Department of College and Career Readiness

Computer Applications Curriculum

5.0 Credits

Unit Four

PATERSON PUBLIC SCHOOLS

Preparing All Children for College and Career

Computer Applications

Course Description

Computer Applications is a 5-credit business course designed ultimately to prepare students to be productive in the college and career of their choice. Unit one provides students with opportunities to learn and practice effective and appropriate personal and digital communication skills, netiquette, health and safety in the workplace, and Internet ethics such as privacy, copyright infringement and plagiarism. In unit two, a career research project is completed and students complete self-assessments to best identify their future careers. Students prepare a career portfolio including resume, references, and cover letters in Microsoft Word, as well as learning interview skills to facilitate potential job acquisition. Additionally, students gain invaluable Microsoft Word skills, such as formatting, editing text, working with tables, lists and document management among many word processing skills. The students learn about the many facets of Microsoft Excel in unit three, including data collection and analysis and the many uses for these skills in the workplace. Students are taught in unit three, the tools for properly creating visually appealing and engaging Microsoft PowerPoint presentations including effective use of transitions, animations and slide show effects. Each unit contains a suggested time length, required materials, and recommended goals and objectives. A great deal of time is committed to Microsoft Word as many of the skills learned in this unit are transferrable to the remaining two units. Emphasis is placed on the interconnectedness of the three core Microsoft applications. Computer Applications is offered to students grades 9-12 and is comprised of 4 units: Computer Applications in the Workplace, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

Paterson Public Schools

Preparing All Children for College and Career

Computer Applications

Pacing Guide		
Unit	**Topic**	**Suggested Timing**
Unit 1	Computer Applications in the Workplace	approx. 4 weeks
Unit 2	Microsoft Word	approx. 14 weeks
Unit 3	Microsoft Excel	approx. 10 weeks
Unit 4	Microsoft PowerPoint	approx. 7 weeks

Educational Technology Standards

8.1.12.A.1, 8.1.12.B.2, 8.1.12.C.1, 8.1.12.D.1, 8.1.12.E.1, 8.1.12.F.1

➢ **Technology Operations and Concepts**

- Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.

➢ **Creativity and Innovation**

- Apply previous content knowledge by creating and piloting a digital learning game or tutorial.

➢ **Communication and Collaboration**

- Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.

➢ **Digital Citizenship**

- Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.

➢ **Research and Information Literacy**

- Produce a position statement about a real world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.

➢ **Critical Thinking, Problem Solving, Decision Making**

- Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

Career Ready Practices

Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

CRP1. **Act as a responsible and contributing citizen and employee**
Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

CRP2. Apply appropriate academic and technical skills.
Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

CRP3. Attend to personal health and financial well-being.
Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial well-being, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.

CRP4. Communicate clearly and effectively and with reason.
Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

CRP5. Consider the environmental, social and economic impacts of decisions.
Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.

CRP6. Demonstrate creativity and innovation.
Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

CRP7. Employ valid and reliable research strategies.
Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

CRP9. Model integrity, ethical leadership and effective management.
Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term

effects that management's actions and attitudes can have on productivity, morals and organizational culture.

CRP10. Plan education and career paths aligned to personal goals.
Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

CRP11. Use technology to enhance productivity.
Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

CRP12. Work productively in teams while using cultural global competence.
Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

Differentiated Instruction

Strategies to Accommodate Students Based on Individual Needs

Time/General	Processing	Comprehension	Recall
- Extra time for assigned tasks - Adjust length of assignment - Timeline with due dates for reports and projects - Communication system between home and school - Provide lecture notes/outline	- Extra Response time - Have students verbalize steps - Repeat, clarify or reword directions - Mini-breaks between tasks - Provide a warning for transitions - Reading partners	- Precise step-by-step directions - Short manageable tasks - Brief and concrete directions - Provide immediate feedback - Small group instruction - Emphasize multi-sensory learning	- Teacher-made checklist - Use visual graphic organizers - Reference resources to promote independence - Visual and verbal reminders - Graphic organizers - Digital Forms with instant feedback
Assistive Technology	**Tests/Quizzes/Grading**	**Behavior/Attention**	**Organization**
- Computer/whiteboard - Spell-checker - Voice to text application - Headphones with mic	- Extended time - Study guides - Shortened tests - Read directions aloud - Performance-based tests	- Consistent daily structured routine - Simple and clear classroom rules - Frequent feedback - Appropriate seating	- Individual daily planner - Display a written agenda - Note-taking assistance - Color code materials - Multilingual directions

Enrichment

Strategies Used to Accommodate Based on Students Individual Needs:

- Adaption of Material and Requirements

- Evaluate Vocabulary

- Elevated Text Complexity

- Open-ended Activities

- Independent Student Options

- Projects Completed Individually or with Partners

- Self-Selection of Research

- Tiered/Multi-Level Activities for Ability Levels

- Digital and Classroom Resource-based Projects

- Individual Response Board via Google Classroom or Alternative Classroom Site

- Alternative Projects
- Text-to-talk or talk-to-text applications

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Assessments
Suggested Formative/Summative Classroom Assessments

- Student Generated Timelines, Maps, Charts, Graphic Organizers Using Microsoft Word, Excel or PowerPoint
- Teacher-created Unit Assessments, Chapter Assessments, Quizzes
- Teacher-created DBQs, Essays, Short Answer
- Accountable Talk, Debate, Oral Report, Role-Playing, Think Pair, and Share
- Projects, Portfolios, PowerPoint Presentations, Gallery Walks
- Homework
- Use Google Docs, Sheets or Slides to Demonstrate Skills, Knowledge or Ability
- Rubric-based Business Application, Cross-curricular or Present and Publish Projects
- Photo, Video, Graphic Art, Radio, Song Utilization in Word, Excel, or PowerPoint Projects
- Create a Presentation and add Audio, Video, Sound or Narration
- Complete Assessments using Google Forms, presentations, or performance-based activities
- Use Tumblr or Symbaloo to Create Resource Boards
- Review and Critically Analyze Video-based Resources; use Digital resources to Respond - Google Docs & Forms, or MS Word

Interdisciplinary Connections

English Language Arts
- Journal writing
- Close reading of job search related content
- Create a travel or other sales brochure
- Keep a running word wall of topic-related vocabulary

Social Studies
- Research the history of a given industry/profession
- Research prominent poets, authors or book genres to create newsletters
- Research geographic locations to prepare a presentation for travel in coordination with a budget spreadsheet and brochure

World Language
- Translate industry-content using digital resources
- Create a translated index of topic-related vocabulary in a journal
- Generate a translated list of words and phrases related to workplace safety
- Create a presentation of common phrases or useful terms for travel to another country

Math
- Research industry salaries for a geographic area and juxtapose against local cost of living
- Create tables and spreadsheets with formulas to calculate various math functions
- Collect and analyze data using charts and graphs
- Develop a program in computer programming using various applications

Fine & Performing Arts
- Create a poster for a social function
- Design, develop and create a book for presentation to the class
- Design a logo to represent a company for use on letterhead, invoices and presentations
- Perform for the class a formal job interview with one or two students

Science
- Research the environmental impact of a given career or industry
- Research latest developments eco-friendly technology
- Investigate applicable-careers in STEM fields

New Jersey Student Learning Standards

9.3 – Career and Technical Education

Career Cluster: Various

- 9.3.12.ED.2: Demonstrate effective oral, written and multimedia communication in multiple formats and contexts.
- 9.3.12.BM.3: Explore, develop and apply strategies for ensuring a successful business career.

Pathway: Various

- 9.3.12.BM-ADM.3 – Plan, monitor and manage day-to-day business activities.
- 9.3.IT-WD.10: Comply with intellectual property laws, copyright laws and ethical practices when creating Web/digital communications.

Common Career Technical Core (CCTC)

Career Cluster - Various

9.3.12.ED.02 – Demonstrate effective oral, written and multimedia communication in multiple formats and contexts.
- ED 02.1 – Write informational correspondence to stakeholders in the learning environment.

9.3.12.BM.3 - Explore, develop and apply strategies for ensuring a successful business career.
- BM.3.4 – Utilize career-advancement activities to enhance professional development.

9.3.12.BM-ADM.3 – Plan, monitor and manage day-to-day business activities.
- BM-ADM.3.1– Utilize office equipment to accomplish administrative service related job assignments.
- BM-ADM.3.3 – Maintain workflow to enhance productivity.

9.3.IT-WD.10: Comply with intellectual property laws, copyright laws and ethical practices when creating Web/digital communications.

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Common Core State Standards (CCSS)

CCSS - English-Language Arts

Production and Distribution of Writing:

- CCSS.ELA-LITERACY.W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Range of Writing:

- CCSS.ELA-LITERACY.W.11-12.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences

Common Core State Standards (CCSS)

CCSS - Mathematics

Summarize, represent, and interpret data on a single count or measurement variable:
- CCSS.MATH.CONTENT.HSS.ID.A.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).

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Course: Computer Applications **Unit:** 4 – Microsoft PowerPoint **Grade Level:** 9-12	**Unit Overview:** In this unit, students are taught the tools for properly creating visually appealing and engaging Microsoft PowerPoint presentations including effective use of transitions, animations and slide show effects. As an extension, students should learn how to create .jpeg/picture files of each slide in a presentation in order to use them in a program such as Windows Movie Maker to create a movie from the presentation.

New Jersey Student Learning Standards (NJSLS): 9.3.12.ED.02, 9.3.12.BM.3, 9.3.12.BM-ADM.3, 9.3.IT-WD.10
Common Career Technical Core (CCTC): ED 02.1, BM.3.4, BM-ADM.3.1, BM-ADM.3.3
Common Core State Standards (CCSS): W.11-12.4, W.11-12.10, HSS.ID.A.1

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
Acquire new skills in PowerPoint basics. **NJSLS:** 9.3.12.BM.3, 9.3.12.BM-ADM.3, **CCTC:** BM-ADM.3.1, BM-ADM.3.3 **CCSS:** W.11-12.4	Why is it important to know and understand your audience when planning and preparing a presentation? What does it mean to be media literate and how does it apply to the topic of PowerPoint? Why is it important to catch your audience's interest when you are giving a presentation?	▪ Identify parts of the PowerPoint screen. ▪ Work with the Ribbon, tabs and groups. ▪ Open an existing presentation. ▪ Insert and edit text on slides. ▪ Start and run slide shows. ▪ Preview and print a presentation.	**Unit 1 Assessment** Complete the online assessment of 10 multiple choice questions with at least 70% accuracy. http://glencoe.mheducation.com/sites/0076613955x/student_view0/unit4/lesson1/self_checks.html **Interactive Review:** **Use the online tutorial to review new**	PowerPoint 2010: The power of presentations: http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/index.html

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
			information and test your knowledge. http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/lesson1/interactive_reviews.html	
Develop strategies to help you improve the skills necessary to create professional looking presentations. **NJSLS:** 9.3.12.ED.02, 9.3.12.BM.3, 9.3.12.BM-ADM.3 **CCTC:** ED 02.1, BM.3.4, BM-ADM.3.1, BM-ADM.3.3 **CCSS:** W.11-12.4, W.11-12.10	How might a club or activity that you are involved with use PowerPoint? How can careful preparation and planning help me to create professional, attractive presentations? What steps must I take to ensure my PowerPoint presentations are an effective communication tool in the workplace?	▪ Understand basic principles of creating a good presentation. ▪ Explore different views when working with slides. ▪ Consider how to organize information on a slide using placeholders. ▪ Learn how to set up an organized presentation.	**Unit 2 Assessment** Complete the online assessment of 10 multiple choice questions with at least 70% accuracy. http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/lesson2/self_checks.html **Interactive Review: Use the online tutorial to review and assess understanding** http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/lesson2/interactive_revie	B.E. Publishing: "Present It! Teen-based Activities for Microsoft PowerPoint."

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
			ws.html **Presentation** Create brief presentation using the step-by-step instructions as a model for project completion.	
Establish a repertoire of qualities that make verbal presentations interesting. **NJSLS:** 9.3.12.ED.02, 9.3.12.BM-ADM.3 **CCTC:** ED 02.1, BM-ADM.3.1, BM-ADM.3.3 **CCSS:** W.11-12.4, W.11-12.10, HSS.ID.A.1	To what extent does preparing a presentation differ from a school to a business? How can developing my presentation skills help be to create and deliver successful presentations? To what extent could giving a good presentation impact my reputation in school or work?	▪ Use themes ▪ Promote and demote text in slide. ▪ Create diagrams, tables and charts. ▪ Insert Clip Art, pictures, shapes, and WordArt. ▪ Use the Spelling Checker and Thesaurus. ▪ Add additional visual elements to presentations.	**Journal** In your journal respond to the following prompt: How can you use the presentation skills you have learned in a classroom setting? **Presentation** Prepare a personal biography in PowerPoint with a minimum of 10 slides.	**Real World Connection Activities** http://glencoe.mheducation.com/sites/007661395x/student_view0/real_world_connection_activities.html

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
Utilize PowerPoint presentations to convey your message visually to a large audience. **NJSLS:** 9.3.12.ED.02, 9.3.12.BM.3, 9.3.12.BM-ADM.3, **CCTC:** ED 02.1, BM.3.4, BM-ADM.3.1, BM-ADM.3.1, BM-ADM.3.3 **CCSS:** W.11-12.4, W.11-12.10	To what extent will planning the content I will enter into my PowerPoint presentation make it more effective and professional looking? Why is it important to consider the potential for overpowering my presentation with excessive effects? From what I know about PowerPoint, what steps might be necessary to make my presentations more appealing to my audience?	▪ Use proofing tools to edit presentations, such as spelling and grammar. ▪ Create multiple slide presentations using various tools such as, formatting titles, changing themes for colors and fonts, adding effects using Quick Styles.	**Newspaper Comparison** Locate a local newspaper and a national newspaper. Compare the front pages. In your journals, compare and contrast how the two are different/similar. Explain how some of the visual features of the print media may relate to the digital media of PowerPoint.	**Academic Projects** http://glencoe.mheducation.com/sites/007661395x/student_view0/academic_projects.html
Recognize the importance of excellent communication skills and utilize them when	To what extent can transitions make my presentation more professional?	▪ Customize slide backgrounds. ▪ Modify slide layouts, fonts, and text.	**Unit 3 Assessment** Complete the online assessment of 10 multiple choice questions with at least	**Business Application Projects** http://glencoe.mheducation.com/sites/007661395x/student_view0/business_a

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
presenting to an audience. **NJSLS:** 9.3.12.ED.02, 9.3.12.BM.3, 9.3.12.BM-ADM.3 **CCTC:** ED 02.1, BM.3.4, BM-ADM.3.1, BM-ADM.3.3 **CCSS:** W.11-12.4	How can graphics and formatting impact my PowerPoint presentation? How can I emphasize the main points of my presentation while maintaining the attention of my audience?	▪ Modify and add effects to pictures, shapes and graphics. ▪ Apply animation and transition effects. ▪ Work with Slide masters. ▪ Modify page setup. ▪ Use headers and footers.	70% accuracy. http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/lesson3/self_checks.html **Journal** View the TedTalk video with Will Stephen. This lesson is about presentation skills. Respond to the questions below in a minimum of two paragraphs. In your journal, explain how even though the speaker spoke about "nothing," how he actually explained something about presentations. How can a PowerPoint help your presentation? **Interactive Review:**	pplication_projects.html **How to sound smart in your TEDx Talk | Will Stephen | TEDxNewYork** https://www.youtube.com/watch?v=8S0FDjFBj8o

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
			Use the online tutorial to review and assess understanding http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/lesson3/interactive_reviews.html	
Understand the principles of planning an effective, organized presentation using your own information. **NJSLS:** 9.3.12.ED.02, 9.3.IT-WD.10 **CCTC:** ED 02.1, BM-ADM.3.1, BM-ADM.3.3 **CCSS:** W.11-12.4, W.11-12.10	How can utilizing PowerPoint's file protection feature allow me to collaborate with others and manage files without a loss of information? To what extent do I think copyright laws are important in regards to preparing a PowerPoint presentation? If copyright laws did not exist, what would happen?	▪ Add, delete and rearrange slides. ▪ Add hyperlinks and Action buttons. ▪ Use grids and guides. ▪ Preview slides and modify printing options. ▪ Create custom shows. ▪ Rehearse timings. ▪ Prepare presentations by saving them in various formats, such as .jpeg for use in creating a video. ▪ Ensure no	**Unit 4 Assessment** Complete the online assessment of 10 multiple choice questions with at least 70% accuracy. http://glencoe.mheducation.com/sites/007661395x/student_view0/unit4/lesson4/self_checks.html **Close Reading** Read critically a sample PowerPoint presentation to check for issues of plagiarism or copyright	**Present and Publish Projects** http://glencoe.mheducation.com/sites/007661395x/student_view0/present_and_publish_projects.html

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
		material is the property of someone else.	infringement. Edit any instances of plagiarism to complete the presentation.	

Unit 4 Vocabulary

Animation	Photo album
Audio	Placeholder
Button	Presentation
Chart	Proofing tools
Chart elements	Quick Access Toolbar (QAT)
Chart layout	Recording
Cursor	Slide
Effects	Slide show
Graphics	Smart Art
Images	Table
Modify	Timing
Multimedia	Transition
Notes	Video
Orientation	View
Path options	WordArt

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Suggested Unit Projects
Choose At Least One

Students will read a short novel such as "The Acorn People," by for example. On completion of the book, students will create a summary of the story in no less than 20 slides. They must use proper writing styles and techniques including punctuation and grammar. Students must include pictures, multiple layouts, transitions, animations and sound.	Students will create a children's picture book. Students will review several samples of illustrated children's books to gain an understanding of the creative process and the elements that help make a children's book successful. Additionally, students will develop the story utilizing the appropriate plot structure techniques. Students may work in a small group to brainstorm ideas for characters, setting, and conflict. The story will be created in Microsoft PowerPoint in no less than 10 slides. Presentations must include transitions, animations, sound (audio voice recording, clipart, or music from a file), and pictures. If they choose, they may use their skills for creating a movie of their PowerPoint slides.
Working in a small group, create a travel business. Design a presentation to communicate with customers about various destinations. Using Microsoft Word, each group member will create a travel brochure to a different country. Using Microsoft Excel, each group member will create a travel budget for a family of 4 to the destination chosen for the brochure. Using Microsoft PowerPoint, compile all of the research information together and collaborate on a slide presentation with a minimum of 12 slides.	

Suggested Structured Learning Experiences

Field Trip Students who successfully complete the Children's Book assignment will present their stories to kindergarten or first grade students at a local elementary school. Students will assist the students in creating their own paper book.	