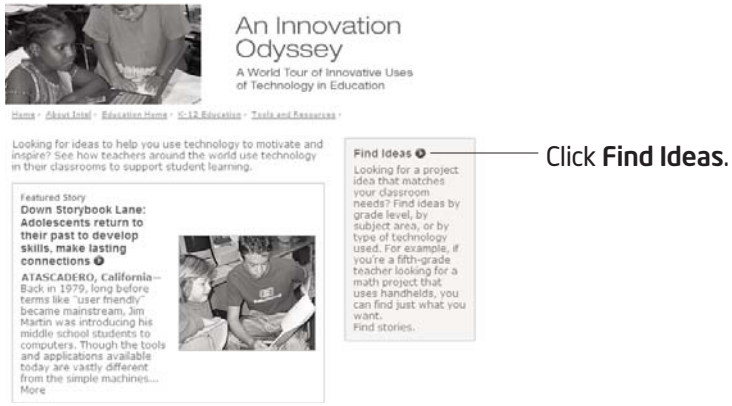
Exploring *An Innovation Odyssey* (**www.intel.com/education/odyssey**) provides ideas on how to use technology to motivate and inspire students. Explore how teachers around the world use technology in their classrooms to support student learning.

Exploring Best Practices for Teachers

Explore best practices through stories submitted by teachers around the world. *An Innovation Odyssey* (**www.intel.com/education/odyssey**) highlights hundreds of examples of student-centered instruction that engage students in meaningful, technology-enriched project work. Available resources include project ideas, stories from innovative teachers, monthly themes for classrooms, and strategies for teachers and school leaders to use technology to support learning.

1. Open the *An Innovation Odyssey* Web site: **www.intel.com/education/odyssey**

2. Click **Find Ideas** and explore available resources.

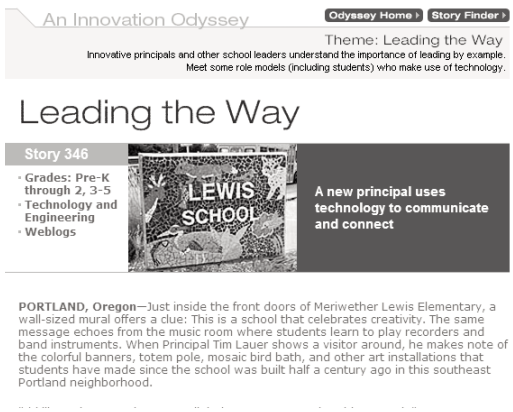


What ideas for integrating technology would you like to share with your teachers? Note your thoughts on the lines below and be prepared to share them with the group.

Exploring Strategies for School Leaders

As a school leader, you understand the potential of integrating technology to enhance teaching and learning. You also need to communicate the vision and convince teachers, parents, and community members that educational technology is an essential investment for children. *An Innovation Odyssey* helps you lead by example.

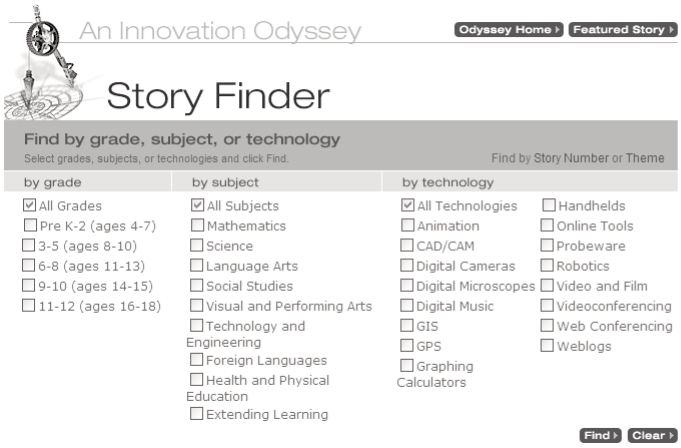
1. Open the *An Innovation Odyssey* Web site (if necessary): **www.intel.com/education/odyssey**
2. Click **Themes for Learning** to access Leading the Way. Explore ways innovative principals and other school leaders model the importance of leading by example. Meet powerful role models (including students) who make effective use of technology.



Using the Story Finder

The Story Finder is a searchable index of more than 400 stories—with a new story everyday. This online collection paints a picture of what effective technology integration looks like in the classroom.

1. View the *An Innovation Odyssey* Web site (if necessary) : **www.intel.com/education/odyssey**
2. Click **Strategies for School Leaders**.
3. Click **Find Ideas** to access the Story Finder, and consider the following:
   a. In what subject areas would you like to see teachers using more technology?
   b. What technology tools do you think your teachers could use?
   c. What actions will you take to promote technology in your school or district?

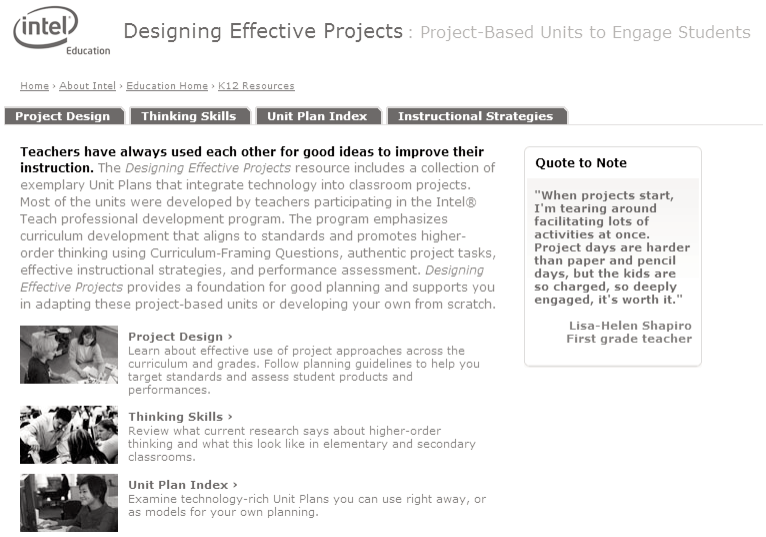


4. After you finish searching for stories, click the **Back** button to return to the Strategies for School Leaders page.

Think about the information available at *An Innovation Odyssey*. What resources did you find useful? Note your thoughts on the lines below.

Step 3: Introducing Designing Effective Projects

Designing Effective Projects (**www.intel.com/education/designprojects**) provides a foundation for good planning and supports educators in adapting or creating original project-based units. The *Designing Effective Projects* resource includes a collection of exemplary unit plans that integrate technology into classroom projects. Most of the units were developed by teachers participating in the Intel® Teach Program.



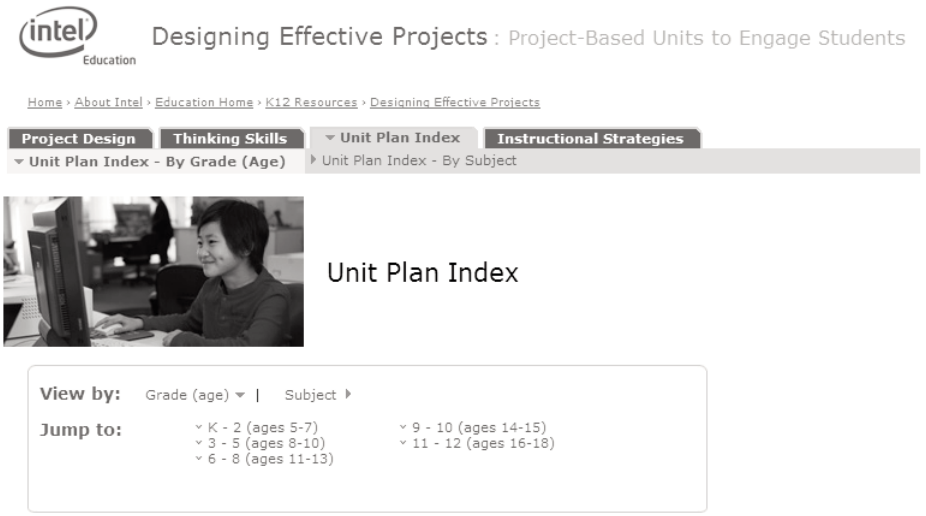
The *Designing Effective Projects* resource can help educators:

- Learn how project-based units engage students in meaningful work and promote 21st century skills, such as critical thinking, collaboration, and self-direction
- See how questions and ongoing assessment keep project work focused on important learning goals
- Gather ideas from a collection of exemplary unit plans
- Design technology-rich teaching plans

Searching the Unit Plans

Spend a few moments exploring the *Designing Effective Projects* resources, focusing specifically on the Unit Plan Index. Note ideas and unit plans that you may want to revisit or share with others at a later time.

1. Go to the *Designing Effective Projects* Web site: **www.intel.com/education/designprojects**
2. Click **Unit Plan Index** to examine technology-rich unit plans that teachers can use right away or refer to as models for unit ideas addressing priority areas for your school or district. The unit plans in this database are adapted from actual unit plans created by teachers through participation in the Intel Teach Program.



3. Click **Grade (age)** or **Subject** to narrow your search.
4. Scroll to view the unit plans that match your criteria.
5. To see more details about a particular unit plan, click the unit plan name.
6. While you review the unit plans, you might note each section of the plans (such as Curriculum Framing Questions, Assessment Processes, Differential Instructions, and so forth) and consider how the unit plans address and incorporate the following 21st century skills.

The term, *21st century skills*, is frequently used to describe a variety of abilities that are increasingly essential for success in the modern world but are often not taught in traditional educational settings.

These skills include:

- **Accountability and Adaptability**—Exercising personal responsibility and flexibility in personal, workplace, and community contexts; setting and meeting high standards and goals for one's self and others; tolerating ambiguity
- **Communication Skills**—Understanding, managing, and creating effective oral written, and multimedia communication in a variety of forms and contexts
- **Creativity and Intellectual Curiosity**—Developing, implementing, and communicating new ideas to others; staying open and responsive to new and diverse perspectives
- **Critical Thinking and Systems Thinking**—Exercising sound reasoning in understanding and making complex choices; understanding the interconnections among systems
- **Information and Media Literacy Skills**—Analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media
- **Interpersonal and Collaborative Skills**—Demonstrating teamwork and leadership; adapting to varied roles and responsibilities; working productively with others; exercising empathy; respecting diverse perspectives
- **Problem Identification, Formulation, and Solution**—Ability to frame, analyze, and solve problems
- **Self-Direction**—Monitoring one's own understanding and learning needs, locating appropriate resources, transferring learning from one domain to another
- **Social Responsibility**—Acting responsibly with the interests of the larger community in mind; demonstrating ethical behavior in personal, workplace, and community contexts

Source: Partnership for 21st Century Skills (www.21stcenturyskills.org)*. Used with permission.

7. Explore the other resources available in *Designing Effective Projects*:

   a. Click the **Project Design** tab to see how well-designed Curriculum-Framing Questions keep projects focused on important learning goals. Find good ideas teachers can use to assess projects and keep students on track during project work. Review planning guidelines to see how teachers can target standards and assess student products and performances.

   b. Click the **Thinking Skills** tab to review what current research says about higher-order thinking and what teaching thinking looks like in elementary and secondary classrooms.

   c. Click the **Instructional Strategies** tab to learn about adapting several ideas worth borrowing to engage students and meet instructional aims.

8. Consider your school or district's current practices when exploring resources, including:

   a. As a leader, what must I do to support and promote effective teaching strategies that will positively impact teacher practices and student learning?

   b. What support methods are in place in my school or district to facilitate project-based learning in classrooms?

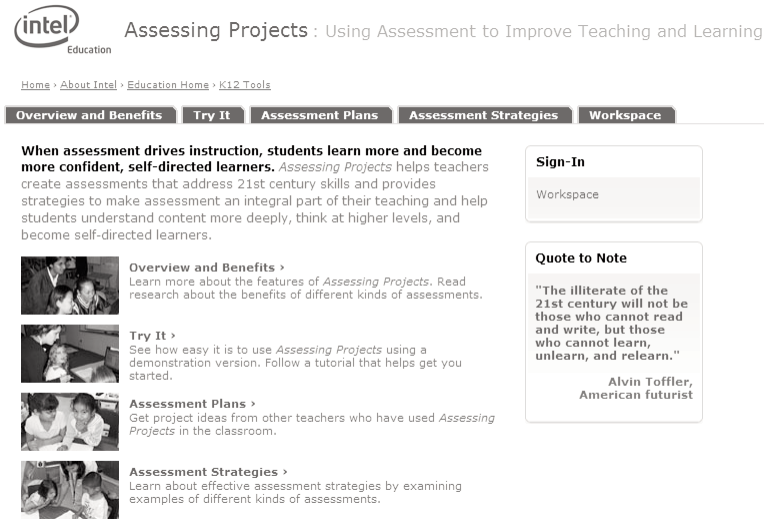
   c. What resources are available to promote 21st century skills?

   d. How can project-based learning assist in meeting standards and develop 21st century skills?

Use the lines below to note your overall thoughts and findings.

Step 4: Introducing Assessing Projects

Assessing Projects (**www.intel.com/education/assessingprojects**) supports student-centered assessment practices and provides a library of assessments for assessing 21st century thinking.



The *Assessing Projects* resource helps teachers:

- Assess 21st century thinking
- Develop strategies for making student-centered assessment an integral part of teaching and student learning
- Create assessments that promote lifelong learning

To explore *Assessing Projects*:

1. Open the *Assessing Projects* Web site:
   www.intel.com/education/assessingprojects

   Note: To enter the Workspace, you need a logon ID and password. On your own time, create a logon ID and password, so you can review the resource and access the Assessment Library and Workspace area. While exploring the library, be sure to review sample assessments of 21st century skills.

2. Click the **Assessment Plans** tab to view project ideas that provide a variety of student-centered assessment strategies used throughout the units. An assessment timeline shows when each assessment is used. Each assessment tool is included as well as detailed instructional procedures.

3. Click the **Try It** tab to use the demonstration version.

4. Click the **Assessment Strategies** tab to examine methods and instruments for gauging student needs, encouraging self-direction and collaboration, monitoring progress, and checking and demonstrating understanding.

Note any ideas, plans, or strategies you may want to share.

Module 2 Summary

Review your knowledge about the Intel® Teach Program, including some of the resources on the Intel Education Web site. Explore best practices for integrating technology into teaching and learning.

Essential Question:

- How can educational leaders support teacher effectiveness to improve student achievement?

Key Points:

- Student-centered, inquiry-based instruction engages students in meaningful projects.
- 21st century skills play an integral part in student projects.
- Leaders support and promote technology integration through daily modeling, problem solving, and team approaches to teaching and learning.

Notes:

Module 3

Introducing Web 2.0 and New Technologies

In this module, you explore new technologies that can enhance teacher practices, student achievement, and community collaboration. You learn how some educators currently integrate Web 2.0 tools into daily practices, and you discover how Web 2.0 tools can improve communication and information dissemination.

Essential Question

How can educational leaders support teacher effectiveness to improve student achievement?

Module Questions

- How can Web 2.0 technologies be integrated into my school's or district's technology plan?
- What tools can teachers and students use to connect to the global community and enhance teaching and learning?
- How can Web 2.0 tools enhance daily communication with staff, parents, students, and community members?

Module Objectives

In this module, you:

- Learn how some educators currently integrate Web 2.0 tools into their practices
- Review school sites using Web 2.0 tools
- Learn how to use Web 2.0 tools to disseminate information

Tools

- Internet Browser
- Course Updates Site or Resource CD
- Web 2.0 Tools

Module 3

Introducing Web 2.0 and New Technologies

Activity 1: Understanding Web 2.0

Successful schools provide students with more than basic skills. Today's 21st century students need to think critically, solve problems, collaborate, use technology, communicate clearly, and be self-directed. Educational leaders must ensure that schools continue to be relevant to students and keep pace with our changing world. What actions can you take to effectively leverage technology integration in your school or district? One key approach is to support and model new Web 2.0 technologies for teachers and students.

Web 2.0 represents a shift from the *read-only* version of the Web (that is, the Web as a digital encyclopedia) to a *read-write* version. Web 2.0 means users can now participate, manipulate, and contribute to Web content, often without using specialized software beyond their browsers. Wikipedia offers a detailed definition of Web 2.0 at **http://en.wikipedia.org/wiki/Web_2**.

Many educators (and most of their students) are familiar with Web 2.0 social networking sites. In addition to simply messaging friends or identifying buddies, Web 2.0 tools are being leveraged by educators to enhance students' classroom and out-of-classroom experiences.

Note: For additional Web sites and online tools that can be used by teachers to help students work together on projects, access the *Web Resources, Collaboration* folder on the Resource CD.

Web 2.0 tools allow students to expand their learning by collaborating and sharing with a global audience, peers, parents, and teachers. Students can use web-based collaborative learning tools to:

- Share thoughts, ideas, and projects
- Provide links to informative and reliable Web sites
- Gather information from others
- Respond to others' thoughts
- Add, edit, and delete online content
- Create linear, journal-like products

Comparing Web 2.0 Tools—Blogs, Wikis, and Collaborative Web Sites

In this activity, you explore the benefits and drawbacks of three common Web 2.0 resources—blogs, wikis, and collaborative Web sites:

- **Blogs:** Short for weblogs, blogs are used to share information and opinions with readers and to solicit feedback and discussion. Blogs often take the form of a journal and are regularly updated with new entries.
- **Wikis:** Wikis are collaborative Web sites that can be set up to be edited by anyone or only designated users. The creator of a wiki can receive notice of all changes, and can track and monitor the development of the site content.

- **Collaborative Web Sites:** Collaborative Web sites allow individuals to create or upload documents to the Web where they can then be edited using familiar formatting tools by anyone you invite who has Internet access. Some sites also provide the ability to edit and create presentations and spreadsheets.

Web 2.0 tools and environments take advantage of Web programming that can separate form from content. Michael Wesch, a professor of Cultural Anthropology, demonstrates this in his video on YouTube* (**www.youtube.com**), *The Machine is Us/ing Us*.

The following tables provide additional information on using blogs, wikis, and collaborative Web sites in the classroom.

Blogs	
Examples of Instructional Uses	Character journals, lists of research sources, reflections on learning, collecting responses to ideas, debating issues relevant to the subject area
Drawbacks	▪ Interaction is limited to written responses. ▪ Blogs often can be viewed by anyone with Internet access unless you make the blog entries private. ▪ Formatting, design options, and multimedia are often limited. ▪ Content usually must be edited online. ▪ People may respond to blog entries with inflammatory or inappropriate content.
Blogging Sites	A list of Web sites where you can set up your own blog is available in the *Web Resources, Collaboration* folder on the Resource CD.
More Information	**Blogging: It's Elementary, My Dear Watson** **www.educationworld.com/a_tech/tech/tech217.shtml** Presents an article about using blogs in elementary classrooms **Blogging Basics: Creating Student Journals on the Web** **www.educationworld.com/a_tech/techtorial/techtorial037print.shtml** Provides a quick introduction to getting your students to write their own blogs

Wikis	
Examples of Instructional Uses	Group writing, collaborative Web development, shared research findings, project planning, information collection
Drawbacks	▪ Other authors could make unwanted changes to your work. ▪ Content must be edited online. ▪ People may contribute inflammatory or inappropriate content.
Blogging Sites	A list of Web sites where you can set up your own wiki is available in the *Web Resources, Collaboration* folder on the Resource CD.
More Information	**Using Wikis in Education** **www.scienceofspectroscopy.info/edit/index.php?title=Using_wiki_in_ education** Defines wikis and suggests ways students can use them

Collaborative Web Sites	
Examples of Instructional Uses	Collaborative writing, revisions, feedback from one or multiple writers, tracked author contributions
Drawbacks	▪ Usually, files created online require special software to be viewed offline. ▪ Content can be lost if you revert to a previous version. ▪ Other authors could make unwanted changes to your work.
Blogging Sites	A list of Web sites where you can set up your own online collaborative site is available in the *Web Resources, Collaboration* folder on the Resource CD.
More Information	**A Paradigm Shift for School Software** **www.eschoolnews.com/resources/technology-without-breaking-the-bank** Offers a comprehensive article about the use of online applications **Type and Travel: Web-based Word Processors** **http://reviews.cnet.com/4520-9239_7-6627472-1.html** Includes an overview of online word processing applications with a comparison chart

Other examples of Web 2.0 tools used by educators include:

- **Social Bookmarking Tools:** Allow educators and students to bookmark and share favorite sites with others. For example, see **www.diigo.com**.
- **Media Storage and Sharing Sites:** Allow educators and students to post media (images, audio, or video) for safekeeping and sharing. For example, see **www.flickr.com**.
- **Podcasts:** Allow educators and students to access and subscribe to regularly updated audio recordings. For example, see **www.epnweb.org**.

Use the lines below to note any thoughts or ideas you might want to share with the group, and record any resources you want to explore in more depth later on your own.

Notes:

Activity 2: Learning from Current Practitioners

In current practices, Web 2.0 tools and resources allow teachers and educational leaders to:

- Improve communication with staff, parents, students, and the global community
- Ease the burden on technology staff to assist with information dissemination
- Meet school or district technology goals

Increasingly, administrators use simple content publication tools, such as blogging tools on school networks, to post information online for teachers, students, and community members. Generally, blogs can be set up quickly, and they can be used to communicate to wide audiences easily.

In this activity, you explore some education-related sites that implement Web 2.0 tools. Working in groups of 5 or 6 participants, you review education-related Web sites and answer the questions below. Be prepared to share your thoughts with the whole group later.

1. How do the Web sites compare to what is currently in place in your school or district?

2. How might Web 2.0 technologies impact your school or district?

3. What challenges might you face as a leader promoting Web 2.0 technologies?

Now that you reviewed and discussed Web 2.0 ideas and issues with the whole group, take a moment to think again about your school's or district's specific needs and practices. Based on current practices with Web 2.0 tools, what goals will you set to ensure that your school or district successfully integrates Web 2.0 technologies?

Notes:

Activity 3: Exploring Web 2.0 Tools

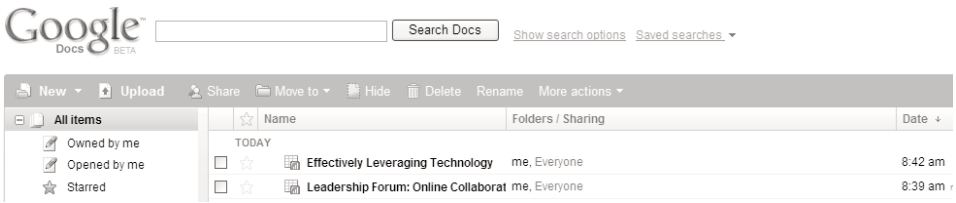
For many educators, when faced with the overwhelming (and constantly multiplying) number of Web 2.0 tools, their first question is, "Where do I begin?" One of the most powerful sets of Web 2.0 tools you can begin with are the free tools and resources provided by Google*, such as Google Documents (**http://docs.google.com**).

In this activity, you work in small groups with an online collaborative spreadsheet. You use Google Documents to access an online spreadsheet and work collaboratively with other participants to add and edit the spreadsheet's content. Be prepared to log on to Google Documents and share some of your resources and reactions to Web 2.0 tools. As you complete this activity, think about how you might use Google Documents and similar collaborative tools in your daily work.

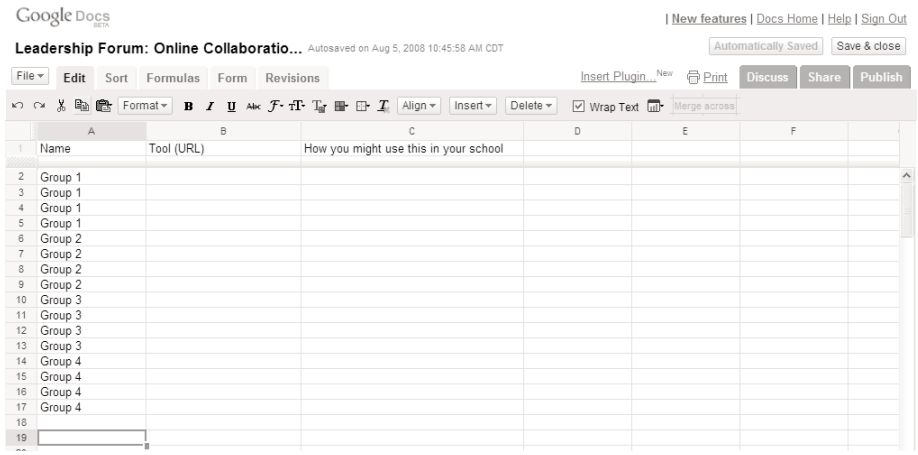
1. Log on to Google Documents: **http://docs.google.com**

   Note: Your facilitator configured a spreadsheet in Google Documents and granted rights to all participants to view and edit it.

2. Open the **Leadership Forum: Online Collaboration Tools** spreadsheet.



3. On the assigned spreadsheet, add the URL of one of the Web 2.0 tools mentioned in this module (or another Web 2.0 tool you currently use) and describe how educators might use it. If you have time, you may also want to spend a few minutes researching the additional Web 2.0 tools listed on the Resource CD.



Module 3 Summary

Explore new technologies that can enhance teacher practices, student achievement, and community collaboration. Review how some educators currently integrate Web 2.0 tools into daily practices, and discover how Web 2.0 tools can improve communication and information dissemination.

Essential Question:

- How can educational leaders support teacher effectiveness to improve student achievement?

Key Points:

- Blogs, wikis, and online collaborative documents allow students and teachers to collaborate on projects by sharing and responding to each other's work online.
- Web 2.0 tools allow students, educators, and community members to participate and contribute online without the need of specialized software (other than an Internet browser) or coding skills.
- Administrators use simple content publication tools, like blogs, to disseminate information online to teachers, students, and other community members.
- Web 2.0 tools are often easy to use, and they extend the reach of communication.

Notes:

Module 4

Developing Your Action Plan

In this module, you begin constructing your Action Plan. Your plan serves as a framework for your thinking and decision making in how you will support technology integration over time, and how you will align your actions with national leadership standards.

Essential Question

How can educational leaders support teacher effectiveness to improve student achievement?

Module Questions

- What can I personally do to advance effective technology integration in my school or district?
- What leadership behaviors can I exhibit in the short-, medium-, and long-range time frames?

Module Objectives

In this module, you:

- Examine the Action Plan Template
- Discuss components of an effective Action Plan
- Begin construction of your Action Plan

Tools

- Action Plan Template
- Course Updates Site or Resource CD

Module 4

Developing Your Action Plan

Activity 1: Creating Your Action Plan

In this activity, you create an Action Plan that helps you to proactively plan specific actions you can take to promote and encourage technology integration that will improve teaching and learning. The Action Plan Template serves as a framework for your thinking and decision making. Sample Action Plan Ideas and Sample Action Plans are available to assist you in generating ideas and steps you will take to begin developing your plan based on your specific needs.

Step 1: Examining the Action Plan Template

Consider how you will support technology integration over time, and how you will align your actions with national leadership standards. Then, review the Action Plan Template. Notice in the template that each of the ISTE NETS-A standards is referenced on the left, and three time frames to consider are shown across the top.

STANDARD	Short Range	Medium Range	Long Range
I. Leadership and Vision			
II. Learning and Teaching			
III. Support, Management, and Operations			
IV. Support, Management, and Operations			
V. Assessment and Evaluation			

(Continued)

Action Plan Template (continued)

STANDARD	Short Range	Medium Range	Long Range
VI. Social, Legal, and Ethic Issues			

Given your local area's success and progress, consider and discuss the following questions after you review the template:

1. What is your school's or district's technology focus?

2. What are your priority areas for your school's or district's technology integration?

3. What specific areas will be the focus for your school's or district's technology professional development?

4. What do you need to consider regarding equitable access when identifying short-, medium-, and long-range goals?

Whatever your particular needs—for yourself, your school, or your district—you are more likely to successfully address your priorities if you have a plan.

Sample Action Plan Ideas

Throughout the forum, you access, review, and explore many resources that can assist you in effectively leveraging technology integration in your school or district. As you begin to develop your action items specific to your goals, reference the resources in your plan that will assist you in reaching your goals. The Sample Action Plan Ideas below are designed as suggestions and thought-provokers. Each could have a short-, medium-, and long-range component, depending on where you and your school or district fall on the continuum specific to the goal.

- Think through and document your personal thoughts on why your school or district needs technology integrated with instruction, and then share with your staff.
- Inventory all of your technology equipment (such as desktops, laptops, handhelds, digital cameras, projection devices, and so on, including RAM, processor speed, pixels, and other specifications) by grade, room, teacher, and building to help strategically upgrade as resources become available.
- Work with the board, community members, unions, and media to increase support for staff development time dedicated to technology integration for instruction.
- Work with the technology committee to find ways to help teachers electronically access your curriculum so they are better able to link units and lesson plans to the specific benchmarks and standards targeted in your school's improvement plan.
- Help your teachers set up e-mail distribution lists for various purposes, targeting teacher communication with parents about curriculum (such as an academic e-newsletter from each teacher).
- Give students experience writing for a real audience, and use your school or district Web site to post student publications. The submissions could be screened by a committee of parents and teachers via e-mail collaboration.
- Find a way for your teachers to use handheld devices to assess individual student progress along your curricular continuum.
- Set up some "tech fair" time at staff meetings, or even an entire meeting, for teachers to share what works with their students regarding the use of technology.
- Have junior and senior level students review the Acceptable Use Policy (AUP), filtering software, and First Amendment language, and then report their findings to the technology department.
- Model the effective use of e-mail to your staff so face time at meetings can be spent more substantively. Be explicit in asking teachers how they can use this technique in their instruction with students.
- Work on a board policy supporting each of your district-wide curriculum committees, including a component in their planning that addresses technology to assist teachers in delivering and assessing instruction.

- Begin building an electronic (web-based) reference site or database created for teachers, by teachers, which includes annotated Web sites that support instruction. For example, present to teachers a list of three web-based calculator sites with an explanation of their strengths and weaknesses.
- Budget money for teacher team visits to other districts that emphasize technology integration. Work with these teachers to merge new ideas into your technology strategic plan.
- Use web-based task tracking to support school or district improvement and accreditation efforts.
- Work with the technical support team to determine technical needs for implementing Web 2.0 tools into the classroom. Get suggestions on which tools are appropriate for teachers and students based on security, purpose, accessibility, and ease of use.
- Work with the technology committee to design a staff development plan for introducing Web 2.0 tools to teachers.
- Model the use of Web 2.0 tools with your staff to show the power of tools (staff meetings; committee work; communication with students, parents, and community; and so forth).
- Promote the use of Web 2.0 tools by using tools to communicate with your staff, students, parents, and community.
- Encourage and support teachers' and students' use of Web 2.0 tools in the classroom.
- Include a new instructional technology innovation story detailing teacher efforts in each parent or community newsletter (weekly or monthly).

Note: To view completed Action Plans, see Appendix C.03 and Appendix C.04.

Step 2: Planning Effectively

When creating your Action Plan, identify concrete action items that are within your ability to accomplish. The following list contains additional elements to consider when creating an effective, manageable Action Plan:

- **Intentionality:** Are the action items possible and can you carry out the plan based on the identified needs?
- **Meaning:** Do the action items have strong personal and school or district organizational meaning?
- **Resources needed:** Considering the available resources in your school or district, are the action items realistically achievable?
- **People to contact or engage:** Are all key stakeholders included in your Action Plan items?
- **Reasonable time frame:** Is the timetable realistic for achieving each action item listed in your plan?
- **Policy implications:** Do the Action Plan items align to existing policies or do barriers exist that may cause delays in achieving short-, medium-, or long-range goals?
- **Competing initiatives:** What are your goals and is your plan effective? What competing initiatives have you considered in relation to the project and tasks identified?
- **Substance of other initiatives:** Can you leverage existing or future initiatives to better serve multiple projects?

Use the lines below to record any considerations in your school or district that may affect your Action Plan. Also, note other ideas you gathered from your individual ranking, NETS-A exploration, Essential Conditions Checklist, and group discussions. Be prepared to share with the group.

Step 3: Developing Your Action Plan

Consider your prioritization of leadership behaviors, exploration of ISTE NETS-A standards, and discussions with peers. With these considerations in mind, begin constructing your Action Plan using the template provided. You have time to begin work on your Action Plan. Remember to be concrete and realistic about what you can personally accomplish. The Action Plan Template and ISTE NETS-A are available electronically in the *Forum Tools* folder of the Resource CD.

Activity 2: Sharing Your Action Plan

Step 1: Thinking Through Your Action Plan

Think about the process you went through to create your Action Plan. Use the lines below to note any thoughts you may want to share with your partner or group.

Step 2: Participating in a Pair and Share

You and a partner will share feedback about each other's Action Plan. Focus your discussion and feedback on the following prompts:

1. What challenges might you face when you implement your plan?

2. How do you plan to involve key stakeholders and bring them on board?

3. What are the immediate actions you will take toward implementing your plan?

4. What will you do personally to advance effective technology integration in your school or district?

Activity 3: Concluding the Forum

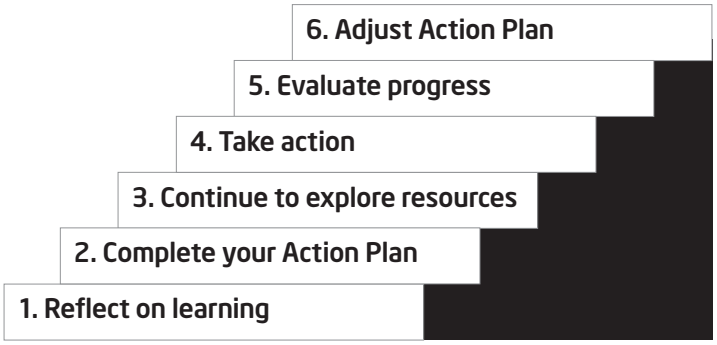
The Leadership Forum focuses on how you, as an educational leader, can promote and support effective technology integration. The ideas shared and lessons learned can help you support teachers by promoting technology integration in classrooms, which can ultimately lead to improved student achievement.

How can educational leaders support teacher effectiveness to improve student achievement?

Step 1: Focusing on Next Steps

As you continue to work on your Action Plan, consider your goals that are immediately attainable and how you can achieve them. Remember that your Action Plan must be based on the realistic expectations of what can be accomplished in the short-, medium-, and long-range time frames. When your Action Plan is complete, you are ready to implement your plan school- or district-wide.

While implementing your plan, continuously evaluate your progress and adjust your plan accordingly. Use the resources provided in this forum, such as the *Visual Ranking Tool*, NETS-A, Essential Conditions Checklist, Course Updates site, Resource CD, and your peers to monitor your progress and adapt your plan.



Step 2: Reflecting on Lessons Learned

Reflect on your forum experience and what you learned about your role in supporting and promoting technology integration. What are the next steps to support the integration of technology in your school or district? Use the lines below to record your thoughts and ideas.

Activity 4: Evaluating Your Forum Experience

In this activity, you take a survey to share your impressions, ideas for improvement, and overall assessment of the Intel® Teach Leadership Forum. Please help us by completing an online evaluation of the forum.

Completing the Online Evaluation

The purpose of the evaluation is to monitor the overall quality of the Leadership Forum professional development. The evaluation is designed to collect information about your experience at the forum, and about how prepared you feel to promote and support effective technology integration in your school or district. This survey should take fewer than 15 minutes to complete. Participation is voluntary, and all questions are optional. We appreciate your time and value your input.

1. Go to the Intel Teach Course Updates site: **teachonline.intel.com/courseupdates**
2. Click the **Leadership Forum Survey** at the bottom of the page.
3. Complete the survey, and then click **Submit**.

Module 4 Summary

Develop an Action Plan as a framework for supporting technology integration. Review your short-, medium-, and long-range goals, and reflect on the critical roles you play in supporting effective technology integration into instruction.

Essential Question:

- How can educational leaders support teacher effectiveness to improve student achievement?

Key Points:

- An Action Plan includes short-, medium-, and long-range goals that are realistic and achievable.
- An Action Plan aligns to leadership standards and involves key stakeholders throughout the plan.
- An Action Plan includes available resources necessary to attain goals identified in the short-, medium-, and long-range time frames.
- Continuous reflection, evaluation of progress, and adjustments to your action items are important to your plan's overall success.

Notes:

Appendix

Appendix

Appendix A
Intel® Teach Program

This section contains information about the Intel® Teach education initiative, how to get involved, and programs available to support technology integration.

How to Get Involved

The Intel® Teach Program is a free, proven professional development program for K–12 educators.

Intel Teach, part of the Intel® Education Initiative, is the most successful teacher professional development program of its kind. Working with local governments, Intel Teach builds teachers' and students' 21st century skills—such as digital literacy, critical thinking, problem solving, and collaboration—through quality teaching and learning. More than 5 million teachers in more than 40 countries have participated in Intel Teach—learning how, when, and where to incorporate technology tools and resources into curriculum.

Intel Teach is a program designed to improve the effective use of technology in classroom teaching, with Intel providing all training and curriculum materials free of charge; Intel Teach is not a sales or marketing program.

In-Service Program

Available to K–12 teachers, schools, and districts, the Intel Teach In-Service Program is a suite of professional development offerings. This program is about pedagogy and integration of technology to help students build higher-order thinking skills and attain standards; the In-Service Program is not about software.

Based on a peer-to-peer model, Local Education Agencies (LEAs), such as schools, districts, or state agencies, select experienced teachers to serve as Master Teachers (MTs). The MTs receive professional development from certified Senior Trainers (STs), enabling MTs to return to their area schools or districts and lead sessions for their colleagues.

The In-Service Program has three free professional development offerings for K–12 teachers—Essentials, Essentials Online, and Thinking with Technology.

Intel® Teach Essentials Course

The Intel® Teach Essentials Course has been engaging educators around the world since 2000, with face-to-face, hands-on instruction on the essentials of effective technology integration. Teachers learn from other teachers to incorporate technology into their

teaching to enhance student learning. They also learn how to create assessment tools and complete unit plans aligned with state and national standards.

Intel® Teach Essentials Online Course

The goal of the Intel® Teach Essentials Online Course is to help classroom teachers develop student-centered learning through technology integration and project-based approaches. This course delivers the Essentials Course curriculum through a combination of face-to-face and flexible online delivery.

The International Society for Technology in Education reviewed the Intel Teach Essentials Course on March 15, 2007 and determined that it clearly supports implementation of the ISTE National Educational Technology Standards (NETS) for Teachers in a specific, carefully reviewed and documented manner and prepares participants to substantially meet the following standards:

NETS•T ALIGNMENT

- Meets: I.A., II.A., II.B., II.C., II.D., II.E., V.C., VI.A.
- Supports significant growth for: I.B., III.C., III.D., IV.A., IV.C., V.A., V.B., V.D.

Intel® Teach Thinking with Technology Course

Ideally suited for teachers who have taken the Essentials Course (or a comparable technology integration program), this modular course builds on the ideas of effective technology integration and student inquiry to focus on how technology can enhance higher-order thinking skills. A set of free online thinking tools—available at the Intel® Education Web site—offers educators a structured way to help students think critically.

The International Society for Technology in Education (ISTE) completed its initial review of the Intel® Teach Thinking with Technology Course on October 20, 2005, and has determined that it clearly supports implementation of the ISTE National Educational Technology Standards (NETS) for Teachers in specific, carefully reviewed and documented ways and substantially prepares participants in the following manner:

NETS•T ALIGNMENT

- Meets: I.A., II.A., II.B., II.D., II.E., III.A., III.C.
- Supports significant growth for: II.C., III.B., III.D., IV.A., IV.C., V.B., V.C., V.D.

For more information on these offerings and to complete the online Local Education Agency application, visit: **www.intel.com/education/teach**

Appendix B
K-12 Tools and Resources

The following free online K-12 tools and resources support 21st century teaching and collaborative student-centered learning. These tools and resources help teachers play a critical role in facilitating learning activities and posing questions that promote and develop higher-order thinking among students. The online thinking tools are interactive learning places where teachers enable students to engage in robust discussions, pursue investigations, analyze complex information, and solve problems.

Overview of K–12 Teaching Resources

The 21st century teaching and learning resources described in this appendix help teachers play a critical role in facilitating learning activities and posing questions that make students think deeply.

The ***Designing Effective Projects*** resource provides a foundation for good planning and supports teachers in adapting a collection of exemplary project-based unit plans or developing their own from scratch. Most of the Designing Effective Projects units were developed by teachers participating in the Intel® Teach professional development program.

An Innovation Odyssey is a collection of innovative uses of technology from teachers around the world. Teachers can find ideas for projects they may want to do with their own students. School leaders can find convincing examples that show teachers and parents how technology supports learning. Ideas can be shown by grade level, subject area, or type of technology used.

Overview of K–12 Productivity Tools

Free K–12 teaching tools and resources for educators support collaborative student-centered learning.

Assessing Projects helps teachers create assessments that address 21st century skills. *Assessing Projects* also provides strategies to make assessment an integral part of teaching and help students understand content more deeply, think at higher levels, and become self-directed learners.

The Intel® Education *Help Guide* provides step-by-step instructions to hundreds of technical skills for commonly used software applications.

Overview of Online Thinking Tools

Thinking tools are based on research that demonstrates the value of visual representation in constructing and retaining new information. Thinking tools take advantage of technology to allow students to convey and exchange ideas, actively construct knowledge, solve problems, and create nonlinguistic representations of what they have learned.

The ***Seeing Reason Tool*** helps students investigate cause-and-effect relationships. Students use this tool to discuss, represent, and defend their interpretations through mathematical and scientific reasoning across the curriculum.

The ***Showing Evidence Tool*** helps students build well-structured arguments. Students use this tool to make claims, support positions with evidence, debate differences, and reach conclusions.

The ***Visual Ranking Tool*** helps students prioritize and compare lists. Students use this tool to evaluate and prioritize information, collaborate with peers, study multiple perspectives, and make decisions through consensus or negotiation.

No special software is needed to use these tools—just the Internet and a free plug-in. Teachers set up online accounts, create unlimited numbers of student projects and teams, and all student work is stored on Intel's servers. Best of all, the tools and related resources are provided free of charge.

You can learn more about the free online thinking tools at:
www.intel.com/education/tools

Professional Development Using K–12 Tools and Resources

If you are interested in helping your teachers learn to integrate the free K–12 tools and resources into curriculum, free professional development is available for K–12 teachers. The Intel® Teach Essentials Course and Essentials Online Course incorporate *Assessing Projects, Designing Effective Projects,* and the *Help Guide*. The Essentials Course curriculum supports:

- Instructional design, project approaches, multiple methods of assessment, and promotion of 21st century skills
- Effective use of technology in the classroom
- Instructional uses of new communication and collaborative learning technologies
- Research and productivity strategies and tools
- Problem-solving strategies and teamwork

The Intel® Teach Thinking with Technology Course helps teachers develop K–12 students' critical thinking—a vital 21st century skill—while using existing curriculum and aligning to state and national standards. During the face-to- face, hands-on Thinking with Technology Course, teachers:

- Develop strategies and project ideas for using online thinking tools to target higher-order thinking skills

Create a complete unit plan that is aligned to standards and includes:

- Curriculum-Framing Questions
- Detailed instructional strategies
- Integration of an online thinking tool
- Assessment plan and tools

You can learn more about these courses at: **www.intel.com/education/teach**

Notes:

Appendix C
Action Plan Resources

This section contains resources that will assist you in completing your Action Plan.

Action Plan Standards

I. LEADERSHIP AND VISION—Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.**

II. LEARNING AND TEACHING—Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.**

III. PRODUCTIVITY AND PROFESSIONAL PRACTICE—Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.**

IV. SUPPORT, MANAGEMENT, AND OPERATIONS—Educational leaders ensure the integration of technology to support productive systems for learning and administration.**

V. ASSESSMENT AND EVALUATION—Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.**

VI. SOCIAL, LEGAL, AND ETHICAL ISSUES—Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues.**

Action Plan Template

Standard	Short Range	Medium Range	Long Range
I. Leadership and Vision			
II. Learning and Teaching			
III. Productivity and Professional Practice			
IV. Support, Management, and Operations			
V. Assessment and Evaluation			
VI. Social, Legal, and Ethical Issues			

Principal Action Plan Example

Standard	Short Range	Medium Range	Long Range
I. Leadership and Vision	Gain an understanding of the district's new wide area network (WAN)	Meet with students/ teachers/ parents to explain the new WAN that will provide faster Internet access	Monitor the implementation of the WAN and keep stakeholders informed about the implementation and capability of the system
II. Learning and Teaching	Identify and schedule professional development opportunities for teachers (such as the Intel® Teach Program)	Determine and record availability of technology tools needed for a technology rich environment to implement learning gained from training (Intel Teach), such as digital camera, projection devices	Prioritize budget allocations for (1) professional development participation, and (2) technology purchases to implement the strategies learned by teachers in professional development
III. Productivity and Professional Practice	Observe students and teachers using technology software	Set up a management system for teachers to keep track of student progress	Determine annual budget allocations based on teachers' reports
IV. Support, Management, and Operations	Provide a copy of the District Technology Strategic Plan to all staff	Communicate via e-mail to staff regarding expectations for their feedback regarding the Tech Plan and provide a template for them to use to record their recommendations	Conduct a staff meeting to discuss the recommendations and use technology to record responses to determine school priorities
V. Assessment and Evaluation	Develop a classroom observation schedule and electronically inform staff of methods that will be used to observe, record observations and provide feedback	Collect and review teachers' lessons plans to prepare for classroom observations and identify specific areas of focus for the observations	Conduct and record classroom observations using technology and provide teachers with immediate feedback
VI. Social, Legal, and Ethical Issues	Ensure that filtering software is in place throughout the school	Determine that both student and staff policy manuals outline expectations and consequences as a result of misuse of technology	(Ongoing) Review and monitor filtering software reports and provide reports to staff/students/parents about inappropriate use to determine ways to prevent this

Superintendent Action Plan Example

Standard	Short Range	Medium Range	Long Range
I. Leadership and Vision	Contact neighboring district superintendents to identify common curriculum needs and determine their interest in participating in a cross-district sharing of curriculum	Organize a cross-district curriculum writing team to include administrators, teachers, parents, and students	Design a K–12 core curriculum that is aligned with state standards and supported by technology
II. Learning and Teaching	Identify appropriate professional development opportunities for teachers to support the new curriculum	Determine and record availability of technology tools needed for a technology rich environment to implement new curriculum	Prioritize budget allocations for (1) professional development participation, and (2) technology purchases to implement the new curriculum
III. Productivity and Professional Practice	Prepare an in-service training for new teachers on the curriculum, including how to use the Curriculum Resource CD	Make copies of the Curriculum Resource CD and other materials needed; schedule new teachers to attend the in-service training; secure facility and equipment needed for the training	Conduct the in-service training; create an online evaluation for the participants to complete for feedback about the training: communicate electronically with new teachers throughout the year to offer support and encouragement
IV. Support, Management, and Operations	Visit schools and conduct an environmental scan to determine numbers and working order of computers and peripherals	Work with administrators and tech director to develop a 5-year technology plan for upgrading computer labs and maintenance of labs	Present the plan to the Board of Education for approval and budget allocation authorization

(Continued)

Standard	Short Range	Medium Range	Long Range
V. Assessment and Evaluation	Meet with principals to review state assessment results	Identify additional web-based resources to assess students and administer the assessments; review reports generated to identify students who need additional help	Develop a schedule to work one-on-one with students who need help; generate study guides for each student; conduct the one-on-one meetings with students, and provide immediate feedback
VI. Social, Legal, and Ethical Issues	Ensure that filtering software is in place throughout the district	Determine that both student and staff policy manuals outline expectations and consequences as a result of misuse of technology	(Ongoing) Review and monitor filtering software reports and provide reports to staff/students/parents about inappropriate use to determine ways to prevent this

Notes