Syllabus for 21things4students.net Project
Version 09-07-2012

I. Goals & Standards

A. Goal of the Project

The goal of the 21things4students project is to provide a fun and engaging way to help students improve their technology proficiency by providing cost-effective (FREE) resources to their classrooms. Using this project-based resource provides local districts with an authentic means for students to demonstrate proficiency for state reporting of 8th grade technology proficiency as opposed to a multiple-choice test.

B. Addressing Standards

The 21things for the 21st Century Student (21Things4Students.net) web resource provides project-based activities through Quests and Missions which are designed to address the National Educational Technology Standards for Students (NETS-S) and Michigan Educational Technology Standards for Students (METS-S) at grade levels 6-8, as well as skill areas identified in the P21 (Partnership for 21st Century Skills).

We hope to add and/or replace Quests in a future revision which will also address Common Core State Standards.

C. Online Learning Requirement

Student participants, guided by their instructor (referred to as their **SSI Chief**, or Secret School Instructor), complete project-based activities, using Web 2.0 tools through an online resource at http://21things4students.net. The completion of these online projects is intended to assist students in meeting the "online learning requirement" for graduation in Michigan.

D. What are the "21things?"

This 21things4students.net resource is made up of "21 things." Each thing consists of Missions made up of Quests (learning activities) in a project-based learning environment, which uses free web tools and resources to address NETS-S and METS-S standards.

II. Delivery

A. Content delivery and flexibility

This project has been designed to meet the request by teachers for flexible delivery. Therefore the 'things' do not 'build' on each other and can be used out of order, although we have suggested an order through the numbering sequence, and to begin with Thing *1. Basic Orientation.*

• Teachers can use the entire set of '21 things'
• Teachers can select individual 'things' and individual Quests in a Mission

• Teachers are free to use and customize a Moodle/Blackboard version of the 21things in full or part as long as credit is given and there is no commercial use (payment) received.

Some districts use things 1-7 for the 5th or 6th grade, then the next 7 for each of the following two grade levels. Other districts have split them up across different content areas, and some use it as part of their computer curriculum. Check with your curriculum director and technology coordinator to discuss the most effective delivery method for your school/district.

B. Tracking Document

We have provided students and teachers with a tracking document. It is a mission/quest and award listing in order from 1-21. We have provided it in two versions, an excel file and our recommended interactive Adobe Acrobat version. The interactive version features check off fields, input for the student name, input fields for reflections and comments, and a column for the SSI Chief (teacher) to check off as well. A copy of this is provided in the Appendix of this document.

Thing	Mission	Quest	Quest	✔	Badge Earned	SSI Chief
Name: Twoone					8/25/2012	
1. Basic Orientation	Mission Briefing	1.Q1	Secret Image Capture	✓		
		1.Q2	21t4s tracking doc	✓		
		1.Q3	FilesAndDomains	✓		
		1.Q4	Navigation Tips	✓		
		Award	Cadet Award		◆	
	Undercover Ops	1.Q5	AUP	✓		
		1.Q6	Passwords & Usernames	✓		
		1.Q7	Shortcuts	✓		
		1.Q8	Agent Equipment	✓		
		Award	Undercover Ops Award		◆	
	21t4s Agent	Typing	Typing Score	15 wpm		
	Quiz		Quiz score	100		
	BADGE		21 t4s Badge	★		
Notes/Reflections:		The yellow areas are boxes you can type in.				
This was a lot of fun! I liked learning how to do a screenshot and my favorite shortcut was the ZAP one!						

III. Teacher Planning

Note: For additional support or tutorials for teachers using this site, please visit the 21things4teachers.net site, where educators learn to use these tools for the classroom.

A. Teacher Registration

Teachers are asked to register through a survey tool located on the Teacher Resources or Teacher Start Pages. Registration helps the Project Team identify statistics which are helpful for reporting to the funding source as well as their employer ISD.

Registration provides a password and access to a FREE Moodle course which houses a variety of free resources. Teachers can download the badges, awards, quiz answers, certificates, and other materials developed to support teachers as they use the resources.

B. Student Work

a. Teachers need to identify their own system for the submission of student work, available at their local setting. Consider the following options:

   i. Online presence using web site creator (See Thing *3. Digital Footprint* for suggested tools such as Weebly, Edublogs, Wikispace, Google Sites, etc.)
   ii. An ePortfolio where files are saved to a local drive space ("secret file space") which become part of an electronic portfolio of student work
   iii. Course Management Systems (Moodle & Blackboard, Edmodo, etc.)

Note: In Michigan, most of the districts have access to either Blackboard or Moodle through their local Intermediate School District, or through their own installation. A zipped course for both of these cms systems is being revised for the new content and will be available for download late fall of 2012.

C. Student Accounts

a. We recommend student email accounts (e.g. Gmail) accounts be created for each student. Generic accounts can be created by the teacher. Some of the Web 'tools' used in the activities do require an email account, although we have tried to limit this.

b. Student Usernames and Passwords
   i. There is a section in the Thing *1.Basic Orientation* which helps guide password/username creation.
   ii. We recommend the teacher provide a means or location for students to store/save their usernames and passwords.

D. Teacher Resources & Feedback

The Teacher Resources on the site are: Teacher Resources, Teacher Start Page, Teacher Mission Guide (which provides links to all of the Teacher Pages), Assessment, 21Things Mission Vocabulary, Feedback & Evaluation, and Important Documents.

1) Teacher Start Page

   - Contains important notes
     Accessing the previous version of 21things4students
   - Terminology
   - Browser Recommendations
   - Alignment to the NETS-S and METS-S
   - Missions and Quests
   - Badges, Awards & Gems
   - Special Achievement Awards
   - Quizzes
   - Tracking Document
   - Content delivery

- Curriculum Standards Alignment
- Audio and Video
- Syllabus
- Web sites accessed list
- Bad links reporting
- CMS integration for Moodle and Blackboard

B. Teacher Mission Guide - this opens to individual teacher pages for each of the 21 'Missions" **which have:**

- Descriptions of the Mission(s) and Quests for each Project
- Projected completion times
- Links to Additional Resources
- Additional Activities
- Evaluation - rubrics
- NETS-S and METS standards addressed in the Mission
- Feedback link to a short survey providing feedback on the individual Mission and Quest

C. Assessment

Portfolio suggestions
- Rubrics discussion
- Quiz information

D. 21 Things Mission Vocabulary - Terms used in this project

E. Feedback & Evaluation - Request for your feedback and suggestions

F. Important Documents

- Standards alignment
- Graphic map of the Missions and Quests located on the Mission Guide
- Student Mission & Quest tracking guide
- Compressed list of all of the Mission and Quests
- Syllabus
- List of website URLs

G. SSI Department Chief
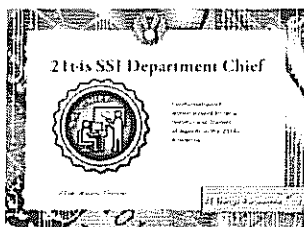
Teachers are referred to as the SSI Department Chief. Throughout these activities we suggest students (referred to as Agents) check with their SSI Chief for specific directions or requirements. For additional terms we use, please refer to the 21things Mission Vocabulary page. All students begin as "Recruits" and graduate to a "Cadet" and then to "21t4s Agent" upon completion of the Basic Orientation. They will then do Missions and Quests for the 21t4s Agency,

earning badges, awards and gems. Upon completion of the entire set of 21things, the student can be award a personalized certificate as a "Graduate of the 21t4s Academy of Technology Proficiency." The SSI Chief badge is available through the Moodle site along with the other teacher resources.

H. Missions & Quests

We recommend everyone start their students with the "1. Basic Orientation Begin Here" page. The activities are called "Quests" and include all of the resources for the learning process online. The resources include: videos, video tutorials, directions, documentation, files, and linked web resources. Students will use a wide variety of FREE web tools as they develop technology skills while completing the Quests. Students will demonstrate their skills as they create a 'digital portfolio' of work.

An online Mission begins with an orientation to the Quests (activities) around an identified area of learning (one of the 21things). The "21things" are made up of one or more Missions, and each mission is made up of one or more Quests. The Quests are activities which may include videos, audio, tutorials, directions, files, or linked resources. Students demonstrate proficiency in each of the 21things by creating one or more end-products, which become part of a Digital Portfolio demonstrating their proficiency with technology.

I. Badges, Awards, Certificates & Gems

Badges, Awards & Gems have been designed by our graphic design artist. When teachers register they will receive access to a password protected Moodle course which houses the badge, award, gem, special achievement awards, and certificate images which can be awarded to the student. *Gems* are awards that can be uses for *Advanced Activities* found linked to these teacher pages, such as in the Suite Tools Advanced activities. *Advanced Activities* are linked to the teacher pages. We suggest not posting these on an open access website, page or location to preserve the 'specialness' of these for the students using this resource from around the globe.

Examples:

Enforcement Specialist badge (Be Legal and Fair)

Gold Gem
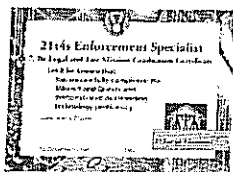
Graduation Certificates for the completion of each of the 21 things are available as a PowerPoint file so that a teacher is able to type in the student name and date before printing it out. We have limited the amount of color in the certificate to help the printing budget.

There are 4 special awards available for teachers to assign to students for exceptional work: Gold Medal Award, Helping Others Award, Problem-Solver Award, and Tech Assistant Award.

IV. Media & Technical Aspects

D. Student Portfolio/Online Presence
    a. Steps needed
        i. Work with your Tech Director

    ii.   Work with your Curriculum Coordinator

    iii. Follow the acceptable use policies for your school

    iv. Create student accounts as needed for your deployment

A. Audio and Video

A few of the videos are flash-based. We are housing the majority of our own videos on Vimeo to address compatibility issues. There are some videos embedded from Common Craft, SchoolTube, TeacherTube, and a few other sources which are identified on our web site links listing. We will work on providing the audio content of videos as mp3 files as needed by districts if they cannot unblock access to them. We are also working to provide mp3 audio for all of the pages to address accessibility and student preference (later fall 2012).

B. Bad Links

When a web link or resource does not work, please notify us and we will work to replace it as quickly as possible. There is a "Bad Link Report" button and we ask you to include the link to the page it is located on, and where on the page (screenshot or such) to help us. We have provided a "Bad Link" button on the About Page or use our email address provided 21things4students@remc.org .

C. Browser Recommendations

We are working to limit the amount of Flash media housed on the site to improve compatibility with a variety of devices and browsers. If Flash is available, please make sure it is updated and enabled (for some video viewing). Java may also be required for some of the project activities, in particular for thing 21. Game Design. We are moving the majority of our own videos to be hosted on the Vimeo site so that users with iPads can view them. Please have your district open the access to the Vimeo site if it is blocked. iPad users can use a variety of Free browsers from the app store (Photon, Rover, Skyfire to name a few) which view assorted flash files if needed.

D. Software Requiring Installation

1. Scratch by MIT used in thing 21.Game Design, located at http://scratch.mit.edu/.
2. PhotoStory3 in Thing 18. Digital Storytelling

E. Web 2.0 Tools and Registration

We have tried to focus on web tools which do not require students to create an account to cut down on the number of passwords and usernames required. There are some tools which do require registration online with an email address, for example the Thing *5.Suite Tools* which focuses on Google applications.

A. Web sites accessed list

A link is provided on the Teacher Start Page listing the URL's accessed. We have created a spreadsheet which lists the external links we are using for student missions and quests.

V. Assessment

A. Portfolio

We encourage teachers to have students complete their work through an electronic portfolio of some sort. We have provided links to some samples on the Student Showcase page, and will add more over time.

Following are some suggestions from teachers using this project:

1. Web-based portfolio using free web page resources such as Weebly, Edublogs, or student web pages your district provides. Please make sure these pages are either password protected or your students do not provide their full name and contact information.

2. Google docs portfolio shared with you

3. Word Processing program used as an eportfolio, keeping screenshots or samples of each of the artifacts for the Quests they complete.

4. Use of a Course Management System such as Blackboard & Moodle provides. * We are currently working on a zipped course version of each of these and will post them as soon as they are completed (projected for late fall 2012).

5. They can alternatively save their work on a local network drive the district provides, or their own medium, such as a flash drive.

B. Quizzes in Testmoz

There is a quiz located on each "thing" graduation page. These are considered to be vocabulary or informational and not demonstration of technology proficiency. The student uses the link provided, which takes them to a login page for Testmoz.com. They enter a name which is not saved, and the password provided to them. They can retake these as many times as they wish. **The password to** take **each quiz** is provided with the link to the quiz. (It is always the first name of the 'thing' plus 21. Example: Cloud Management quiz password is cloud21).

Quiz score: We instruct them to take a screenshot (taught in basic orientation) of their score to save in their 'secret filespace,' show to their SSI Chief and to enter the score in their tracking document. There will be anywhere from 3-10 multiple choice questions for each quiz. At this time we are unable to provide you with specific student answers, so you may want them to capture their results beyond the score. This may be a change we can implement for the 2013 summer update.

Quiz location: The quizzes are located on the "Graduation" pages which are hidden from the sidebar menu, but are linked to from the bottom of each main mission page.

Quiz answers: Teachers are able to access a list of the quizzes and answers on the password protected page in Moodle after they register.

C. Rubrics

We have provided (or are in the process of adding) rubrics to help guide the evaluation of student work for the different Quests. We welcome any submissions by you to help complete them or to provide additional options. Please title them with the Mission and Quest name and send them to 21things4students@remc.org . We recommend rubric creation sites such as http://rubistar.4teachers.org/ or at Teachnology's http://www.teach-nology.com/platinum/samples/rubrics/ .

21Things4Students Rubric

Visual Organization

Level 1 – Beginner	0-59	E	Assignment is missing or incomplete, knowledge is unclear or not conveyed
Level 2 – Novice	60-69	D	Assignment has been attempted, knowledge is emerging
Level 3 – Apprentice	70-79	C	Assignment is complete and some what accurate, knowledge is limited
Level 4 – Journeyman	80-89	B	Assignment is complete and accurate, student is knowledgeable
Level 5 – Expert	90-100	A	Assignment is above expectations and unique, able to share knowledge with others

Quest:

Student Name: Grade Level:

Level 1	2	3	4	5
Student did not complete assignment. OR Student does not demonstrate an understanding of mapping using Gliffy, bubbl.us or another mapping program. Work completed shows major misunderstandings about the topic	Student demonstrates basic understanding of mapping using Gliffy, bubbl.us or another mapping program. Work completed shows some misunderstandings of topic	Student demonstrates understanding and essential knowledge of mapping using Gliffy, bubbl.us or another mapping program. Work completed is mostly accurate. Some minor misunderstandings exist.	Student demonstrates a moderate amount of understanding of mapping using Gliffy, bubbl.us or another mapping program. Work completed is accurate	Student demonstrates an exemplary understanding of mapping using Gliffy, bubbl.us or another mapping program. Work completed is very accurate. Student presents information above and beyond what was expected

Comments:

D. Assessment Connections to Data Warehousing Environment in Michigan

With 98% of the schools in Michigan using a data warehousing system, it is strongly encouraged that teachers document student performance. The reporting of 8th grade technology proficiency is required annually. To assist your district in reporting student proficiency, consider using your local data warehouse with the 21things4students in the following ways:

a. Review the technology standards loaded in your own data warehouse and align student assessments with the NETS-S and/or METS
b. Consider the following data points to chart student growth:
   i. pre- and post- assessment of technology skills
   ii. create an item bank of questions related to standards
   iii. chart proficiency for each project based learning activity or "Thing" using the 5-point rubric
   iv. record test, quiz, and/or assessment scores
   v. create unique assessments based on local district initiatives in technology
c. Generate reports that show growth in student technology proficiency and share with your administration

VI. About the Project

The 21things4students.net project is supported by a grant from the REMC Association of Michigan and maintained by a team from three Intermediate School Districts in Michigan (Ingham ISD, Macomb ISD, and Shiawassee RESD). It was created as an educational and online resource to help students improve their technology proficiency as they prepare for success in the 21st century. This project was specifically developed to provide districts and classroom teachers with resources to help students meet or exceed the 8th grade technology proficiency requirements in Michigan. The development of this resource came at the request of teachers using the initial 21things4teachers.net site.

During the first year (2011-2012) of this project over 5,000 surveys were completed by students from across the globe. Their primary suggestion was to make it more game-like and interactive. The project site was revised (summer 2012) to take the 21 things and change them into Missions where student 'agents' complete a series of "Quests" (activities/projects). Students can receive badges, awards, and gems (all digital) for completing the Missions, and a Certificate of Graduation from the 21t4s Academy when all 21 areas have been successfully completed from their "Secret School Instructor" (aka SSI Chief).

The team that created and manages this project consists of:
Carolyn McCarthy, Project Manager, Shiawassee RESD
Jan Harding, Macomb ISD
Jennifer Parker-Moore, Ed.D., Macomb ISD
Melissa White, Ingham ISD
and in memory of Frank Miracola, Macomb ISD

This project has received invaluable help and input from the following educators:
Members of the REMC Instructional Technology Specialists in Michigan (REMC/RITS): Malinda Waffle, Kevin Clark, Gina Loveless, Greg Marten, Ron Houtman, Andy Mann, Toula Jacobson, Anne Thorp, Cindy Kendall, Kay Hauck, Laura Cummings, Lynn Lieberman, Tim Davis, and Sue Summerford.

Teacher-educators from classrooms piloting and using the 21things4students who helped with Mission and Quest development:
Kathy Campau, Scott Husken, Renee Jorae, Sharon Sylvester, Julie Ann Hopp, Julia Lengemann, Wendy Murray, Heather Pickering, Tom Lurie, Bill Trachsel, Doug Quick, and Suzie Woda.

Graphic Design: Foxbright and Oleh Godzak (Macomb ISD)

Project ISD Partners: Ingham ISD , Macomb ISD , Shiawassee RESD

We have worked hard to provide project-based activities which address the National Educational Technology Standards for Students (NETS-S), and the Michigan Educational Technology Standards for students (METS) as well as areas of the Framework for 21st Century Learning identified by the Partnership For 21st Century Skills.

Contact information: 21things4students@remc.org

VII. The "21 Things"

Thing 1: Basic Orientation

The Basics are designed to teach students how to navigate the site, create logins/passwords, and use equipment and tools in a productive manner. Screen captures, file storage, navigating websites, visual learning tools to mind map acceptable use, passwords/user names, and keyboard shortcuts are all a part of this "Thing". Students are asked to create a "secret file space", an online presence, or navigate their course management system to post their work.

Tools: Weebly, Survey Monkey, Typing Test, Type Race, Typing Web, and some Keyboarding games

Standards:

NET-S:	METS
4. Critical Thinking, Problem Solving, & Decision Making	6-8.Technology Operations & Concepts
b. Plan and manage activities to complete a project	1. Identify file formats for a variety of applications
6. Technology Operations & Concepts	5. Identify a variety of information storage devices and
a. Understand and use technology systems.	rationales for using a certain device
	6. Use accurate technology terminology

Thing 2: Cloud Management
Cloud Management is the "thing" that teaches students about using internet based resources in the "cloud" to organize and manage files, including documents, websites, videos, etc. Students will learn how to save their bookmarks "in the cloud" for easy retrieval at any computer, as well as create a Dropbox account for easy document storage and retrieval from anywhere.

Tools: Diigo, Delicious, Dropbox

Standards:

NETS-S:	METS:
2. Communication & Collaboration	6-8.Research & Information Literacy
a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.	1. use a variety of digital resources to locate information
d. Contribute to project teams to produce original works or solve problems.	6-8.Technology Operations & Concepts
3. Research & Information Fluency	2. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials
b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.	

Thing 3: Digital Footprint

Digital Footprint refers to the online presence students create through the various websites they visit, including blogs, wikis, social networking sites, and more. Students also use visual image tools to create word clouds and mind maps for a visual of their digital footprint.

Tools: Google Docs or Chartle (tallying internet use), Image Chef, Bubbl.us or gliffy

NETS-S:	METS:
1.Creativity & Innovation b. create original works as a means of personal or group expression. 5.Digital Citizenship a. advocate and practice safe, legal, and responsible use of information and technology.	6-8.Creativity & Innovation 2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience 6-8.Digital Citizenship 6. discuss the long term ramifications (digital footprint) of participating in questionable online activities (e.g., posting photos of risqué poses or underage drinking, making threats to others)

Thing 4: Visual Organizers

Visual Organizers shares online visual mapping tools/organizers that can be used for note-taking, summarizing, brainstorming or any activity where students need to make a visual display of information.

Tools: Bubbl.us or gliffy, Alternates: creately, xmind, mindomo
Standards:

NETS-S:	METS:
2. Communication & Collaboration a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats d. Contribute to project teams to produce original works or solve problems 3. Research & Information Fluency d. Process data and report results 4. Critical Thinking, Problem Solving, & Decision Making a. Identify and define authentic problems an significant questions for investigation b. Plan and manage activities to develop a solution or complete a project	6-8.Creativity & Innovation 1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity 3. illustrate a content-related concept using a model, simulation, or concept-mapping software 6-8.Technology Operations & Concepts 2. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials

6. Technology Operations & Concepts d. Transfer current knowledge to learning of new technologies	

Thing 5: Suite Tools

Suite Tools are the free, online set of document creation tools that allow students to create as well as collaborate on documents. One of the best known examples of this in the "cloud" is Google Drive. Formerly known as Google Docs, it is similar to Microsoft Office. Google Drive allows students to create documents with a word processor, spreadsheet, presentation tool, as well as access premade templates. Students can create documents and work collaboratively on them online, as well as comment on each other's work.

Tools: Google Docs, pics4learning, bubbl.us or gliffy, MEL, online citation makers, other free image sites

Standards:

NETS-S	METS
1. Creativity & Innovation b. Create original works as a means of personal or group expression.	6-8. Creativity and Innovation 1. Student will use common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity
2. Communication & Collaboration d. Contribute to project teams to produce original works or solve problems.	2. Student will create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience.
5. Digital Citizenship a. Advocate and practice safe, legal, and responsible use of information and technology. b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity. c. Demonstrate personal responsibility for lifelong learning	6-8. Critical Thinking, Problem Solving, Decision Making 2. Student will evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program) 6-8. Digital Citizenship 1. Student will provide accurate citations when referencing information sources
6. Technology Operations and Concepts a. Understand and use technology systems. b. Select and use applications effectively and productively. d. Transfer current knowledge to learning of new technologies.	6-8. Technology Operation and Concepts 1. Student will identify file formats for a variety of applications (e.g., doc, xls, pdf, txt, jpg, mp3) 2. Student will use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials.

Thing 6: Cyber Safety

This is the internet safety and digital citizenship "Thing". There are a number of resources and additional assignments related to Internet Safety. Students will utilize a variety of online resources to learn about social, ethical, and responsible use of the Internet. Cyber-bullying is also covered during this "Thing".

Tools: Possible use of Google Docs, Glogster, Flickr, Creative Commons , Cyberspy Game and Theft Faceoff, PBS Kids Webonaut game

Standards:

NETS-S:	METS:
5. Digital Citizenship	6-8.Digital Citizenship
a. Advocate and practice safe, legal, and responsible use of information and technology	1. Provide accurate citations when referencing information sources
	2. Discuss issues related to acceptable and responsible use of technology (such as privacy, security, copyright, plagiarism, viruses, file-sharing)
b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity	3. Discuss the consequences related to unethical use of information and communication technologies
	4. Discuss possible societal impact of technology in the future and reflect on the importance of technology in the past
c. Demonstrate personal responsibility for lifelong learning	5. Create media rich presentations on the appropriate and ethical use of digital tools and resources
d. Exhibit leadership for digital citizenship	6. Discuss the long term ramifications (digital footprint) of participating in questionable online activities (such as posting photos of risqué' poses or underage drinking, making threats to others)
	7. Describe the potential risks and dangers associated with online communications

Thing 7: Be Legal and Fair

Copyright laws are a major concern for both students and teachers. Use the links and resources on this page to help clear up some misconceptions about copyright, locate copyright free material, and learn more about Creative Commons.

Tools: MS Word or Google Docs, Free image sites, Creative Commons

Standards:

NETS-S:	METS
1. Creativity & Innovation	6-8.Creativity & Innovation
b. Create original works as a means of personal or group expression	2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience
5. Digital Citizenship	
a. Advocate and practice safe, legal, and responsible use of information and technology	6-8.Research &Information Literacy
	3. understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched
d. Exhibit leadership for	

digital citizenship	
	6-8.Digital Citizenship 1. provide accurate citations when referencing information sources 2. discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, viruses, file-sharing) 5. create media-rich presentations on the appropriate and ethical use of digital tools and resources 7. describe the potential risks and dangers associated with online communication

Thing 8: Search Strategies

The goal of this "thing" is to get students to utilize search engines, educational databases, blogs and wikis to locate information. Evaluation criteria and citation tools are presented so that students understand how to critically evaluate information they find readily on the web. They are then tested on this knowledge by completing a research project.

Tools: CAARDS, Bogus and hoax sites, Students write paragraphs; use of word processing tool; analyze blog and wiki sites, Google search, Google Scholar, Big6

Standards:

NETS-S:	METS:
1. Creativity & Innovation b. Create original works as a means of personal or group expression	6-8.Research & Information Literacy 1. use a variety of digital resources to locate information 2. evaluate information from online information resources for accuracy and bias
2. Communication & Collaboration b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats d. Contribute to project teams to produce original works or solve problems	3. understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched 4. identify types of web sites based on their domain names (e.g., edu, com, org, gov, net)
3. Research & Information Fluency a. Plan strategies to guide inquiry b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks d. Process data and report results	6-8.Communication & Collaboration 1. use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences
4. Critical Thinking, Problem Solving, & Decision Making a. Identify and define authentic problems and significant questions for investigation b. Plan and manage activities to develop a solution or complete a project	6-8.Critical Thinking, Problem Solving, & Decision Making 3. gather data, examine patterns, and apply information for decision making using available digital resources

c. Collect and analyze data to identify solutions and/or make informed decisions d. Use multiple processes and diverse perspectives to explore alternative solutions 5. Digital Citizenship a. Advocate and practice safe, legal, and responsible use of information and technology b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity c. Demonstrate personal responsibility for lifelong learning	6-8.Digital Citizenship 1. provide accurate citations when referencing information sources 6-8.Technology Operations & Concepts 3. perform queries on existing databases 4. know how to create and use various functions available in a database (e.g., filtering, sorting, charts)

Thing 9: Social Networks

The influences of social networking and microblogging sites such and Twitter and Facebook have over 500 million active users "tweeting" and "posting" throughout the world. Twitter in April of 2011 had over 200 million accounts. Google + (Plus) is another site that is attracting a lot of attention with its ability to put your contacts into "circles" of friends, professional contacts, family, etc. With the popularity of these sites exploding, educators must find ways to teach social responsibility and the importance of privacy settings. In addition, students must also understand that posting comments, such as in a blog or on FaceBook, comes with guidelines as well.

As you consider how you will teach this thing, consider using EdModo (FaceBook-like, educational, and FREE) or EduBlogs (FREE blogging site where you can create student blogs).

Tools: Teacher's Domain (life online), Glogster OR Google Presentation OR Prezi OR VoiceThread, Edublogs, Google Forms OR Survey Monkey

Standards:

NETS-S:	METS:
2. Communication & Collaboration a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media. b. communicate information and ideas effectively to multiple audiences using a variety of media and formats. 5. Digital Citizenship b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity. c. demonstrate personal responsibility for lifelong learning.	6-8.Communication & Collaboration 1. use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences 3. identify effective uses of technology to support communication with peers, family, or school personnel 6-8.Research & Information Literacy 1. use a variety of digital resources to locate information

Thing 10: Hands-On-Line

Hands On-line helps students explore what it takes to become a successful online learner. Each state has its own online requirements for K-12 students. This has led to more schools offering students instruction in a virtual environment. One example is the Michigan Merit Curriculum guidelines (2006) for online learning require that students: 1. Take an online course, or 2. Participate in an online experience, or 3. Participate in online experiences incorporated into each of the required credit courses of the Michigan Merit Curriculum.

Tools: Word processor program of your choice
Standards:

NETS-S:	METS:
4. Critical Thinking, Problem Solving & Decision Making a. Identify and define authentic problems and significant questions for investigation c. Collect and analyze data to identify solutions and/or make informed decisions d. Use multiple processes and diverse perspectives to explore alternative solutions 5. Digital Citizenship b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity c. Demonstrate personal responsibility for lifelong learning	6-8.Communication & Collaboration 1. use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences 3. identify effective uses of technology to support communication with peers, family, or school personnel

Thing 11: Interactives

Interactive websites are designed to enhance online learning opportunities and engage students in authentic learning processes. They interact with the user through a text-based or graphical user interface. There are now thousands available. This "Thing" will spotlight some that are well known for their standards based curricular activities. Students will find many uses for Google Maps, Thinkfinity, and Quizlet.

Tools: Google Maps, Thinkfinity, Quizlet
Standards:

NETS-S:	METS:
3. Research & Information Fluency b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks 4. Critical Thinking, Problem Solving, & Decision Making a. Identify and define authentic problems and significant questions for investigation d. Use multiple processes and diverse perspectives to explore alternative solutions	6-8.Creativity & Innovation 3. illustrate a content-related concept using a model, simulation, or concept-mapping software

6. Technology Operations & Concepts	
b. Select and use applications effectively and productively	

Thing 12: Digital Images

During this "Thing", students will learn to edit, store, and access photos. In education, many digital image sites are blocked by filtering. Therefore, this "Thing" will focus more on the photo editing resources. Photo storage sites such as Flikr and others are not spotlighted, but are listed as Additional Resources.

Tools: Avatar creators (wee world, doppleme, wimpy yourself), Fotoflexer

Standards:

NETS-S:	METS:
1. Creativity & Innovation	6-8.Creativity & Innovation
a. Apply existing knowledge to generate new ideas, products, or processes	1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity
b. Create original works as a means of personal or group expression	
	2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience
3. Research & Information Fluency	
b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media	
c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks	6-8.Research & Information Literacy
	1. use a variety of digital resources to locate information
5. Digital Citizenship	
a. Advocate and practice safe, legal, and responsible use of information and technology	
	6-8.Digital Citizenship
	1. provide accurate citations when referencing information sources
6. Technology Operations & Concepts	
a. Understand and use technology systems	
b. Select and use applications effectively and productively	

Thing 13: Troubleshooting

The purpose of this "thing" is to help students become more self-reliant when faced with a computer problem such as printer trouble, sound, or connectivity issues. At the very least, students needs to learn how to protect personal identity and electronic data. There are many aspects of this protection, including software updates, active monitoring software, and personal habits for online interaction. Students need to be aware of threats that can harm them. Also, understanding some key troubleshooting skills will allow your students to get their computers up and running quickly, and without waiting for someone else to help them.

Tools: Visual Organizer (bubbl.us or gliffy), Word processor, Delicious or Diigo account

Standards:

NETS-S:	METS:
4. Critical Thinking, Problem Solving & Decision Making	6-8.Technology Operations & Concepts
b. Plan and manage activities to develop a solution or complete a project	6. use accurate technology terminology
d. Use multiple processes and diverse perspectives to explore alternative solutions	
6. Technology Operations & Concepts	
a. Understand and use technology systems	
b. Select and use applications effectively and productively	
c. Troubleshoot systems and applications	
d. Transfer current knowledge to learning of new technologies	

Thing 14: Dig the Data

During this "Thing", students will utilize spreadsheets, charting, and critical thinking to analyze information. A spreadsheet is a computer program such as Excel, OpenOffice Calc, or Google Docs Spreadsheets that is used to plot data in cells (or the intersection of a column and a row). There are many additional features of spreadsheets, including the ability to use formulas, charts, functions, and data analysis tools. In addition, students will use visual learning tools (Wordle) to get started with data analysis.

Tools: Wordle, Excel or Google spreadsheet, Tetris (game online)
Standards:

NETS-S	METS
1. Creativity & Innovation	6-8.Creativity & Innovation
b. Create original works as a means of personal or group expression	1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity
d. Identify trends and forecast possibilities	
3. Research & Information Literacy	
d. Process data and report results	6-8.Technology Operations & Concepts
	4. know how to create and use various functions available in a database (e.g., filtering, sorting, charts)

Thing 15: Career Prep

The Career Prep "Thing" should coincide with your school's current Educational Development Plan (EDP). Some districts pay for Career Cruising, while others choose to utilize free resources such as the ones outlined here. Prior to planning to teach this thing, check with your school counselor about the most up-to-date EDP policies and procedures for your school.

Tools: Career prep-Holland Code, Bubbl.us or gliffy or Wordle or Tagxedo, Various career resource sites, Google docs or spreadsheet

Standards:

NETS-S	METS
1. Creativity & Innovation b. create original works as a means of personal or group expression. 3. Research & Information Fluency b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks. d. process data and report results. 4. Critical Thinking, Problem Solving, & Decision Making a. identify and define authentic problems and significant questions for investigation. c. collect and analyze data to identify solutions and/or make informed decisions. 5. Digital Citizenship c. demonstrate personal responsibility for lifelong learning. 6. Technology Operations and Concepts a. understand and use technology systems. b. select and use applications effectively and productively. c. troubleshoot systems and applications. d. transfer current knowledge to learning of new technologies.	6-8.Creativity & Innovation 1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity 2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience 3. illustrate a content-related concept using a model, simulation, or concept-mapping software 6-8.Research & Information Literacy 1. use a variety of digital resources to locate information 5. employ data-collection technologies (e.g., probes, handheld devices, GPS units, geographic mapping systems) to gather, view, and analyze the results for a content-related problem 6-8.Critical Thinking, Problem Solving, and Decision Making 1. use databases or spreadsheets to make predictions, develop strategies, and evaluate decisions to assist with solving a problem 3. gather data, examine patterns, and apply information for decision making using available digital resources

Thing 16: Buyer Beware

Students are bombarded with Internet advertisements every day. As consumers, it is important to teach them how to be safe, smart, and responsible. E-commerce refers to doing business on the Internet. This includes using the Internet for business (i.e. buying, selling, or marketing), creating an e-biz, or consumer use (i.e. banking, buying/selling, or checking stocks).

Tools: Spreadsheet or word processor, EdHeads "Design a Cellphone"
Standards:

NETS:	METS:
1. Creativity & Innovation	6-8.Creativity & Innovation
c. use models and simulations to explore complex systems and issues.	3. illustrate a content-related concept using a model, simulation, or concept-mapping software
3. Research & Information Fluency	6-8.Research & Information Literacy
b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.	1. use a variety of digital resources to locate information
d. process data and report results.	2. evaluate information from online resources for accuracy and bias
	3. understand that using information from a single internet source might result in the reporting of
4. Critical Thinking, Problem Solving & Decision Making	erroneous facts and that multiple sources should
c. collect and analyze data to identify solutions and/or make informed decisions.	always be researched

Thing 17: Mobile Computing

The Mobile Computing "thing" reminds students about what is appropriate when using portable mobile/cell phone technology. The EdHeads and NetSmartz sites are a big part of this "thing".

Tools: Spreadsheet or word processor, EdHeads "Design a Cellphone"
Standards:

NETS-S	METS
1. Creativity & Innovation	
c. Use models and simulations to explore complex systems and issues	6-8.Creativity & Innovation
	1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an
4. Critical Thinking, Problem Solving, & Decision Making	audience and to support creativity
a. Identify and define authentic problems and significant questions for investigation	2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience
5. Digital Citizenship	6-8.Communication & Collaboration
a. Advocate and practice safe, legal,	3. identify effective uses of technology to support communication with

and responsible use of information and technology d. Exhibit leadership for digital citizenship	peers, family, or school personnel 6-8.Digital Citizenship 3. discuss the consequences related to unethical use of information and communication technologies 7. describe the potential risks and dangers associated with online communications

Thing 18: Video Creation

During this "thing", students will be learning about digital storytelling and video creation. Students may also want to utilize photos they photo-edit using tools they learned about in Digital Images. They will create digital stories with these photos using available tools such as Photostory 3, Movie Maker, or iMovie. Voicethread and Animoto are also FREE options. For video posting, consider using Vimeo, TeacherTube, or SchoolTube. Finally, for video editing, consider using WeVideo.

Tools: Photopeach, Photostory3, or Voicethread, Various free music sites, Citation makers
Standards:

NETS-S	METS
1. Creativity & Innovation a. Create original works as a means of personal or group expression	6-8.Creativity & Innovation 2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of
3. Research & Information Fluency c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks	media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience
4. Critical Thinking, Problem Solving, & Decision Making b. Plan and manage activities to develop a solution or complete a project	6-8.Critical Thinking, Problem Solving, & Decision Making 2. evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program)
5. Digital Citizenship a. Advocate and practice safe, legal, and responsible use of information and technology	6-8.Digital Citizenship 1. provide accurate citations when referencing information sources 5. create media-rich presentations on the appropriate and ethical use of digital tools and resources

Thing 19: Powerful Presentations

Research on effective teaching and learning strategies (Classroom Instruction That Works, Marzano, Pickering, and Pollock) has shown that the use of nonlinguistic representations, graphic organizers, note taking, and setting goals/objectives are effective strategies to use for learners. The use of multimedia or web presentations can address many or all of these strategies. Students will be exposed to a variety of presentation tools, including Prezi or Google Presentations.

Tools: Prezi, Google Presentations (Glogster, Voicethread, also options).

Standards:

NET-S	METS
1. Creativity & Innovation b. Create original works as a means of personal or group expression 2. Communication & Collaboration a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats d. Contribute to project teams to produce original works or solve problems 3. Research & Information Fluency b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media 5. Digital Citizenship b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity 6. Technology Operations & Concepts d. Transfer current knowledge to learning of new technologies	6-8.Creativity & Innovation 2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience 6-8.Communication & Collaboration 1. use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences 6-8.Digital Citizenship 1. provide accurate citations when referencing information sources

Thing 20: Screencasting

This "thing" called "Screencasting" will show students how to create "how to" demonstrations of their on-screen performance using free tools like Screencast-o-matic and Jing. In situations where students are not able to appear on-screen due to parent permission or AUP issues, cartoons and avatars are a workable substitute. Therefore, students will learn about the free tools available for creating cartoons and animated presentations.

Tools: Writecomics, Screen-cast-o-matic OR Screenr OR Jing
Standards:

NETS-S	METS-S
1. Creativity and Innovation a. apply existing knowledge to generate new ideas, products, or processes. b. create original works as a means of personal or group expression. 2. Communication and Collaboration b. communicate information and ideas effectively to multiple audiences using a variety of media and formats. 3. Research and Information Fluency a. plan strategies to guide inquiry. b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks. 4. Critical Thinking, Problem Solving, and Decision Making a. identify and define authentic problems and significant questions for investigation. b. plan and manage activities to develop a solution or complete a project. 5. Digital Citizenship a. advocate and practice safe, legal, and responsible use of information and technology. 6. Technology Operations and Concepts a. understand and use technology systems. b. select and use applications effectively and productively. c. troubleshoot systems and applications. d. transfer current knowledge to learning of new technologies.	6-8. Creativity & Innovation 2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience 6-8.Critical Thinking, Problem Solving & Decision Making 2. evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program) 6-8.Digital Citizenship 5. create media-rich presentations on the appropriate and ethical use of digital tools and resources

Thing 21: Game Design

Computer science programs are shrinking in America's colleges and universities because students are not choosing these majors. Many students might be interested in game design and development but are often discouraged when they learn how important math and science skills are, especially if they are not comfortable in these areas of learning. By introducing programming concepts earlier it is hoped that more students can be interested in pursuing higher learning in these areas. Game Design gives students an opportunity to use SCRATCH, a program that allows kids to learn programming in an easy, fun, and very game like environment. Scratch was developed by the MIT Media Lab at the Massachusetts Institute of Technology.

Tools: Scratch
Standards:

NETS-S:	METS:
1. Creativity & Innovation a. Apply existing knowledge to generate new ideas, products, or processes. b. Create original works as a means of personal or group expression. c. Use models and simulations to explore complex systems and issues. 2. Communication & Collaboration a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats. c. Contribute to project teams to produce original works or solve problems. 4. Critical Thinking, Problem Solving, & Decision Making a. Identify and define authentic problems and significant questions for investigation. b. Plan and manage activities to develop a solution or complete a project. 6. Technology Operations & Concepts a. Understand and use technology systems. b. Select and use applications effectively and productively. c. Transfer current knowledge to learning of new technologies.	6-8.Creativity & Innovation 2. Student will create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience. 3. Student will illustrate a content-related concept using a model, simulation, or concept mapping software.