

**NEW MILFORD PUBLIC SCHOOLS**  
**New Milford, Connecticut**



8<sup>th</sup> Grade Intermediate Computer  
Applications

**June 2016**

**Approved by BOE, December 2016**

## **New Milford Board of Education**

David Lawson, Chairperson  
Bill Dahl, Vice Chairperson  
Wendy Faulenbach, Secretary  
Tammy McInerney, Assistant Secretary  
Angelia Chastain  
Robert Coppola  
David Littlefield  
Brian McCauley  
J.T. Schemm

### **Superintendent of Schools**

Mr. Joshua Smith

### **Acting Assistant Superintendent**

Ms. Alisha DiCorpo

### **Authors of Course Guide**

Jennifer Morrison  
Korin Santovasi

## **New Milford's Mission Statement**

The mission of the New Milford Public Schools, a collaborative partnership of students, educators, family and community, is to prepare each and every student to compete and excel in an ever-changing world, embrace challenges with vigor, respect and appreciate the worth of every human being, and contribute to society by providing effective instruction and dynamic curriculum, offering a wide range of valuable experiences, and inspiring students to pursue their dreams and aspirations.

# **New Milford Public Schools**

## **Curriculum**

### **8th Grade Computer Technology-Intermediate Computer Skills**

8th grade technology is taken by all 8th grade students. The class meets once every 6 days for the entire school year and will be pass/fail. Building on the skills learned in 7th grade, the curriculum continues the model of learning new skills while creating media emphasizing 21st century skills. Students will create a digital portfolio of their work and their personal responses to that work. Student projects will be individual and small group allowing them to practice collaboration. Digital publication will be explored through creation of publicity material for a club or organization that is of interest to the student. The topic of data will include both how data is collected about them every day and how to use data. Students will also be introduced to Data Science (Machine Learning) building on the computational thinking they began in 7th grade. The second half the year will be devoted to pursuing a technology topic of interest to the individual student. They will research, learn, and create a tutorial to teach others. Appropriate Digital Citizenship skills (taught in 6th grade) will continue to be reinforced throughout the curriculum.

**New Milford Public Schools**  
**Curriculum**  
 8th Grade Computer Technology

<b>Committee Member(s):</b> Jennifer Morrison Korin Santovasi <b>Unit Title:</b> Publications	<b>Course/Subject:</b> Computer Applications <b>Grade Level:</b> 8th grade <b># of Classes:</b> 8 (Meets once every 6 days)
---	---

**Identify Desired Results**

**Common Core Standards**

- W.8.6 Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.
- Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

<b>Enduring Understandings</b> Generalizations of desired understanding via essential questions (Students will understand that ...)	<b>Essential Questions</b> Inquiry used to explore generalizations
---	---

<ul style="list-style-type: none"> <li>● The tool (application, software, device) used to create a document will depend on many factors-no one tool is best.</li> <li>● The purpose of a project determines the form the project takes as well as the content it delivers.</li> <li>● Collaboration is necessary in order to be an effective 21st learner and digital citizen.</li> </ul>	<ul style="list-style-type: none"> <li>● How can you decide which tool is best to use to create a document?</li> <li>● When is it best to use a printed format for a publication and when is an E version best?</li> <li>● How can a project be organized so all collaborating partners have a hand in its creation?</li> </ul>
---	---

**Expected Performances**  
 What students should know and be able to do

- Students will know the following:
- Different tools (applications) have different strengths and weaknesses.
  - Understand the usefulness of a template for publications.
- Students will be able to do the following:
- Compare several publication tools that could be used to create booklets or brochures that may be printed or shared digitally.
  - Create and save a template in Drive.
  - Collaborate with a partner(s) to create a publication (brochure, or booklet; able to be printed or digital) - topics may vary from year to year but could include school

- clubs, organizations the student belongs to, social issues etc.
- Create a simple website or blog to serve as their digital portfolio

**Character Attributes**

- Citizenship
- Integrity
- Respect
- Honesty

**Technology Competencies**

- ISTE Proposed New Standards - 6. Creator and Communicator
  - Students express ideas and generate learning artifacts by responsibly creating, repurposing and remixing digital assets.
  - Students share their work using digital formats and platforms best suited to their communication goals.
- 21st Century skills - Media Literacy: Analyze Media -Understand how and why media messages are constructed, and for what purposes
- 21st Century skills - Media Literacy: Create Media Products - Understand and utilize the most appropriate media creation tools, characteristics and conventions.

**Develop Teaching and Learning Plan**

**Teaching Strategies:**

- Moderate class discussion of the pros and cons of paper publications and e-publications.
- Collaborate on a class pro/con list
- Lead class in brainstorming a list of tools they could use to create a booklet or brochure or digital equivalent - supplement with teacher list as needed
- Provide sample publications for discussion of purpose
- Provide tips and tricks to approximate a multi-part publication using Google Docs
- Explain templates

**Learning Activities:**

- Contribute to class discussions
- Determine purpose of a publication and possible reasons for the chosen format.
- Explore Publisher for publication types and formats
- Create a template in Google Docs

## Assessments

Performance Task(s)	Other Evidence
<p>Authentic application to evaluate student achievement of desired results designed according to GRASPS (one per marking period)</p>	<p>Application that is functional in a classroom context to evaluate student achievement of desired results</p>
<p><b>Goal:</b> To create a brochure or booklet, and fake social media posts to promote a school club, community organization, or social cause</p> <p><b>Role:</b> Author, Publicist, Social Media Promoter</p> <p><b>Audience:</b> Self, Peers</p> <p><b>Situation:</b> You and your partner(s) will be creating a publication and social media to promote a school club, community organization, or social cause.</p> <p><b>Product or Performance:</b> A publication, brochure, booklet, or digital equivalent</p> <p><b>Standards for Success:</b></p> <p>Publication must include information needed by prospective members of the organization.</p> <p>Publication must include images and links as appropriate (organization website, social media, etc.).</p> <p>Images used must be properly credited.</p>	<ul style="list-style-type: none"> <li>● Daily entries to blog or journal documenting exactly what the individual student has learned or accomplished.</li> <li>● Contribution to class discussion</li> <li>● Portfolio Reflection</li> </ul>

## Suggested Resources

- Microsoft Publisher (templates and help)
- Google Docs and /or Drawing
- Lucid Press - Chrome app
- [S'More](#)
- Fake Social Media Creators ie: [Snapchat Templates](#)
- [Google Sites](#)
- [Portfolio Rubric](#)

**New Milford Public Schools**  
**Curriculum**  
 8th Grade Computer Applications

<b>Committee Member(s):</b> Jennifer Morrison Korin Santovasi <b>Unit Title:</b> Data	<b>Course/Subject:</b> Computer Applications <b>Grade Level:</b> 8th grade <b># of Classes:</b> 8 (Meets once every 6 days)
<b>Identify Desired Results</b>	
<b>Common Core Standards</b>	
<ul style="list-style-type: none"> <li>● Speaking and Listening-Presentation of Knowledge and Ideas:           <ul style="list-style-type: none"> <li>○ Make strategic use of digital media and visual displays of data to express information and enhance understanding.</li> </ul> </li> <li>● Math: Represent and interpret data.</li> </ul>	
<b>Enduring Understandings</b> Generalizations of desired understanding via essential questions (Students will understand that ...)	<b>Essential Questions</b> Inquiry used to explore generalizations
<ul style="list-style-type: none"> <li>● Data is collected about them in many places</li> <li>● Data can be used to drive a variety of decisions</li> <li>● Data is most useful when it is portrayed visual (graphically)</li> <li>● Importance of anonymity in surveys</li> </ul>	<ul style="list-style-type: none"> <li>● What is data used for?</li> <li>● How can data be collected?</li> </ul>
<b>Expected Performances</b> What students should know and be able to do	
<b>Students will know the following:</b> <ul style="list-style-type: none"> <li>● Some ways data is collected</li> <li>● What Data Science (Machine Learning) is</li> </ul> <b>Students will be able to do the following:</b> <ul style="list-style-type: none"> <li>● Identify several sources of data</li> <li>● Choose needed data and create a visual representation of that data</li> <li>● Define Data Science; Name the 4 ways data can be sorted; Complete an introductory machine learning activity</li> </ul>	
<b>Character Attributes</b>	
<ul style="list-style-type: none"> <li>● Citizenship</li> <li>● Integrity</li> <li>● Respect</li> <li>● Honesty</li> </ul>	
<b>Technology Competencies</b>	
<ul style="list-style-type: none"> <li>● ISTE Proposed Standards: Computational Thinking           <ul style="list-style-type: none"> <li>○ Students identify authentic problems, work with data and employ algorithmic thinking to propose and automate solutions</li> <li>○ Collect data or identify relevant data sets and use digital tools to analyze</li> </ul> </li> </ul>	

and represent data

- ISTE Proposed Standards: Digital Citizenship
  - Students recognize that data is collected and tracked as they navigate online; they proactively manage personal data to maintain digital privacy and security and are aware that automated personalization can reduce diversity of viewpoints and knowledge.
- 21st Century Skills
  - Critical Thinking and Problem Solving
  - Think Creatively
  - Work Creatively with Others

### **Develop Teaching and Learning Plan**

#### **Teaching Strategies:**

- Introduce data collection, include types collected and who is collecting.
- Guide students through creation of an anonymous student survey (possible question topics include - gender, clubs, activities-relate to previous publication unit) using Google Forms
- Develop activities that connect lessons learned in the Choose to Code videos to the data students have collected.
- Guide discussion regarding questions that could be answered from survey; ways data could be grouped.
- Present guidelines for appropriate graphical representations of data.

#### **Learning Activities:**

- Complete *Choose to Code* (Microsoft) lessons
- Contribute questions to a survey to be completed by 8th graders
- Explore data collected about the 8th grade
- Develop a question regarding school or community clubs or social issues that may be answered by the data collected
- Create a visualization of the data - graph and infographic.

## Assessments

Performance Task(s)	Other Evidence
<p>Authentic application to evaluate student achievement of desired results designed according to GRASPS (one per marking period)</p>	<p>Application that is functional in a classroom context to evaluate student achievement of desired results</p>
<p><b>Goal:</b> To use the data collected in grade survey to answer questions about the club, group, or social issue used in the last unit.</p> <p><b>Role:</b> Data scientist</p> <p><b>Audience:</b> Club leader or mentor, prospective members</p> <p><b>Situation:</b> As the social media director for your club or organization you will want to know more about what types of students may be interested in joining.</p> <p><b>Product or Performance:</b> Infographic</p> <p><b>Standards for Success:</b></p> <ul style="list-style-type: none"> <li>● Construction of relevant questions (data problems).</li> <li>● Creation of an Infographic that visually displays the answer to the questions.</li> </ul>	<ul style="list-style-type: none"> <li>● Daily entries to blog or journal documenting what the individual student has learned or accomplished.</li> <li>● Contribution to class discussion</li> <li>● Graphs</li> <li>● Portfolio Reflection</li> </ul>

## Suggested Resources

- <http://datascience.choosetocode.com/>
- [Azure ML](#) – Azure Machine Learning
- [Kaggle](#) – Kaggle is the world's largest community of data scientists.
- [Cortana Analytics Gallery](#) – Gallery of data analytics solutions
- [Azure ML templates](#) – Templates for Machine Learning
- [Raw](#) – Dataset visualizations website
- [Module 4 Lesson](#) – Lesson for students to work on from Module 4
- [Portfolio Rubric](#)

**New Milford Public Schools**  
**Curriculum**  
 8th Grade Computer Applications

<b>Committee Member(s):</b> Jennifer Morrison Korin Santovasi <b>Unit Title:</b> Independent Study Part 1	Course/Subject: Computer Applications Grade Level: 8th grade # of Classes: 5 (Meets once every 6 days)
<b>Identify Desired Results</b>	
<b>Common Core Standards</b>	
CCSS.ELA-LITERACY.W.8.6 <ul style="list-style-type: none"> <li>● Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.</li> </ul> CCSS.ELA-LITERACY.W.8.8 <ul style="list-style-type: none"> <li>● Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</li> </ul>	
<b>Enduring Understandings</b> Generalizations of desired understanding via essential questions (Students will understand that ...)	<b>Essential Questions</b> Inquiry used to explore generalizations
<ul style="list-style-type: none"> <li>● Technology related subjects come from a wide variety of fields.</li> <li>● Many skills can be learned with resources found on the Internet.</li> </ul>	<ul style="list-style-type: none"> <li>● Where did the technologies we use come from?</li> <li>● How can I teach myself about a technology related skill or subject?</li> </ul>
<b>Expected Performances</b> What students should know and be able to do	
<b>Students will know the following:</b> <ul style="list-style-type: none"> <li>● Students will choose an aspect of technology to study, beginning with the history of that technology.</li> <li>● There are many different fields of study that include technology.</li> </ul> <b>Students will be able to do the following:</b> <ul style="list-style-type: none"> <li>● Research and create a presentation of the background or history of their chosen technology.</li> <li>● Work collaboratively with other students who have chosen the same independent study topic to create the presentation.</li> <li>● Document their history respecting copyright in all aspects.</li> </ul>	

### Character Attributes

- Citizenship
- Independence
- Respect
- Honesty
- Perseverance

### Technology Competencies

- Proposed ISTE Standards: Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals.
  - Students intentionally set goals, apply strategies to meet them and use technology tools to reflect on their learning.
  - Students personalize their learning environments to enhance knowledge or pursue their own curiosities.
  - Students experiment with emerging technologies, drawing on their knowledge of existing tools and operations, and demonstrate an agility in troubleshooting and solving technical problems.
- Proposed ISTE Standards: Creator and Communicator
  - Students communicate clearly and express themselves creatively for a variety of purposes using the tools, styles, formats, and digital media appropriate to their goals.
- 21st Century Skills: Uses technology as a tool to research, organize, evaluate, integrate, create, and communicate information.

### Develop Teaching and Learning Plan

#### Teaching Strategies:

- Explain the various independent study topics-based on available software, apps, and tools.
- Provide guidance for best practices with regards to collaboration.
- Create an up to date list of accessible sites or tools for presenting information.

#### Learning Activities:

- Research the history of a chosen technology skill.
- Create a simple presentation of that history
- Maintain a journal or blog documenting their goals and their learning.

## Assessments

Performance Task(s)	Other Evidence
<p>Authentic application to evaluate student achievement of desired results designed according to GRASPS (one per marking period)</p>	<p>Application that is functional in a classroom context to evaluate student achievement of desired results</p>
<p><b>Goal:</b> Choose a topic to learn about</p> <p><b>Role:</b> Student</p> <p><b>Audience:</b> Classmates</p> <p><b>Situation:</b> Research the history/background of your topic. Create a presentation that tells WHY this topic is relevant and important to learn. Product or Performance: Presentation</p> <p><b>Standards for Success:</b></p> <p>A simple collaborative presentation of the history and importance of the selected technology topic.</p>	<ul style="list-style-type: none"> <li>● Continued updates to journal or blog.</li> <li>● Observation by teacher</li> <li>● Collaboration rubric completed by group.</li> <li>● Portfolio Reflection</li> </ul>

## Suggested Resources

- [https://docs.google.com/a/newmilfordps.org/spreadsheets/d/1\\_QLtv\\_-bewQGNpIAVdu9YJEN0GaBwDMUU0gpYi-AydQ/edit?usp=sharing](https://docs.google.com/a/newmilfordps.org/spreadsheets/d/1_QLtv_-bewQGNpIAVdu9YJEN0GaBwDMUU0gpYi-AydQ/edit?usp=sharing)
- [Portfolio Rubric](#)

# New Milford Public Schools

## Curriculum

### 8th Grade Computer Applications

<p><b>Committee Member(s):</b> Jennifer Morrison Korin Santovasi</p> <p><b>Unit Title:</b> Independent Study Part 2</p>	<p><b>Course/Subject:</b> Computer Applications <b>Grade Level:</b> 8th grade <b># of Classes:</b> 9 (Meets once every 6 days)</p>
<b>Identify Desired Results</b>	
<b>Common Core Standards</b>	
<ul style="list-style-type: none"> <li>● CCSS.ELA-LITERACY.RST.6-8.3</li> <li>● Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</li> </ul>	
<b>Enduring Understandings</b> Generalizations of desired understanding via essential questions (Students will understand that ...)	<b>Essential Questions</b> Inquiry used to explore generalizations
<ul style="list-style-type: none"> <li>● That there are many skills that they can learn from tutorials and materials found on the Internet.</li> <li>● That in order to complete a project in a timely manner they will need to create a goal and a plan.</li> </ul>	<ul style="list-style-type: none"> <li>● How can I teach myself about a technology related skill or subject?</li> <li>● How can I create a plan to complete a project in a timely manner?</li> <li>● How can I teach others about what I've learned?</li> </ul>
<b>Expected Performances</b> What students should know and be able to do	
<p>Students will know the following:</p> <ul style="list-style-type: none"> <li>● That there are many skills that they can learn from tutorials and materials found on the Internet.</li> <li>● That in order to complete a project in a timely manner they will need to create a goal and a plan.</li> <li>● There are many different fields of study that include technology.</li> </ul> <p>Students will be able to do the following:</p> <ul style="list-style-type: none"> <li>● Create a project timeline and set goals</li> <li>● Locate and use tutorials and help pages.</li> <li>● Create several examples that demonstrate what they've learned.</li> <li>● Create a tutorial - text, video, or audio that teaches how to do what they've learned.</li> </ul>	
<b>Character Attributes</b>	
<ul style="list-style-type: none"> <li>● Citizenship</li> <li>● Integrity</li> <li>● Respect</li> <li>● Honesty</li> </ul>	

<b>Technology Competencies</b>	
<ul style="list-style-type: none"> <li>● Proposed ISTE Standards: Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals.               <ul style="list-style-type: none"> <li>○ Students intentionally set goals, apply strategies to meet them and use technology tools to reflect on their learning.</li> <li>○ Students personalize their learning environments to enhance knowledge or pursue their own curiosities.</li> <li>○ Students experiment with emerging technologies, drawing on their knowledge of existing tools and operations, and demonstrate an agility in troubleshooting and solving technical problems.</li> </ul> </li> <li>● Proposed ISTE Standards: Creator and Communicator               <ul style="list-style-type: none"> <li>○ Students communicate clearly and express themselves creatively for a variety of purposes using the tools, styles, formats, and digital media appropriate to their goals.</li> </ul> </li> <li>● 21st Century Skills: Uses technology as a tool to research, organize, evaluate, integrate, create, and communicate information.</li> </ul>	
<b>Develop Teaching and Learning Plan</b>	
<p>Teaching Strategies:</p> <ul style="list-style-type: none"> <li>● Demonstrate various options for tutorials and Help.</li> <li>● Show different styles of tutorials.</li> </ul>	<p>Learning Activities:</p> <ul style="list-style-type: none"> <li>● Explore the chosen skill, creating several products that demonstrate learning of the skill.</li> <li>● Create a tutorial designed to teach another student the skills learned.</li> <li>● Maintain a journal or blog documenting their goals and their learning.</li> </ul>

<b>Assessments</b>	
<b>Performance Task(s)</b>	<b>Other Evidence</b>
Authentic application to evaluate student achievement of desired results designed according to GRASPS (one per marking period)	Application that is functional in a classroom context to evaluate student achievement of desired results
<p><b>Goal:</b> To create a tutorial so others can learn what you have learned.</p> <p><b>Role:</b> Teacher</p> <p><b>Audience:</b> Other students/ peers</p> <p><b>Situation:</b> You have been asked to create training for your tech company.</p>	<ul style="list-style-type: none"> <li>● Continued updates to journal or blog.</li> <li>● Classroom observation of independent activity</li> <li>● Creation of a constructive review of another group's tutorial</li> <li>● Portfolio Reflection</li> </ul>

**Product or Performance:** Work with a team to create a tutorial, video, screencast, audio, or textbook for the independent study skill you have chosen.

**Standards for Success:**

Creation of a training tool that will be tested and rated by another student group.

### Suggested Resources

- [https://docs.google.com/a/newmilfordps.org/spreadsheets/d/1\\_QLtv-bewQGNpIAVdu9YJEN0GaBwDMUU0gpYi-AydQ/edit?usp=sharing](https://docs.google.com/a/newmilfordps.org/spreadsheets/d/1_QLtv-bewQGNpIAVdu9YJEN0GaBwDMUU0gpYi-AydQ/edit?usp=sharing)
- [Screencastify](#)
- [Portfolio Rubric](#)