CURRICULUM

FOR

INFORMATION PROCESSING MULTIMEDIA PRESENTATIONS

GRADES 9-12

This curriculum is part of the Educational Program of Studies of the Rahway Public Schools.

ACKNOWLEDGMENTS

Dr. Susan Dube, Supervisor of Science, Technology Education, Business, and World Languages

The Board acknowledges the following who contributed to the preparation of this curriculum.

Leon Bunion

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Subject/Course Title:	Date of Board Adoptions:
Information Processing Multimedia Presentations	**September 15, 2020**
Grades 9-12	

RAHWAY PUBLIC SCHOOLS CURRICULUM
Information Processing Multimedia Presentations – Grades 9-12

PACING GUIDE

Unit	Title	Pacing
1	Introduction to Google Docs	10 weeks
2	Introduction to Google Sheets	10 weeks
3	Introduction to Google Slides	10 weeks
4	Interactive Google Apps	10 weeks

ACCOMMODATIONS

504 Accommodations:
- Provide scaffolded vocabulary and vocabulary lists.
- Provide extra visual and verbal cues and prompts.
- Provide adapted/alternate/excerpted versions of the text and/or modified supplementary materials.
- Provide links to audio files and utilize video clips.
- Provide graphic organizers and/or checklists.
- Provide modified rubrics.
- Provide a copy of teaching notes, especially any key terms, in advance.
- Allow additional time to complete assignments and/or assessments.
- Provide shorter writing assignments.
- Provide sentence starters.
- Utilize small group instruction.
- Utilize Think-Pair-Share structure.
- Check for understanding frequently.
- Have student restate information.
- Support auditory presentations with visuals.
- Weekly home-school communication tools (notebook, daily log, phone calls or email messages).
- Provide study sheets and teacher outlines prior to assessments.
- Quiet corner or room to calm down and relax when anxious.
- Reduction of distractions.
- Permit answers to be dictated.
- Hands-on activities.
- Use of manipulatives.
- Assign preferential seating.
- No penalty for spelling errors or sloppy handwriting.
- Follow a routine/schedule.
- Provide student with rest breaks.
- Use verbal and visual cues regarding directions and staying on task.
- Assist in maintaining agenda book.

IEP Accommodations:
- Provide scaffolded vocabulary and vocabulary lists.
- Differentiate reading levels of texts (e.g., Newsela).
- Provide adapted/alternate/excerpted versions of the text and/or modified supplementary materials.
- Provide extra visual and verbal cues and prompts.
- Provide links to audio files and utilize video clips.
- Provide graphic organizers and/or checklists.
- Provide modified rubrics.
- Provide a copy of teaching notes, especially any key terms, in advance.
- Provide students with additional information to supplement notes.
- Modify questioning techniques and provide a reduced number of questions or items on tests.
- Allow additional time to complete assignments and/or assessments.
- Provide shorter writing assignments.
- Provide sentence starters.
- Utilize small group instruction.
- Utilize Think-Pair-Share structure.
- Check for understanding frequently.
- Have student restate information.
- Support auditory presentations with visuals.
- Provide study sheets and teacher outlines prior to assessments.
- Use of manipulatives.
- Have students work with partners or in groups for reading, presentations, assignments, and analyses.
- Assign appropriate roles in collaborative work.
- Assign preferential seating.
- Follow a routine/schedule.

Gifted and Talented Accommodations:
- Differentiate reading levels of texts (e.g., Newsela).
- Offer students additional texts with higher lexile levels.
- Provide more challenging and/or more supplemental readings and/or activities to deepen understanding.
- Allow for independent reading, research, and projects.
- Accelerate or compact the curriculum.
- Offer higher-level thinking questions for deeper analysis.
- Offer more rigorous materials/tasks/prompts.
- Increase number and complexity of sources.
- Assign group research and presentations to teach the class.
- Assign/allow for leadership roles during collaborative work and in other learning activities.

ELL Accommodations:
- Provide extended time.
- Assign preferential seating.
- Assign peer buddy who the student can work with.
- Check for understanding frequently.
- Provide language feedback often (such as grammar errors, tenses, subject-verb agreements, etc…).
- Have student repeat directions.
- Make vocabulary words available during classwork and exams.
- Use study guides/checklists to organize information.
- Repeat directions.
- Increase one-on-one conferencing.
- Allow student to listen to an audio version of the text.
- Give directions in small, distinct steps.
- Allow copying from paper/book.
- Give student a copy of the class notes.
- Provide written and oral instructions.

| | Differentiate reading levels of texts (e.g., Newsela). Shorten assignments. Read directions aloud to student. Give oral clues or prompts. Record or type assignments. Adapt worksheets/packets. Create alternate assignments. Have student enter written assignments in criterion, where they can use the planning maps to help get them started and receive feedback after it is submitted. Allow student to resubmit assignments. Use small group instruction. Simplify language. Provide scaffolded vocabulary and vocabulary lists. Demonstrate concepts possibly through the use of visuals. Use manipulatives. Emphasize critical information by highlighting it for the student. Use graphic organizers. Pre-teach or pre-view vocabulary. Provide student with a list of prompts or sentence starters that they can use when completing a written assignment. Provide audio versions of the textbooks. Highlight textbooks/study guides. Use supplementary materials. Give assistance in note taking Use adapted/modified textbooks. Allow use of computer/word processor. Allow student to answer orally, give extended time (time-and-a-half). Allow tests to be given in a separate location (with the ESL teacher). Allow additional time to complete assignments and/or assessments. Read question to student to clarify. Provide a definition or synonym for words on a test that do not impact the validity of the exam. Modify the format of assessments. Shorten test length or require only selected test items. Create alternative assessments. On an exam other than a spelling test, don't take points off for spelling errors. |

RAHWAY PUBLIC SCHOOLS CURRICULUM

Content Area: Information Processing/Multimedia Presentations

Unit Title: Introduction to Google Docs

Target Course/Grade Level: Grades 9-12

Unit Summary: This unit introduces the importance of properly formatted documents using Microsoft Word. Students will learn a variety of documents and formatting practices. Students can use these concepts academically and professionally. Student will also have the opportunity to work with projects that simulate realistic business settings.

Approximate Length of Unit: 10 weeks

LEARNING TARGETS

NJ Student Learning Standards:
NJSLS-Career Readiness, Life Literacies, and Key Skills
- Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.
  - 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
  - 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
  - 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
  - 9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).
  - 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
  - 9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.
  - 9.4.12.DC.7: Evaluate the influence of digital communities on the nature, content and responsibilities of careers, and other aspects of society (e.g., 6.1.12.CivicsPD.16.a).
  - 9.4.12.IML.1: Compare search browsers and recognize features that allow for filtering of information.
  - 9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.
  - 9.4.12.IML.8: Evaluate media sources for point of view, bias, and motivations (e.g., NJSLSA.R6, 7.1.AL.IPRET.6).

- ○ 9.4.12.IML.9: Analyze the decisions creators make to reveal explicit and implicit messages within information and media (e.g., 1.5.12acc.C2a, 7.1.IL.IPRET.4).
- ○ 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).
- ○ 9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.
- ○ 9.4.12.TL.3: Analyze the effectiveness of the process and quality of collaborative environments.
- ○ 9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem (e.g., 7.1.AL.IPERS.6).

Interdisciplinary Connections and Standards:
Computer Science and Design Thinking:
8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.
8.1.12.DA.2: Describe the trade-offs in how and where data is organized and stored.
8.1.12.DA.5: Create data visualizations from large data sets to summarize, communicate, and support different interpretations of real-world phenomena.

NJ SLS Companion Standards: Reading and Writing Standards for History, Social Studies, Science, and Technical Subjects:
RST.9-10.5. Analyze the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).
WHST.9-10.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
WHST.9-10.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
WHST.9-10.6. Use technology, including the Internet, to produce, share, and update writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
WHST.9-10.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
WHST.9-10.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Unit Understandings:

Students will understand that…
- ● Improve ability to proofread, edit, revise and rewrite work.
- ● Use Google Docs to create print-ready announcements with picture effects.
- ● Use Google Docs to create a variety of styles of resumes, letterhead, and cover letters with tables and bullets.
- ● Use Google Docs to create multi-page reports with cover sheets, watermarks, page numbers, picture bullets, formatted tables, and charts.
- ● Use Google Docs to create document cover sheets using graphics.

Unit Essential Questions:
- What are the various documents that can be created in Google Docs?
- How is a professionally formatted document created?
- Why is it important to format a document correctly?
- How do you create a professional resume and cover letter?

Knowledge and Skills:

Students will know…
- How to effectively utilize Google Docs for academic and professional documents.

Students will be able to …
- Create effective Google Docs
- Use a coordinated document theme for all documents
- Work independently with few instructions
- Create a memo, letter, table, two-page letter, flyers, announcements, unbound report and left bound report with a cover page

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EVIDENCE OF LEARNING

Assessment:

What evidence will be collected and deemed acceptable to show that students truly "understand"?
- **End of Unit Assessment:**
    - Students will complete a comprehensive end of unit assessment.
- Student must complete end of section questions and activities
- Students are also given mini-projects/assignments to test their practical knowledge of the topic

Learning Activities:
What differentiated learning experiences and instruction will enable all students to achieve the desired results?
- Students participate in a series of mini-projects, such as "Create a photo journal", "The Resume Project".
- Students will work on collaborative projects with peers.

RESOURCES

Teacher Resources:
- Google for Education: Applied Digital Skills

Equipment Needed:

● LCD Projector and laptop for daily lessons and projects

RAHWAY PUBLIC SCHOOLS CURRICULUM

UNIT TWO

Content Area: Information Processing/Multimedia Presentations

Unit Title: Introduction to Google Sheets

Target Course/Grade Level: Grades 9-12

Unit Summary: This unit exposes students to the importance of Google Sheets and the various uses. Students will learn how to successfully format worksheets and incorporate formulas and graphs. These skills can be transferred to other academic areas and professionally.

Approximate Length of Unit: 10 weeks

LEARNING TARGETS

NJ Student Learning Standards:
NJSLS-Career Readiness, Life Literacies, and Key Skills
   ● Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.
      ○ 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
      ○ 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
      ○ 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
      ○ 9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).
      ○ 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
      ○ 9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.
      ○ 9.4.12.DC.7: Evaluate the influence of digital communities on the nature, content and responsibilities of careers, and other aspects of society (e.g., 6.1.12.CivicsPD.16.a).
      ○ 9.4.12.IML.1: Compare search browsers and recognize features that allow for filtering of information.
      ○ 9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.
      ○ 9.4.12.IML.8: Evaluate media sources for point of view, bias, and motivations (e.g., NJSLSA.R6, 7.1.AL.IPRET.6).

- ○ 9.4.12.IML.9: Analyze the decisions creators make to reveal explicit and implicit messages within information and media (e.g., 1.5.12acc.C2a, 7.1.IL.IPRET.4).
- ○ 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).
- ○ 9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.
- ○ 9.4.12.TL.3: Analyze the effectiveness of the process and quality of collaborative environments.
- ○ 9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem (e.g., 7.1.AL.IPERS.6).

Interdisciplinary Connections and Standards:
Computer Science and Design Thinking:
8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.
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WHST.9-10.6. Use technology, including the Internet, to produce, share, and update writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
WHST.9-10.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
WHST.9-10.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Unit Understandings:
Students will understand that…
- Use Google Sheets to create worksheets with formulas, functions, and charts.
- Use Google Sheets to create worksheets formatted with borders, fill color and effects, graphics, and font changes.
- Use Google Sheets to create formatted worksheets with pictograph charts.
- Use Google Sheets to compile data from other Google Apps programs.

Unit Essential Questions:
- What is Google Sheets used for?

- How are spreadsheets/workbooks formatted?
- What are the common formulas used?
- How are various charts created?
- How can Google Sheets be used to create timelines?
- How can Google Sheets be used as a companion to other Google Apps programs?

Knowledge and Skills:
Students will know…
- The basic purposes and functions of Google Sheets.

Students will be able to …
- Develop worksheets with formulas and with embedded charts.
- Produce worksheets with clipart, formatting changes, functions, conditional formatting.
- Create pictograph charts in Google Sheets.
- Prepare timelines in Google Sheets based on historical events.
- Formulate worksheets in Google Sheeets with absolute values.
- Apply 3-D formats, rotate, and explode a pie chart.

EVIDENCE OF LEARNING

Assessment:
What evidence will be collected and deemed acceptable to show that students truly "understand"?

- **End of Unit Assessment:**
  - Students will complete a comprehensive end of unit assessment.
- Student must complete end of section questions and activities
- Students will participate in critical thinking activities.
- Students are also given mini-projects/assignments to test their practical knowledge of the topic

Learning Activities:

What differentiated learning experiences and instruction will enable all students to achieve the desired results?

- Students participate in group activities, which require students to work together as a team to generate examples, solutions, and creative ideas as they relate to the lesson.
- Students participate in mini-projects, such as "Create a Study Schedule" and "Create a Budget".
- Students will complete a series of mini projects related to each topic.

RESOURCES

Teacher Resources:
- Google for Education: Applied Digital Skills

Equipment Needed:
- LCD Projector and laptop for daily lessons and projects

RAHWAY PUBLIC SCHOOLS CURRICULUM

UNIT THREE

Content Area: Information Processing/Multimedia Presentations

Unit Title: Introduction to Google Slides

Target Course/Grade Level: Grades 9-12

Unit Summary: This unit explores the uses of Google Slides to create a variety of professional presentations. Students will learn guidelines to follow when creating a presentation for a group, along with various formatting strategies and creative additions.

Approximate Length of Unit: 10 weeks

LEARNING TARGETS

NJ Student Learning Standards:
NJSLS-Career Readiness, Life Literacies, and Key Skills
- Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.
  - 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
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  - 9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).
  - 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
  - 9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.
  - 9.4.12.DC.7: Evaluate the influence of digital communities on the nature, content and responsibilities of careers, and other aspects of society (e.g., 6.1.12.CivicsPD.16.a).
  - 9.4.12.IML.1: Compare search browsers and recognize features that allow for filtering of information.
  - 9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.
  - 9.4.12.IML.8: Evaluate media sources for point of view, bias, and motivations (e.g., NJSLSA.R6, 7.1.AL.IPRET.6).
  - 9.4.12.IML.9: Analyze the decisions creators make to reveal explicit and implicit messages within information and media (e.g., 1.5.12acc.C2a, 7.1.IL.IPRET.4).

○ 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).
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Interdisciplinary Connections and Standards:
Computer Science and Design Thinking:
8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.
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WHST.9-10.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
WHST.9-10.6. Use technology, including the Internet, to produce, share, and update writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
WHST.9-10.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
WHST.9-10.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Unit Understandings:

Students will understand that…
● Use Google Slides to create slideshows with tables, picture graphics, sound, and animation effects.
● Use Google Slides to manipulate pictures and graphics to suit the needs of the user.
● Adjust slide transitions and presentation times.
● Add and print speaker notes.

Unit Essential Questions:
• What purposes are appropriate for Google Slides?
• What makes an effective Google Slides presentation?
• How can one incorporate animation and graphics in a presentation?
• Where can a Google Slides presentation be used?

Knowledge and Skills:

Students will know…

- The basic purposes and functions of Google Slides.

Students will be able to …

- Develop professional Google Slides presentations.
- Design professional Google Slides presentations with custom animation, sound, and motion clips.
- Revise and generate unique images.
- Prepare timed presentations.
- Collaborate with classmates to create an interactive presentation.

EVIDENCE OF LEARNING

Assessment:

What evidence will be collected and deemed acceptable to show that students truly "understand"?

- **End of Unit Assessment:**
    - Students will complete a comprehensive end of unit assessment.
- Student must complete end of section questions and activities
- Students will participate in critical thinking activities.
- Students are also given mini-projects/assignments to test their practical knowledge of the topic

Learning Activities:

What differentiated learning experiences and instruction will enable all students to achieve the desired results?

- Students participate in group activities, which require students to work together as a team to generate examples, solutions, and creative ideas as they relate to the lesson.
- Students participate in mini-projects, such as "Write and If/Then Adventure Story" and "Building Your Own Brand".
- Students will complete a series of mini projects related to each topic.

RESOURCES

Teacher Resources:

- Google for Education: Applied Digital Skills

Equipment Needed:

- LCD Projector and laptop for daily lessons and projects

RAHWAY PUBLIC SCHOOLS CURRICULUM

UNIT FOUR

Content Area: Information Processing/Multimedia Presentations

Unit Title: Interactive Google Apps

Target Course/Grade Level: Grades 9-12

Unit Summary: This unit explores the uses of additional Google Apps such as Google Drive, Google Forms, Google Draw and Google Sites. Students will learn guidelines to follow for effective document management, creating forms, and developing a website.

Approximate Length of Unit: 10 weeks

LEARNING TARGETS

NJ Student Learning Standards:
NJSLS-Career Readiness, Life Literacies, and Key Skills
- Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.
  - 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
  - 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
  - 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
  - 9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).
  - 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
  - 9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.
  - 9.4.12.DC.7: Evaluate the influence of digital communities on the nature, content and responsibilities of careers, and other aspects of society (e.g., 6.1.12.CivicsPD.16.a).
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  - 9.4.12.IML.8: Evaluate media sources for point of view, bias, and motivations (e.g., NJSLSA.R6, 7.1.AL.IPRET.6).
  - 9.4.12.IML.9: Analyze the decisions creators make to reveal explicit and implicit messages within information and media (e.g., 1.5.12acc.C2a, 7.1.IL.IPRET.4).

- 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).
- 9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.
- 9.4.12.TL.3: Analyze the effectiveness of the process and quality of collaborative environments.
- 9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem (e.g., 7.1.AL.IPERS.6).

Interdisciplinary Connections and Standards:
Computer Science and Design Thinking:
8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.
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8.1.12.DA.5: Create data visualizations from large data sets to summarize, communicate, and support different interpretations of real-world phenomena.

NJ SLS Companion Standards: Reading and Writing Standards for History, Social Studies, Science, and Technical Subjects:
RST.9-10.5. Analyze the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).
WHST.9-10.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
WHST.9-10.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
WHST.9-10.6. Use technology, including the Internet, to produce, share, and update writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
WHST.9-10.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
WHST.9-10.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Unit Understandings:

Students will understand that…
- Use Google Drive to organize, manage and share files.
- Use Google Forms to collect information from users through a personalized survey or quiz.
- Use Google Draw to create and manipulate pictures and graphics to suit the needs of the user.
- Use Google Sites to create simple web sites that support collaboration between different editors.

Unit Essential Questions:
- What are the advantages of using Google Drive for storing and file sharing?
- How can a form be used to collect data?
- How can forms be customized for different needs?

- How can Google Drawings be used in collaboration with other Google Apps?
- How can information be shared online?

Knowledge and Skills:
Students will know…
- The basic purposes and functions of Google Drive, Google Forms, Google Draw, and Google Sites.

Students will be able to …
- Create file folders to organize, manage and share files.
- Create Google Forms to collect data from surveys or quizzes.
- Create documents using graphics such as Flyers and Advertisements.
- Create and publish a website to provide information.

EVIDENCE OF LEARNING

Assessment:
What evidence will be collected and deemed acceptable to show that students truly "understand"?

- **End of Unit Assessment:**
    - Students will complete a comprehensive end of unit assessment.
- Student must complete end of section questions and activities
- Students will participate in critical thinking activities.
- Students are also given mini-projects/assignments to test their practical knowledge of the topic

Learning Activities:
What differentiated learning experiences and instruction will enable all students to achieve the desired results?
- Students participate in group activities, which require students to work together as a team to generate examples, solutions, and creative ideas as they relate to the lesson.
- Students participate in mini-projects, including creating surveys, quizzes, advertisements, and websites.

RESOURCES

Teacher Resources:
- Google for Education: Applied Digital Skills

Equipment Needed:
- LCD Projector and laptop for daily lessons and projects