Learning, Communication, and 21st Century Skills: Students Speak Up

Grades: 6-12

Subjects: Language Arts, Social Studies/History, Government, Civics, Career or Job Training, Science (Extension)

Suggested Time: One Class Period (50 minutes)

Lesson Overview
Students will reflect on learning, communication, and preparation for future jobs, including the roles that technology and the Internet play in these areas. There are 8 suggested activities listed in this lesson plan. Review vocabulary and start with the warm-up activity, then select any of the activities that are appropriate for your students. The wrap up activity is a great way to get your students ready for the Speak Up survey.

Activity List
1. Warm-up Exercise – How do you use technology? (10 minutes)
2. Class Discussion – How do you like to learn science? (15 minutes)
3. Class Activity – Technology and Education in the News (20 minutes)
4. Group Activity – Challenges and Obstacles (15 minutes)
5. Group Activity – Our voices, Our future (30 minutes)
6. Wrap Up – The Big Picture (15 minutes + homework)
7. Individual Activity – Speak Up Surveys (15-20 minutes)
8. Extension – Compare the results of your school with the national data (optional)

Objectives
Students will:
• Reflect on their use of technology for learning and communication, both in and outside of school
• Consider how their science and technology education is preparing them for future success
• Discuss their opinions and findings with peers
• Suggest ways that technology and the Internet use can be improved in their school
• Engage in civic responsibility by participating in school site decision-making

Resources
• Poster board or white board to record ideas
• Writing journals and/or paper
• Pencils

Teacher Preparation
• Confirm registration of your school at: http://www.speakup4schools.org/speakup2012/
• Preview the Speak Up 2012 Survey questions by contacting the Speak Up Team at speakup@tomorrow.org
Speak Up Lesson Plan
Grades 6-12 Survey

- Reserve a computer lab or gain access to mobile laptops for classroom use, set up a station in the classroom where the students can complete the survey, or assign the completion of the survey as homework.

Vocabulary
The Speak Up surveys ask questions about the tools that students use for learning inside and outside of the classroom. In preparation for the survey, discuss any new terminology with students.

- Critical thinking
- Digital reader (such as: Kindle, Nook)
- Interactive Whiteboard (SmartBoard, Polyvision)
- Laptops, Netbooks and Laptops
- Learning management systems (such as Blackboard)
- Mobile devices (smartphone, tablet)
- Mobile apps
- MP3 player (like an iPod or iPod Touch)
- Online class/courses
- Online textbooks
- Podcast
- PowerPoint
- School portal
- SmartPhone (iPhone, Droid)
- Simulations
- Skype
- Social Networking
- Tablet PC (such as iPad)
- Text messaging
- Twitter
- Video game player like xbox, Nintendo or Wii
- Virtual Worlds/ massively multiplayer online games (MMOG) (like World of Warcraft)
- Blogs
- Website

Assessment
Teachers can evaluate the students on preparation and participation in group and class discussions. Students can print out a copy of their survey completion confirmation to submit as proof of completion of the survey.
Classroom Activities
The following activities are designed to engage the students in the survey experience and understand the importance of their participation. You may choose to do all or some of these exercises.

1. Warm-up Exercise – How Do You Use Technology? (10 minutes)
Technology means different things to different people. For this activity and the survey, we are using the term “technology” to mean all kinds of electronic devices, not just computers and the Internet. Start by reviewing the following Speak Up questions with the class:

Which of these things do you regularly do for schoolwork? (Check all that apply)

- Access class information online (such as: grades, teacher’s notes or presentations, podcasts)
- Access online databases or real time data (such as from Google maps)
- Communicate with other students using a webcam, skype or online chat
- Communicate with other students using text messaging
- Communicate with teachers using text messaging
- Conduct virtual experiments or simulations
- Create multi-media presentations for an assignment
- Get help from an online tutor
- Listen to a podcast for a class
- Play educational games
- Post to blogs or wikis
- Record or video a teacher lecture or lab
- Take photos of school assignments or materials using my mobile device
- Take tests online
- Turn in papers for plagiarism check (such as: TurnItIn)
- Upload assignments and homework to school portal
- Use mobile applications to keep organized
- Use my social networking site (such as Facebook) to collaborate with classmates on a project
- Use online textbooks or other online curriculum
- Use Twitter to communicate or to follow others
- Watch a video I find online to help with homework
- Watch an online video created by my teacher
- Other

Many schools are exploring how to leverage mobile devices such as smartphones and tablet computers (iPads) to improve student achievement. How would you use a mobile device to help you with your schoolwork? (Check all that apply)

- Access online textbooks
- Access social networking sites (such as Facebook)
- Access the school network from home or school
- Check grades
- Communicate with classmates and teachers
- Create documents, videos or podcasts
- Learn about school activities
- Look up information on the Internet
- Organize my schoolwork assignments
- Play educational games
- Receive reminders and alerts about upcoming tests or assignment due dates
- Record or video lectures or labs so that I can review them later
- Take notes for class
- Text my teacher questions in class
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- Upload or download information from my teachers' website and/or the school's portal
- Use mobile apps to make me more productive
- Use the calculator
- Use the calendar
- Work on projects with my classmates
- Write papers or do homework assignments
- Other

Which of these social media tools or applications do you use outside of school? (Check all that apply)

- Communicate with others through discussion boards, social networking sites, chat or online communities
- Communicate with others through text messaging
- Contribute to a wiki
- Create videos to post and share with others (such as: YouTube, Facebook video)
- Download and view videos from the Internet
- Follow blogs that interest me
- Participate in an online community around a topic that I am interested in
- Participate in massively multiplayer online games (MMOG) or other virtual reality worlds (such as World of Warcraft)
- Participate in online/mobile app games (such as: Words With Friends, Facebook games)
- Stream TV shows/movies from the internet (such as: Hulu, Netflix)
- Take an online class
- Talk to others over the Internet (such as: Skype, Facetime or iChat)
- Update my social networking profile (such as Facebook)
- Use educational mobile apps (such as: graphing calculator, vocabulary lists, language translators)
- Use Twitter to communicate or to follow others
- Use web tools/mobile apps to create a list of resources I want to share or remember (such as: Evernote, Pinterest)
- Use web tools/mobile apps that notify me about things I’m interested in (such as: Pulse, news or magazine articles, changes to websites)
- Use web tools for writing collaboratively with others (such as GOOGLE docs)
- Write or contribute to a blog (my own or someone else's)
- None of the above
- Other

Ask students to write in their journal a quick response to one or both of these questions:

- How important is technology to the way you learn at school and outside of school?
- What is different about the way you use technology at school from the way you use it outside of school?

2. Class Discussion – How do you like to learn science? (15 minutes)
As a class, discuss how students like to learn science. Do you like group activities? Using the computer? Learning about careers? How much (or how little) is technology involved in the way you like to learn? Are there other ways you can see technology helping you with these subject areas (such as animations, games)?

Imagine your ultimate science classroom. Which of these would be most effective in helping you be more successful in that class? (Check all that apply)
Speak Up Lesson Plan
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- Being able to text my teacher with my questions during class
- Collaborating with my classmates on real world problems and experiments
- Doing my own scientific research
- Getting outside of the classroom to study science in action
- Having access to an online science tutor
- Learning from a teacher who I feel a connection with
- Learning from a teacher who is excited about science
- Learning from career professionals or researchers in different scientific fields
- Playing online or computer based science games
- Reading from my textbook
- Taking an online science class
- Understanding the context of science through a virtual or augmented reality environment
- Using a class blog or wiki to share ideas with my classmates
- Using a mobile device to video science lessons to review later
- Using an online textbook that I can access through a mobile device
- Using animations or simulations to help me visualize difficult science concepts
- Using real time data to understand the context for science
- None of the above
- Other

3. Class Activity: Technology and Education in the News (20 minutes)
As a class, read and discuss a current article about technology in schools. We suggest any one of these as a starting point with suggested discussion questions. Choose one or multiple topics and discuss students’ reactions in class.

Mind/Shift: KQED.org Schools and Students Clash Over Use of Technology
http://blogs.kqed.org/mindshift/tag/speak-up-2011/

The High School Student and Online Learning: Be Prepared To Succeed
http://www.sys-con.com/node/1963437

Kids Today
http://www.schoolcio.com/article/kids-today/51702

One to One computing platform helps kids explore technology, world

http://www.eschoolnews.com/freeesn/index-cfm/?i=58076
*Requires a complimentary, digital subscription for access.

Potential questions to ask students during discussion:
- What kinds of technology should students be able to use at school?
- Should there be any restrictions about how to use technology at school?
- How does technology help students with their school work?
Speak Up Lesson Plan
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• How does technology distract students from their school work?
• How are decisions about technology use in schools made?
• Speak Up survey question: How could your school make it easier for you to use technology for schoolwork?

4. Group Activity: Challenges and Obstacles (15 minutes)
Divide students into small groups to brainstorm about 5 challenges or obstacles to using technology and the Internet for schoolwork. Is there any problem that is common to most challenges? What are some proposed solutions?

Encourage students to put themselves in the place of key decision makers in the school or district. How would they prioritize the problems? Which obstacle would they choose to tackle first? Encourage students to think about the trade-offs and new challenges that might be introduced by their proposal. Review the questions below and compare the responses to the list generated by the class.

Besides not having enough time in your school day, what are the major obstacles to using technology in your school? (Check all that apply)
- Cannot access Twitter, Facebook or other social media sites
- Cannot communicate with classmates using text messaging at school
- Cannot use my own mobile devices (cell phone, smartphone, tablet computer, etc.) at school
- My assignments don't require using technology
- Not enough computers or they don't often work
- Printers are not available for my use or my school charges me to print documents
- Teachers don't know how to use the technology
- Teachers limit our technology use
- The Internet is too slow
- There are too many rules against using technology at my school
- Websites that I need are blocked (through school filters or firewalls)
- Not a big deal. I rarely use the technology at my school
- Other

Next, review the question below and have the students design their own schools. What is first thing they would change at the school about technology? How does their choice help students learn?

Imagine you are designing the ultimate school. Which of these tools would have the greatest positive impact on your learning? (Check all that apply)
- Ability to access the Internet anywhere at school
- Ability to use my own mobile devices at school (such as smartphones and tablets)
- Adaptive learning software which adjusts levels of difficulty and content to address your needs
- Chat rooms to discuss topics with students while in class
- Digital content (such as: databases, electronic books, animations, videos etc)
- Digital media creation tools (video, audio)
- Digital reader (such as: Kindle, Nook)
- Educational mobile apps (such as: graphing calculator, vocabulary lists, language translators)
- Electronic portfolios for students
- Games or virtual simulations
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- Handheld student response systems
- High speed color printers
- Interactive whiteboards (such as: Smartboard, Polyvision)
- Laptop for every student to use at school
- Learning management systems (such as Blackboard)
- Online classes
- Online tests and assessments
- Online textbooks
- Online tutors
- School website or portal
- Simulations
- Social media tools for collaboration and communications (blogs, wikis, social networking sites)
- Tablet computer (such as iPad) for every student to use at school
- Text messaging
- Tools to help me organize my work (such as: organize my assignments, take notes, organize my ideas)
- Video conferences and webinars
- Virtual or online whiteboard
- Virtual reality games or environments
- Other

Extend this activity by having students write a letter or design a presentation in which they evaluate the problem, their solution(s), and how their solution(s) will benefit student learning.

5. Class Activity: Our Voices, Our Futures
Students in grades 6th-12th may begin to think about their future or they may be very used to discussing their career aspirations. Have students work on ranking the choices below on their own and share their responses within a class discussion.

How would you like your school to help you explore careers or to get prepared for a future job? (check all that apply)

- Allow me to take career preparing community college or trade school classes for credit
- Allow us to take field trips to visit companies and meet successful role models
- Have a program during the school day about future careers
- Have after school or Saturday programs about future careers
- Learn from teachers who have worked in the professional field I'm interested in
- Let career professionals teach lessons at school
- Provide a self-assessment test to identify my career interests or strengths
- Provide access to websites with information about careers
- Provide “Day in the Life” podcasts or videos about different jobs
- Provide information about mobile apps to explore careers
- Provide information about summer career exploration programs
- Provide information about summer or part-time jobs or internships in my field of interest
- Provide more career technical education classes at school so that I can learn about future jobs
- Tell me about competitions that allow me to assess my skills against other students
- Use the same tools in my classroom that professionals use at work
- Work with mentors who can help me with my college and career planning
- Other
6. Wrap Up – The Big Picture
As with previous years, the Speak Up survey concludes with 2 open-ended questions that focus on big-picture thinking. You may assign this questions to students as a homework assignment.

1.) Imagine you are invited to give the President a briefing on students’ ideas for improving education. So, what would you tell him? What new technologies would you recommend to the President as a good way to increase students’ interest in learning and help prepare them for the jobs of the future? Be creative! The President is counting on your good ideas!

2.) Thinking about all of your classes in school this year, which class would be more interesting and valuable to you if technology was better used in this class? If you were the teacher in that class, how would you use mobile devices, social media, online games or other online tools to make sure all students are successful in this class?

7. Individual Activity: Speak Up Surveys (15-20 minutes)
Have the students complete the Speak Up survey about how they use technology and the Internet at the survey site: http://www.speakup4schools.org/speakup2012/. Enter the school name and state, and your school’s secret word to access the survey.

8. Extension: Compare the results of your school with the national data
School contacts will be notified when the Speak Up data is available in February 2013. Your school's data will be accessible using an admin password provided by your Speak Up contact. Teachers can access aggregated results for their own school as well as their district and see how their students’ experience with technology and the Internet relates to other students. Speak Up will compile the results and share with local, state, and national decision-makers.

The comparative national data provides rich opportunities for data and statistics activities that support your math objectives.
Curriculum Standards

McREL Standards

From Content Knowledge, 3rd Edition, a compilation of content standards for K-12 curriculum, created by Mid-continent Research for Education and Learning (McREL).

Listening and Speaking 6-12 (Level III-IV)
Standard 8: Uses listening and speaking strategies for different purposes
http://www.mcrel.org/compendium/standardDetails.asp?subjectID=7&standardID=8

Writing 6-12 (Level III-IV)
Standard 1: Uses the general skills and strategies of the writing process
http://www.mcrel.org/compendium/standardDetails.asp?subjectID=7&standardID=1

Technology 6-12 (Level III-IV)
Standard 3: Understands the relationships among science, technology, society, and the individual

ISTE National Education Technology Standards

1. Creativity and Innovation
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

5. Digital Citizenship
   Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior

Common Core State Standards

For English Language Arts & Literacy

College and Career Readiness Anchor Standards for Reading
http://www.corestandards.org/ELA-Literacy/CCRA/R/

Key Ideas and Details
CCSS.ELA-Literacy.CCRA.R.1 Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

College and Career Readiness Anchor Standards for Speaking and Listening
http://www.corestandards.org/ELA-Literacy/CCRA/SL/
Comprehension and Collaboration

CCSS.ELA-Literacy.CCRA.SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.CCRA.SL.2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Presentation of Knowledge and Ideas

CCSS.ELA-Literacy.CCRA.SL.4 Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.CCRA.SL.5 Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

College and Career Readiness Anchor Standards for Writing

http://www.corestandards.org/ELA-Literacy/CCRA/W/

Text Types and Purposes

CCSS.ELA-Literacy.CCRA.W.1 Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

Research to Build and Present Knowledge

CCSS.ELA-Literacy.CCRA.W.7 Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

CCSS.ELA-Literacy.CCRA.W.8 Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

CCSS.ELA-Literacy.CCRA.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

CCSS.ELA-Literacy.CCRA.W.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.