

Standards Correlations

Java Programming (Oracle) (6661)

Task	SOL Correlations
Demonstrating Personal Qualities and Abilities	
Demonstrate creativity and innovation.	<p>English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1</p> <p>Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>
Demonstrate critical thinking and problem solving.	<p>English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1</p> <p>Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8, A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>
Demonstrate initiative and self-direction.	<p>English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1,</p>

Task	SOL Correlations
	WG.1, WHI.1, WHII.1
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1
Demonstrating Interpersonal Skills	
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrating Professional Competencies	
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1,

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	USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6 History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8
Demonstrate information-literacy skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1
Demonstrate an understanding of information security.	English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1,

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	WG.1, WHI.1, WHII.1 Mathematics: COM.10
Maintain working knowledge of current information-technology (IT) systems.	English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17 Science: BIO.1, CH.1, ES.1, PH.1
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16 Science: CH.1, ES.1, LS.1, PH.1, PS.1
Apply mathematical skills to job-specific tasks.	English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: 6.1, PH.1, PS.1

Task	SOL Correlations
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1
Examining All Aspects of an Industry	
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16
Examine aspects of management within an industry/organization.	
Examine aspects of financial responsibility within an industry/organization.	
Examine technical and production skills required of workers within an industry/organization.	
Examine principles of technology that underlie an industry/organization.	
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16
Addressing Elements of Student Life	
Identify the purposes and goals of the student organization.	
Explain the benefits and responsibilities of membership in the student organization as	

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a student and in professional/civic organizations as an adult.	
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.	
Identify Internet safety issues and procedures for complying with acceptable use standards.	
Exploring Work-Based Learning	
Identify the types of work-based learning (WBL) opportunities.	
Reflect on lessons learned during the WBL experience.	
Explore career opportunities related to the WBL experience.	
Participate in a WBL experience, when appropriate.	
Comparing Java and PL/SQL Programming	
Compare PL/SQL and Java.	<p>English: 11.5, 12.5</p> <p>FBLA Competitive Events and Activities Areas: Database Design & Applications</p> <p>NBEA Achievement Standards for Information Technology: Choose the appropriate language or application development tool for specific tasks.</p>
Identify the advantages of using PL/SQL in database application development.	<p>English: 11.5, 12.5</p> <p>FBLA Competitive Events and Activities Areas: Computer Problem Solving</p>

Task	SOL Correlations
	<p>Database Design & Applications</p> <p>NBEA Achievement Standards for Information Technology: Choose the appropriate language or application development tool for specific tasks.</p>
Identify the advantages of using Java in database application development.	<p>English: 11.5, 12.5</p> <p>FBLA Competitive Events and Activities Areas: Computer Problem Solving Database Design & Applications</p> <p>NBEA Achievement Standards for Information Technology: Choose the appropriate language or application development tool for specific tasks.</p>
Learning the Fundamentals of Java as an Object-Oriented Programming Language	
Describe Java's place in computer-language history.	<p>English: 11.5, 12.5</p> <p>NBEA Achievement Standards for Information Technology: Evaluate how information technology transforms business processes and relationships. Identify and evaluate how information technology developments changes the way humans do their work. Identify and explain the major components of research and development information technologies and their interrelationships. Use information technology skills in today's learning.</p>
Explain the fundamentals of object-oriented programming.	<p>English: 11.5, 12.5</p> <p>Mathematics: COM.5</p> <p>NBEA Achievement Standards for Information Technology: Identify and explain programming structures.</p>

Task	SOL Correlations
Describe the general form of a Java program, including variables, program flow control, main, and methods statements.	<p>English: 11.5, 12.5</p> <p>Mathematics: COM.15, COM.16</p> <p>NBEA Achievement Standards for Information Technology: Identify and define object-oriented programming terminology.</p>
Create and compile a block of code.	<p>Mathematics: COM.5</p> <p>NBEA Achievement Standards for Information Technology: Apply design principles to programming tasks. Demonstrate the ability to code using object-oriented programming. Select and incorporate appropriate compiler. Test, debug, and document code.</p>
Identify Java keywords.	<p>English: 11.3, 11.5, 12.3, 12.5</p> <p>Mathematics: COM.7</p> <p>NBEA Achievement Standards for Information Technology: Identify and define object-oriented programming terminology.</p>
Describe the standard Java naming conventions.	<p>English: 11.5, 12.5</p> <p>Mathematics: COM.7</p> <p>NBEA Achievement Standards for Information Technology: Identify and define object-oriented programming terminology.</p>
Identify the key components of the Software Development Kit (SDK).	<p>English: 11.5, 12.5</p> <p>NBEA Achievement Standards for Information Technology: Differentiate between source and object code. Identify and define object-oriented programming terminology.</p>

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Describe the JVM.	English: 11.5, 12.5 NBEA Achievement Standards for Information Technology: Differentiate between source and object code. Identify and define object-oriented programming terminology.
Distinguishing Key Elements of Java	
Use Java's primitive data types.	Mathematics: COM.14, COM.15 NBEA Achievement Standards for Information Technology: Demonstrate the ability to code using object-oriented programming.
Initialize and assign variables.	Mathematics: COM.15
Describe the scope rules of a variable.	English: 11.5, 12.5 Mathematics: COM.16 NBEA Achievement Standards for Information Technology: Demonstrate the ability to code using object-oriented programming.
Apply type conversion (casting) in expressions.	
Use the arithmetic operators.	Mathematics: COM.1, COM.7, COM.15 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Compare relational and logical operators.	English: 11.5, 12.5 Mathematics: COM.1, COM.7, COM.8, COM.15, COM.16
Input characters from the keyboard.	Mathematics: COM.13

Task	SOL Correlations
Navigate the Java API.	
Build and execute Java applications, using a development tool.	<p>Mathematics: COM.2</p> <p>NBEA Achievement Standards for Information Technology: Choose the appropriate language or application development tool for specific tasks. Maintain and reengineer existing code. Test, debug, and document code.</p>
Modify Java application source code.	<p>Mathematics: COM.5</p> <p>NBEA Achievement Standards for Information Technology: Maintain and reengineer existing code.</p>
Controlling Program Flow	
Identify situations in which to use control statements.	<p>English: 11.5, 12.5</p> <p>Mathematics: COM.8</p> <p>NBEA Achievement Standards for Information Technology: Identify and define the coding task.</p>
Use <i>if-then</i> and <i>if-then-else</i> statements.	<p>English: 11.5, 12.5</p> <p>Mathematics: COM.8</p> <p>NBEA Achievement Standards for Information Technology: Demonstrate the ability to code using object-oriented programming. Develop both procedural and object-oriented programs.</p>
Use switch statements.	<p>Mathematics: COM.8</p> <p>NBEA Achievement Standards for Information Technology: Demonstrate the ability to code using object-oriented programming.</p>

Task	SOL Correlations
	Develop both procedural and object-oriented programs.
Use <i>for</i> loop statements.	Mathematics: COM.13 NBEA Achievement Standards for Information Technology: Demonstrate the ability to code using object-oriented programming. Develop both procedural and object-oriented programs.
Use the <i>while</i> loop.	Mathematics: COM.8, COM.13 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Use the <i>do-while</i> loop.	Mathematics: COM.13 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Use <i>break</i> and <i>continue</i> statements effectively.	Mathematics: COM.13 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Introducing Classes, Objects, and Methods	
Identify class and method definitions.	English: 11.5, 12.5 NBEA Achievement Standards for Information Technology: Apply design principles to programming tasks.
Differentiate between classes and objects.	English: 11.5, 12.5 NBEA Achievement Standards for Information Technology: Apply design principles to programming tasks.
Describe an object and its operations (or methods).	English: 11.5, 12.5

Task	SOL Correlations
	Mathematics: COM.5
Create a method, and return a value from a method.	English: 11.5, 12.5 Mathematics: COM.5
Use parameters in a method.	Mathematics: COM.5, COM.16
Add a constructor to a class.	NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Overload a constructor.	
Describe garbage collection and the finalize () method.	English: 11.5, 12.5 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Apply the <i>this</i> reference.	English: 11.5, 12.5
Explain the purpose and importance of the Object class.	English: 11.5, 12.5 Mathematics: COM.5
Using Data Types and Operators	
Use single and multidimensional arrays.	Mathematics: COM.14 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Use various formats to initialize arrays.	Mathematics: COM.14 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Apply the bitwise operators.	English: 11.5, 12.5 NBEA Achievement Standards for Information Technology:

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	Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Create objects of type String and utilize their methods.	Mathematics: COM.5 NBEA Achievement Standards for Information Technology: Code common tasks (e.g., creating, adding, deleting, sorting, and updating records).
Understanding Methods and Classes	
Define the public- and private-access modifiers.	English: 11.3, 12.3 Mathematics: COM.11
Pass and return objects/primitive parameters to methods.	Mathematics: COM.5
Use class variables and class methods.	Mathematics: COM.15
Apply recursive methods.	Mathematics: COM.9
Create and use recursive methods and variables.	English: 11.3, 12.3 Mathematics: COM.9
Describe nested and inner classes.	English: 11.5, 12.5 Mathematics: COM.14
Using Inheritance	
Use inheritance to define new classes.	Mathematics: COM.14, COM.16 NBEA Achievement Standards for Information Technology: Maintain and reengineer existing code.

Task	SOL Correlations
Describe the difference between a superclass and a subclass.	English: 11.5, 12.5 Mathematics: COM.5, COM.16
Explain how inheritance affects member access.	English: 11.5, 12.5
Use <i>super</i> to call superclass constructors and members.	
Create a multilevel class hierarchy.	Mathematics: COM.14
Explain cases when constructors are called in a class hierarchy.	English: 11.5, 12.5
Apply superclass references to subclass objects.	English: 11.5, 12.5 Mathematics: COM.5
Demonstrate how to override methods.	English: 11.5, 11.6, 12.5, 12.6
Create abstract methods and classes.	English: 11.1, 12.1 Mathematics: COM.15
Use the keyword <i>final</i> to prevent inheritance.	English: 11.5, 12.5
Create and import a package.	Mathematics: COM.7
Describe how a package affects access to its programs.	English: 11.5, 12.5 Mathematics: COM.16
Explain the purpose of the Thread class and the Runnable interface.	English: 11.5, 12.5
Using Packages and Interfaces	
Explain the purpose of exception handling.	English: 11.3, 11.5, 12.3, 12.5

Task	SOL Correlations
Write code to demonstrate how <i>try</i> and <i>catch</i> work together to handle an exception.	English: 11.5, 11.6, 11.7, 12.5, 12.6, 12.7 Mathematics: COM.16
Create an exception handler.	
Identify the consequences of an unhandled exception.	English: 11.5, 12.5 Mathematics: COM.16
Use multiple <i>catch</i> statements.	English: 11.3, 12.3
Nest <i>try</i> blocks.	
Throw an exception.	
Use the methods of Throwable.	
Create an original exception class.	English: 11.3, 12.3
Exploring Database Input/Output	
Describe a stream.	English: 11.5, 12.5
List the main byte and character stream classes.	English: 11.5, 11.6, 11.7, 12.5, 12.6, 12.7 Mathematics: COM.15
Use predefined streams.	Mathematics: COM.7
Read input from the keyboard.	Mathematics: COM.10
Write output to the monitor.	English: 11.6, 11.7, 12.6, 12.7 Mathematics: COM.11
Use the byte streams for file I/O.	English: 11.6, 11.7, 12.6, 12.7
Read and write binary data.	English: 11.5, 11.6, 11.7, 12.5, 12.6, 12.7 Mathematics: COM.15

Task	SOL Correlations
Use the character-based streams for console I/O.	Mathematics: COM.15
Use the character-based streams for file I/O.	Mathematics: COM.15
Create and manipulate streams in Java.	Mathematics: COM.2
Understanding Multithreaded Programming Support	
Describe the fundamentals of multithreading.	English: 11.5, 12.5
Create multiple threads.	
Describe the life cycle of a thread.	English: 11.5, 12.5
Change a thread's priority.	
Describe the purpose of synchronization.	English: 11.5, 12.5
Create synchronized methods.	English: 11.5, 12.5
Perform thread communication.	
Suspend, resume, and stop threads.	Mathematics: COM.2
Creating Applets, Events, and Other Topics	
Create a Java applet.	English: 11.5, 12.5 Mathematics: COM.3
Explain applet fundamentals, including its architecture.	English: 11.5, 12.5
Handle the passing of parameters into an applet from an HTML page.	Mathematics: COM.3, COM.16
Describe which methods are called by the browser and when they are called.	English: 11.5, 12.5 Mathematics: COM.16
Describe procedures for connecting the Java applet to a database.	English: 11.5, 12.5

Task	SOL Correlations
	<p>Mathematics: COM.2</p> <p>NBEA Achievement Standards for Information Technology: Code a program solution in more than one programming language.</p>
Create new projects and applications in a development environment.	<p>Mathematics: COM.1</p> <p>NBEA Achievement Standards for Information Technology: Choose the appropriate language or application development tool for specific tasks. Test, debug, and document code. Use application development tools to create code.</p>
Design and create a program to meet user needs.	<p>English: 11.5, 12.5</p> <p>Mathematics: COM.2</p> <p>NBEA Achievement Standards for Information Technology: Choose the appropriate language or application development tool for specific tasks. Identify and define the coding task.</p>
Using Databases with Java	
Describe Java's relationship to Oracle's database.	English: 11.5, 12.5
List the Java-related driver classes for common databases.	<p>English: 11.6, 12.6</p> <p>Mathematics: COM.15</p>
Describe the function of the JDBC package.	<p>English: 11.5, 12.5</p> <p>FBLA Competitive Events and Activities Areas: Database Design & Applications</p>
Describe the JDBC connection object.	English: 11.5, 12.5

Task	SOL Correlations
Analyze the process to connect to a database using JDBC package.	English: 11.5, 12.5 Mathematics: COM.5
Describe the JDBC Statement object.	English: 11.5, 12.5
Describe the use of Java code to iterate through the returned ResultSet.	English: 11.5, 12.5 Mathematics: COM.4 FBLA Competitive Events and Activities Areas: Computer Problem Solving Database Design & Applications
Review a Java application that will pass variable and user input into a query.	English: 11.5, 12.5 Mathematics: COM.17 FBLA Competitive Events and Activities Areas: Computer Problem Solving Database Design & Applications
Describe the process to identify and handle Oracle exceptions in Java.	English: 11.5, 12.5 Mathematics: COM.4 FBLA Competitive Events and Activities Areas: Database Design & Applications
Review a Java application to write data to a database table.	English: 11.5, 12.5 FBLA Competitive Events and Activities Areas: Computer Problem Solving Database Design & Applications

Task	SOL Correlations
Preparing for Industry Certification	
Describe the process and requirements for obtaining industry certifications related to the Java Programming (Oracle) course.	<p>English: 11.5, 11.8, 12.5, 12.8</p> <p>FBLA Competitive Events and Activities Areas: Computer Applications Job Interview</p> <p>NBEA Achievement Standards for Information Technology: Obtain programming industry certification(s) needed for chosen career path.</p>
Identify testing skills and strategies for a certification examination.	<p>English: 11.5, 12.5</p> <p>FBLA Competitive Events and Activities Areas: Computer Applications Job Interview</p> <p>NBEA Achievement Standards for Information Technology: Obtain programming industry certification(s) needed for chosen career path.</p>
Demonstrate ability to successfully complete selected practice examinations (e.g., practice questions similar to those on certification exams).	<p>English: 11.5, 12.5</p> <p>FBLA Competitive Events and Activities Areas: Computer Applications Job Interview</p> <p>NBEA Achievement Standards for Information Technology: Obtain programming industry certification(s) needed for chosen career path.</p>
Complete an industry certification examination representative of skills learned in this course (e.g., MOS, MTA, IC3).	