

East Penn School District
Curriculum and Instruction

Curriculum for: Grade 7 Computers

Course(s): Grade 7 Computers

Grades: 7

Department: Computer/Business Applications

Length of Period (average minutes): 40

Periods per cycle: 6

Length of Course (yrs): ½ (trimester)

Type of offering: Exploratory

Credit(s) awarded: .33

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Fundamentals of Computer Science		
Enduring Understandings & Essential Questions	Skills and Knowledge	Standards
<p>Enduring Understandings:</p> <ul style="list-style-type: none"> • Computer programming languages are necessary for the interaction of a user and the device. • Coding can be used for problem solving and creation. • Coding is a set of directions to accomplish a task, an element of programming. <p>Essential Questions:</p> <ul style="list-style-type: none"> • What strategies and processes can I use to become a more effective problem solver? • How do computers help people to solve problems? • How do people and computers approach problems differently? • What does a computer need from people in order to solve problems effectively? • How are languages used with the technology of today? • How are coding and programming different in function and purpose? • How can text communicate content and structure on a web page? 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> • Using the problem-solving process to create digital content. • Writing a sequence of code to run a program or solve a problem. • Creating animation to enhance digital media • Utilizing different coding environments to create lines of code and run a program. • Developing interactive programs to be operated on different platforms and environments. <p><i>Students will know...</i></p> <ul style="list-style-type: none"> • the input-output-store-process model of a computer, and how computers help humans solve problems • the difference between JavaScript and Block coding • why using a computer language is necessary when developing mobile Apps and other interactive media • the use of programming and it's interaction with a physical component 	<p>CSTA Standards</p> <p>2-CS-02 Design projects that combine hardware and software components to collect and exchange data.</p> <p>2-NI-05 Explain how physical and digital security measures protect electronic information.</p> <p>2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution.</p> <p>2-Ap-12 Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.</p> <p>2-NI-04 Model the role of protocols in transmitting data across networks and the Internet.</p> <p>2-IC-23 Describe tradeoffs between allowing information to be public and keeping information private and secure.</p> <p>CEW Standards</p> <p>----13.3.8.C Explain and demonstrate problem solving.</p>

Media/Literacy

Enduring Understandings:

- People construct, experience, and interpret media differently.
- We have rights and responsibilities as consumers and producers of media.
- Media messages are constructed for different purposes.
- There is a process to design and it relates to targeted audiences.
- Effective and legal research is a way respect others' and one's own work.
- How to compile accurate data to create a marketing tool.

Essential Questions:

- How does marketing affect our perceptions of reality?
- How does the creation of my digital identity control how I am being marketed to as an adolescent?
- How do I investigate career opportunities that match my interest skill set?
- What steps can help you find what you're looking for when you search online?
- How do you evaluate resources for accuracy?
- How do I use digital tools to effectively communicate and present my ideas?

Students will be skilled at...

- Effectively communicating and presenting ideas using digital tools.
- Using the design thinking process to effectively market to an audience.
- Evaluating, curating, and disseminating research to support presentation.
- Giving appropriate credit and citation for the intellectual property of others.

Students will know...

- The definition of an online footprint and how companies use that information to market
- We help create an online profile for companies
- Companies create marketing tools that are designed to form our perceptions for purchasing products
- Where we live and what we experience will determine how we utilize technology
- How to utilize the most appropriate media creation tools, characteristics and conventions.

ISTE Standards

2a Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

2b Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices

3a Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits

3b Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

5b Students collect data or identify relevant data sets, use digital tools to analyze them and represent data in various ways to facilitate problem-solving and decision making.

--**15.9.8.L.** Explain how technologies are used in marketing to gain a competitive advantage.

CEW Standards

--**13.2.8 A** Identify effective speaking and listening (communication) skills.

--**13.2.8.E** Explain the importance of the essential workplace skills/knowledge such as, but not limited to: communication, personal initiative, technical literacy, technology.

Financial Literacy

Enduring Understandings:

- Creating budgets are necessary for financial success.
- Saving and investing are different forms of money management.
- Saving and investing will lead to continued financial wealth.
- Global currencies are valued differently.

Essential Questions:

- How is currency calculated globally?
- How can you make money work for you?
- How does banking and investment work?
- How do my personal finances impact the economy?
- How do I use digital tools to create a budget?

Students will be skilled at...

- Differentiating between short and long term financial goals.
- Working with the financial constraints of a simple budget.
- Creating a stock portfolio to track investments
- Calculating global currencies conversion rates.
- Understanding how their personal finance decisions their current and future decisions.

Students will know...

- Financial terms related to budgeting and investing
- How to create a basic budget
- How to conduct research on investment options to create a simple stock portfolio
- Global currencies rates vary and how to determine its monetary value
- The importance of financial planning and its effects on future outcomes

PA Business, Computer, Information Technology:

15.6.8.B Discuss the importance of developing short-, medium-, and long-term personal financial goals.

15.6.8.F Evaluate assets as related to personal wealth and spending.

15.6.8.G Discuss the need for money management.

15.6.8.H Compare and contrast advantages and disadvantages of various options of paying for short- and long-term purchases.

15.6.8.I Compare advantages and disadvantages of different financial institutions relating to saving, investing, and borrowing.

15.6.8.J Explain the difference between simple and compound interest.

15.6.8.R Evaluate the benefits of a diversified investment portfolio.

CEW Standards

--**13.1.8.E** Analyze the economic factors that impact employment opportunities, such as, but not limited to global influences, potential earnings, salaries/benefits.

--**13.3.8 D** Analyze budgets and pay statements such as, but not limited to expenses, savings, taxes

13.3.8.E Identify and apply time management strategies as they relate to both personal and work situations.