| **Data and Information** | | |
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| **Indiana Academic Standard** | **Clarifying Statement(s)** | **Vocabulary** |
| **3-5.DI.1** Understand and use the basic steps in algorithmic problem solving (e.g., problem statement and exploration, examination of sample instances, design, implementation, and testing). |  | **algorithm** – a step-by-step process to complete a task |
| **3-5.DI.2** Develop a simple understanding of an algorithm (e.g., search, sequence of events, or sorting) using computer-free exercises. |  |  |
| **3-5.DI.3** Demonstrate how a string of bits can be used to represent alphanumeric information and how 1's and 0's represent information. | (1) Help students understand that computers change information into 1’s and 0’s to represent information.  (2) To illustrate binary encoding, we can use any two symbols. | **binary** – a method of encoding data using two symbols (usually 1 and 0) |
| **3-5.DI.4** Describe how a simulation can be used to solve a problem. | Example:  --forecasting the weather and viewing the radar is a simulation of the weather patterns | **simulation** – reproduce the behavior of a system |
| **3-5.DI.5** Understand the connections between computer science and other fields. |  | **computer science** – the study of computers and algorithmic processes, including their principles, design, implementation, and impact on society |

| **Computing Devices and Systems** | | |
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| **Indiana Academic Standard** | **Clarifying Statement(s)** | **Vocabulary** |
| **3-5.CD.1** Demonstrate proficiency with keyboards and other input and output devices. | Example:  A keyboard is an input device that sends information about the keys you press. This is received by the computer and it displays the correct letter or number. A monitor is an output device. It displays all the information that has been sent to it by input devices. | **proficiency** – a high degree of competence or skill (this is determined at the district level)  **device** – a unit of physical hardware or equipment that provides one or more computing functions with a computer system. It can provide input to the computer, accept output, or both.  **input** – the signals or instructions sent to a computer |
| **3-5.CD.2** Understand the pervasiveness of computers and computing in daily life (e.g., voicemail, downloading videos and audio files, microwave ovens, thermostats, wireless Internet, mobile computing devices, GPS systems). |  | **computing** – any goal-oriented activity requiring, benefiting from, or creating algorithmic processes |
| **3-5.CD.3** Apply troubleshooting strategies for identifying simple hardware and software problems that may occur during use. |  | **troubleshooting** – a systematic approach to problem solving that is often used to find and resolve a problem, error, or fault within software or a computer system  **hardware** – the physical components that make up a computing system, computer, or computing device  **software** – programs that run on a computer system, computer, or other computing device |
| **3-5.CD.4** Recognize that computers model intelligent behavior (as found in robotics, speech and language recognition, and computer animation). |  |  |

| **Programs and Algorithms** | | |
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| **Indiana Academic Standard** | **Clarifying Statement(s)** | **Vocabulary** |
| **3-5.PA.1** Use technology resources (e.g., calculators, data collection probes, mobile devices, videos, educational software, and web tools) for problem-solving and self-directed learning, and general-purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, facilitate learning, and individual/collaborative writing, communication, and publishing activities. |  | **peripheral device** – generally defined as any auxiliary device such as a computer mouse or keyboard that connect to and works with the computer in some way. Other examples are webcams, scanners, printer, etc. |
| **3-5.PA.2** Use digital tools to gather, manipulate, and modify data for use by a program. |  | **digital** – a characteristic of electronic technology that uses discrete values, generally 0 and 1, to generate, store, and process data  **data** – information that is collected and used for reference or analysis. Data can be digital or non-digital and can be in many forms, including numbers, text, show of hands, images, sounds, or videos.  program - |
| **3-5.PA.3** Implement problem solutions using a block-based visual programming language. |  | **visual programming language** – any programming language that lets users create programs by manipulating program elements graphically rather than by specifying them textually |

| **Networking and Communication** | | |
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| **Indiana Academic Standard** | **Clarifying Statement(s)** | **Vocabulary** |
| **3-5.NC.1** Use online resources (e.g., email, online discussions, collaborative web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products. |  | **collaborative** – to work, one with another |
| **3-5.NC.2** Use productivity technology tools (e.g., word processing, spreadsheet, presentation software) for individual and collaborative writing, communication, and publishing activities. |  |  |

| **Impact and Culture** | | |
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| **Indiana Academic Standard** | **Clarifying Statement(s)** | **Vocabulary** |
| **3-5.IC.1** Discuss basic issues related to responsible use of technology and information, and the consequences of inappropriate use. |  | **digital citizenship** – the norms of appropriate, responsible behavior with regard to the use of technology |
| **3-5.IC.2** Identify the impact of technology (e.g., social networking, cyber bullying, mobile computing and communication, web technologies, cyber security, and virtualization) on personal life and society. |  |  |
| **3-5.IC.3** Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources. |  | **accuracy** – being correct and precise  **relevance** – important to the matter at hand  **appropriateness** – suitable or proper in the circumstances  **comprehensiveness** – complete, including all or nearly all elements or aspects of something  **bias** – prejudice in favor of or against one thing, person, or group compared with another, usually in a way considered unfair |
| **3-5.IC.4** Understand ethical issues that relate to computers and networks (e.g., equity of access, security, privacy, copyright, and intellectual property). |  |  |