Digital and Media Literacy
G6-8

Ewing Public Schools
2099 Pennington Road
Ewing, NJ 08618

Board Approval Date: September 19, 2022 Michael Nitti, Superintendent

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In accordance with The Ewing Public Schools' Policy 2230, Course Guides, this curriculum has been reviewed and found to be in compliance with all policies and all affirmative action criteria.

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Course Description and Rationale

Students will learn how to use a variety of digital tools to create, share, and communicate online. They will understand the importance of navigating safely and efficiently in a digital world and how to respectfully interact with the world digitally. Students will also learn how to access, evaluate, and use information accurately, fairly, and ethically.

Computer science and design thinking education prepares students to succeed in today's knowledge-based economy by providing equitable and expanded access to high-quality, standards-based computer science and technological design education.

Students receive computer science and design thinking instruction. The study of these disciplines focuses on deep understanding of concepts that enable students to think critically and systematically about leveraging technology to solve local and global issues. Authentic learning experiences that enable students to apply content knowledge, integrate concepts across disciplines, develop computational thinking skills, acquire and incorporate varied perspectives, and communicate with diverse audiences about the use and effects of computing prepares New Jersey students for college and careers.

Students will benefit from opportunities to engage in high-quality technology programs that foster their ability to:

- Develop and apply computational and design thinking to address real-world problems and design creative solutions;
- Engage as collaborators, innovators, and entrepreneurs on a clear pathway to success through postsecondary education and careers;
- Navigate the dynamic digital landscape to become healthy, productive, 21st century global-minded individuals; and
- Participate in an inclusive and diverse computing culture that appreciates and incorporates perspectives from people of different genders, ethnicities, and abilities.

Students will be able to demonstrate the ability to create samples of digital content such as presentations, audio recordings, video and other digital tools to communicate a message. Students will have the skills to move towards becoming content creators rather than content consumers.

At the end of this course, students should continue to practice proper computer usage. Students should be competent in using applications such as presentation softwares and any other programs/ applications needed for academic courses. Students continue learning about and practicing safe, age appropriate online activities. Students should continue to learn strategies and skills to help encourage positive online communications.

Unit 1: Digital Tools and Applications

Why Is This Unit Important?

Understanding how and why to use technology to get and give information is a key 21st Century skill. Students will learn how to determine which digital tool to use for different tasks and how to communicate effectively through digital means.

Enduring Understandings:

- Students will use a variety of digital tools and applications to produce, share and communicate online.
- Students will be able to make connections on what digital tools and applications can be used in their personal life and other educational settings

Essential Questions:

- What tools are best for presenting, sharing and incorporating multi-media?
- How can I use applications to support me in other academic areas?
- What application (tool) will correctly display my information?

Acquired Knowledge:

- Selecting and implementing digital tools

Acquired Skills:

- Use digital tools to communicate messages
- Choosing appropriate tools for each setting

Assessments:

- Group discussion
- Group projects
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Organize Ewing BOE Google Workspace account to maximize productivity

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System
- Google Workspace

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:
9.4.8.DC.7
9.4.8.IML.3
9.4.8.IML.4
9.4.8.IML.5
9.4.8.IML.6
9.4.8.TL.1
9.4.8.TL.2
9.4.8.TL.3
9.4.8.TL.4
9.4.8.TL.5
9.4.8.TL.6
8.1.8.DA.1
8.1.8.DA.3

Unit 2: Digital Communities and Online Behavior

Why Is This Unit Important?

Students will understand the importance of appropriately managing their online behavior and recognize themselves as global, digital citizens.

Enduring Understandings:

- Students will understand appropriate tools to create a culture of respect when communicating with others through digital media and when creating digital media.
- Students will learn strategies to monitor their own online behavior and identify, report and prevent unsafe behaviors such as cyberbullying.
- Students will understand the importance of including their adult in decisions they make about participating in online communities.

Essential Questions:

- How do I communicate with others online?
- What makes me a part of a digital community?
- What are my responsibilities as a digital citizen?
- What is cyberbullying?
- Who do I identify, prevent and report cyberbullying?
- What tools and skills do I need to properly convey my message online?

Acquired Knowledge:

- Identifying and addressing cyberbullying
- Digital citizenship responsibilities regarding communications

Acquired Skills:

- Apply strategies to address and cope with bullying situations
- Use appropriate communications skills when addressing others online

Assessments:

- Group discussion
- Group projects
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Discuss social media account creation and the legal issues of minors creating accounts
- Create a poster or social media graphic for students to understand how to prevent and or report cyberbullying

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System
- Canva
- Google Workspace

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:

9.4.8.DC.7
9.4.8.GCA.2
9.4.8.DC.5
9.4.8.DC.6

Unit 3: Evaluating Digital Media

Why Is This Unit Important?

In a media saturated society, responsible digital citizens must evaluate sources for accuracy, bias, etc. and give credit as needed.

Enduring Understandings:

- The internet is a public place. Anyone can post, share, like and create. It's important for students to build skills in identifying trustworthy and credible media.
- Learn to search and evaluate and select appropriate tools and resources.
- Students as 21st Century learners will need to know how to properly cite others' work and the importance of copyright.

Essential Questions:

- How do I evaluate media to determine if it is trustworthy and credible?
- How do I determine the purpose of the media I am viewing?
- How can digital media influence decisions?
- How do I decide what digital tool or application is best for my job?
- What is copyright?
- How can I make sure to give proper credit when I create digital media?

Acquired Knowledge:

- Media Sourcing
- Online Tool Evaluation Techniques
- Copyright Definition and Uses

Acquired Skills:

- Apply strategies to determine if online media is credible.
- Complete online inquiries using a system to yield results in an efficient manner.
- Use information provided to credit and properly source the material of others.

Assessments:

- Group discussion
- Group projects
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Students create materials (video, graphic, etc.) teaching other students how to evaluate online sources.

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System
- Google Workspace

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:
9.4.8.DC.1
9.4.8.DC.2
9.4.8.IML.1
9.4.8.IML.2
9.4.8.IML.6

Unit 4: Digital Security and Information Privacy

Why Is This Unit Important?

Hackers attack people worldwide roughly every half a minute. This translates to a cybercrime being committed on an average of 2,244 times per day, according to internet security statistics. Understanding the risk and learning how and why to safeguard information digitally is a necessary skill.

Enduring Understandings:

- Theft and illegal activity while unfortunate does happen in our digital society. Students must prepare to protect their digital identity and safeguard against such attacks.

Essential Questions:

- What steps can I take to stay safe online?
- What types of digital crime/scams do I need to be aware of?

Acquired Knowledge:

- Online Safety
- Online Scams and Digital Crimes

Acquired Skills:

- Apply steps and strategies to stay safe online.
- Identify types of online scams and resources to report online crimes when necessary.

Assessments:

- Group discussion
- Group projects
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Students illustrate cybersecurity risks in chart form, and develop infographics to communicate the immediate risk to consumers.

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System
- Google Sheets
- Google Slides

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:

9.4.8.DC.3:
9.4.8.DC.4

Unit 5: Managing Your Digital Footprint

Why Is This Unit Important?

A digital footprint is the trail of information you leave behind when you use the internet. Everyone who uses the Internet has one, whether or not they realize it or want it. Students will understand how and why to manage their digital footprint.

Enduring Understandings:

- Use of digital media has lasting effects. There are strategies to manage your digital identity positively and minimize negative outcomes of digital media use.
- Students will focus understanding on privacy settings and how information can be copied, searched and shared with a public audience

Essential Questions:

- What types of information makes up your digital footprint?
- How do you design (curate) your digital identity?
- How will my media activities now affect my life in 5/10/15 years?

Acquired Knowledge:

- Digital Footprint
- Digital Identities
- Impact of Digital Footprints

Acquired Skills:

- Identify information needed to create a digital footprint.
- Develop strategies to maintain a positive digital footprint and be aware of student online identity.
- Reflect on choices on how every day online activities affect your digital footprint.

Assessments:

- Group discussion
- Group projects
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Students use Google Docs to brainstorm what their digital footprint might include.

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System
- Google Docs

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:

9.4.8.DC.3:
9.4.8.DC.4
9.4.8.DC.5
9.4.8.DC.6

Unit 6: Ethics in Information Media

Why Is This Unit Important?

Digital media ethics deals with the distinct ethical problems, practices and norms of digital news media. As students consume digital content, they must understand and actively evaluate the media they're engaging with.

Enduring Understandings:

- As 21st Century learners will face ethical and moral decisions in the digital world, students must be able to evaluate online decisions and media for bias and stereotypes.

Essential Questions:

- What does ethics look like online?
- How do you identify bias and stereotypes online?

Acquired Knowledge:

- Online ethics
- Stereotypes and bias online

Acquired Skills:

- Identifying online stereotypes and bias in media and applying this to student choices in their own online behaviors.

Assessments:

- Group discussion
- Group projects
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Evaluate and discuss media as a group- breaking down headlines and coverage of current events, social media, etc. to dissect for intent, bias, etc.

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:

9.4.8.IML.1
9.4.8.IML.7
9.4.8.IML.9
9.4.8.IML.10
8.2.8.ITH.1
8.2.8.EC.1
8.2.8.EC.2

Unit 7: Future of Keyboarding

Why Is This Unit Important?

While the future of keyboarding continuously evolves, with innovations like voice typing, students are expected to use their keyboards to do research, complete assignments, and more. Generally, traditional typing remains a beneficial skill in school and work.

Enduring Understandings:

- Keyboarding is an essential skill for any 21st Century learner to keep them competitive in both education and business.
- Students will continue to develop touch typing techniques.
- Students will demonstrate accurate and effective keyboarding technique.

Essential Questions:

- What is touch typing keyboarding technique?
- How can applying touch typing help me type accurately?
- How can I improve my accuracy and typing speed?
- How does this prepare me for other classes and high school?

Acquired Knowledge:

- Touch keyboarding
- Importance of ergonomics in tech

Acquired Skills:

- Keyboarding for efficiency in communication and productivity

Assessments:

- Group discussion
- Independent activities
- Reflection

Suggested Learning Experiences and Instructional Activities:

- Typing warm ups and challenges

Instructional Materials (including, but not limited to):

- Individual student Chromebooks
- Canvas Learning Management System

Computer Science and Design Thinking - 2020 New Jersey Student Learning Standards:

8.1.8.IC.1

Accommodations

Special Education Students

Peer to peer assistance; reduce / revise assignments as per IEP; use manipulatives; calculators; extra time to complete task; provide individual & small group help; notes, and study guides; provide background knowledge; flexible grouping; peer grouping; visual demonstration; text magnification; color coding; repetition; pre-teaching; chunking; differentiating content; preferential seating; rephrasing of directions

English Language Learners

Use consistent, simplified language; provide bilingual partner; provide cooperative learning opportunities; use modeling; use visual aids & manipulatives; scaffolding; chunking the content; subtitles for videos

Students at Risk of Failure

Foster positive relationships; use mental models; provide help formulating specific questions; scaffolding; targeted support

Gifted Students

Provide additional enrichment activity involving demonstration of knowledge, or complementary assignments; independent practice; extension activities

Suggested Pacing

Unit (topic)	Anticipated time frame (days)	Essential questions	Enduring understandings
Digital Tools and Applications	12	What tools are best for presenting, sharing and incorporating multi-media? How can I use applications to support me in other academic areas? What application (tool) will correctly display my information?	Students will use a variety of digital tools and applications to produce, share and communicate online. Students will be able to make connections on what digital tools and applications can be used in their personal life and other educational settings
Digital Communities and Online Behavior	6	How do I communicate with others online? What makes me a part of a digital community? What are my responsibilities as a digital citizen? What is cyberbullying? Who do I identify, prevent and report cyberbullying? What tools and skills do I need to properly convey my message online?	Students will understand appropriate tools to create a culture of respect when communicating with others through digital media and when creating digital media. Students will learn strategies to monitor their own online behavior and identify, report and prevent unsafe behaviors such as cyberbullying. Students will understand the importance of including their adult in decisions they make about participating in online communities.
Evaluating Digital Media	4	How do I evaluate media to determine if it is trustworthy and credible? How do I determine the purpose of the media I am viewing? How can digital media influence decisions? How do I decide what digital tool or application is best for my job? What is copyright? How can I make sure to give proper credit when I create digital media?	The internet is a public place. Anyone can post, share, like and create. It's important for students to build skills in identifying trustworthy and credible media. Learn to search and evaluate and select appropriate tools and resources. Students as 21st Century learners will need to know how to properly cite others' work and the importance of copyright.

Unit (topic)	Anticipated time frame (days)	Essential questions	Enduring understandings
Digital Security and Information Privacy	4	What steps can I take to stay safe online? What types of digital crime/scams do I need to be aware of?	Theft and illegal activity while unfortunate does happen in our digital society. Students must prepare to protect their digital identity and safeguard against such attacks.
Managing Your Digital Footprint	4	What types of information makes up your digital footprint? How do you design (curate) your digital identity? How will my media activities now affect my life in 5/10/15 years?	Use of digital media has lasting effects. There are strategies to manage your digital identity positively and minimize negative outcomes of digital media use. Students will focus understanding on privacy settings and how information can be copied, searched and shared with a public audience
Ethics in Information Media	2	What does ethics look like online? How do you identify bias and stereotypes online?	As 21st century learners will face ethical and moral decisions in the digital world. Students must be able to evaluate online decisions and media for bias and stereotypes.
Future of Keyboarding	3	What is touch typing keyboarding technique? How can applying touch typing help me type accurately? How can I improve my accuracy and typing speed? How does this prepare me for other classes and high school?	Keyboarding is an essential skill for any 21st century learner to keep them competitive in both education and business. Students will continue to develop touch typing techniques. Students will demonstrate accurate and effective keyboarding technique.

Sample Standards Integration

During this course, in addition to the New Jersey Student Learning Standards for Computer Science and Design Thinking, students will work on developing, to an age appropriate level, standards across content areas, including:

Career Readiness, Life Literacies, and Key Skills
9.4.8.CI.4: Explore the role of creativity and innovation in career pathways and industries.
Students will connect the concepts and skills in this course to potential future careers.

Social Studies
6.1.12.EconNE.16.b: Evaluate the economic, political, and social impact of new and emerging technologies on individuals and nations.
Students will discuss the positive and negative impacts of technological advancements.

Science
MS-PS1-6: Undertake a design project, engaging in the design cycle, to construct and/or implement a solution that meets specific design criteria and constraints.
Students will employ the design cycle to complete projects based on specific guidelines.

Mathematics
NJSLS-M.8.SP.A.2: Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit (e.g. line of best fit) by judging the closeness of the data points to the line.
Students will interpret, analyze, and discuss data on diversity in technology careers and education.

English Language Arts
NJSLSA.W6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
Students will engage in written discussion utilizing the district's digital learning environment.

Diversity, Equity & Inclusion

All students deserve equitable access (N.J.A.C. 6A:7) to a high-quality education that is inclusive and reflective of the rich diversity of our state. This curriculum will include learning activities that meet the legislative requirements of the 2019 History and Contributions of Individuals with Disabilities and LGBT (N.J.S.A. 18A:35-4.35-6) and Diversity and Inclusion statutes (N.J.S.A. 18A:35-4.36a) that may include:

- Students work in groups to develop a slide deck highlighting LGBTQ+ pioneers of computer science, such as Alan Turing, Edith Windsor, etc.
- Students will interpret, analyze, evaluate, and discuss data involving diversity in STEM fields (this may include the number of women enrolled in technology education programs, representation of people with disabilities in video games, etc.).