

2010/2011 DoDEA Student Competency Record
Java Programming I
PTP305 - 18 weeks

Student	School Year
Grade	Term (fall, spring)
School	Teacher Signature

Mastery is a level of performance that indicates a student has demonstrated the knowledge, skills, and abilities for a unit of instruction or subject area as defined by a recognized standard. DoDEA defines mastery as being competent in the task and non-mastery as needing task remediation.

As students complete each competency, the student or teacher should assess the student's level of performance and mark the appropriate column next to the competency. This record should be used to provide information about competencies mastered to employer, student-employee, or another school/teacher.

PTP305 18 weeks	JAVA Programming I TASKS/COMPETENCIES	Mastery	Non-Mastery
Implementing DoDEA's CTE Course Requirements			
• 001	Demonstrate DoDEA's Workplace Readiness Skills in course activities.		
• 002	Identify issues related to this field of study that affect the environment and impact local and global communities.		
• 003	Identify Internet safety issues and procedures for complying with acceptable use standards.		
Exploring Programming Concepts			
• 004	Outline the development of computers and current industry trends in the programming field.		
• 005	Describe the functions of computer hardware, software, and computer theory.		
• 006	Describe the software development life cycle (SDLC).		
• 007	Describe the development of programming languages and applications.		
Exploring Object-Oriented Programming			
• 008	Describe object-oriented programming and related concepts (e.g., encapsulation, abstraction, inheritance, and polymorphism).		
• 009	Describe design attributes and methods of each class within a problem description.		
• 010	Describe the concepts of reusability.		
Implementing Programming Procedures			
• 011	Design a program using pseudo code and/or a flowchart.		

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• 012	Design an algorithm for a program.		
• 013	Code a program.		
• 014	Compile a program.		
• 015	Execute a program with sample data.		
• 016	Debug a program.		
• 017	Document a program.		
• 018	Maintain a program using SDLC.		
Mastering Programming Fundamentals			
• 019	Create a program with user-defined classes.		
• 020	Import code from existing sources (e.g., library, pre-constructed code, online resources).		
• 021	Code a program that uses correct data types, variables and constants.		
• 022	Write code using appropriate operators.		
• 023	Code a program accepting user input.		
• 024	Code a program that uses looping, conditional, switch, and sequential control structures.		
• 025	Code an applet.		
• 026	Create a web page to host an applet.		
• 027	Code a program that uses industry accepted style and naming conventions.		
• 028	Identify and correct syntax, semantic, and run-time errors.		
• 029	Code a program that uses exception-handling procedures.		
Developing Web Applications			
• 030	Identify programming languages used to create Web applications.		
• 031	Describe ways to view applets.		
• 032	Design a GUI (graphical user interface) for a Web application.		
• 033	Code a Web application.		
Developing Employability Skills			
• 034	Research continuing education pathways and careers in the information technology industry.		
• 035	Create or update a portfolio containing representative samples of student work (e.g., program design, source code, technical documentation, and output).		