Eric Evans' Lesson Plans for the Week of **Apr 15, 2018**

Mon, Apr 16 (Day B)	Tue, Apr 17 (Day A)	Wed, Apr 18 (Day B)	Thu, Apr 19 (Day A)	Fri, Apr 20 (Day B)
			Evans Out at FIRST Division I World Championship in Houston, TX	
PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM) **Learning Outcomes:** • I will demonstrate my existing knowledge of aerospace engineering • I will demonstrate my research abilities to define key terms related to aerospace engineering **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review expectations for Pre-Test ◦ Mark as DONE in Classroom for grade • Review expectations for Key Terms	PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review pitch, roll, and yaw	PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review pitch, roll, and yaw	PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review pitch, roll, and yaw	PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review pitch, roll, and yaw

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◦ Locate assigned key term(s) and define them ◦ Do NOT define terms assigned to other people • Review expectations for Vocabulary Activity ◦ Access Quizlet ◦ Mark as DONE in Classroom for grade **Independent Practice: (You Do)** • Complete Unit 14 Pre-Test http://www.g-wlearning.com/technologyeducation/2852/ch14/pre.htm • Complete Unit 14 Key Terms Google Doc • Complete Unit 14 Quizlet Activity https://quizlet.com/280979598/pae-chapter-14-flash-cards/ **Introduction to New Material: (I Do)** • Demonstrate Pitch, Roll, Yaw on Model Aircraft	**Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Draw cut/fold lines on paper • Verify measurements • Have partner verify measurements • Re-verify your own measurements • Cut all parts. **Graded Items** • Daily Grades (50%) ◦ Complete Measured Parts ***Standards/Expectations:***	**Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Draw cut/fold lines on paper • Verify measurements • Have partner verify measurements • Re-verify your own measurements • Cut all parts. **Graded Items** • Daily Grades (50%) ◦ Complete Measured Parts ***Standards/Expectations:***	**Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Create Artistic Design on Various Parts **Graded Items** • Daily Grades (50%) ◦ Complete Artistic Parts ***Standards/Expectations:*** **2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems	**Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Assemble Air Skimmer per Instructions **Graded Items** • Daily Grades (50%) ◦ Complete Assembled Air Skimmer ***Standards/Expectations:*** **2:** The student investigates the components of engineering and technology systems. The student is expected to:

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Guided Practice: (We Do) • Build a P/R/Y Model **Graded Items** • Daily Grades (50%) ◦ Unit 14 Pre-Test ◦ Unit 14 Key Terms ◦ Unit 14 Vocabulary Activity in Quizlet • Minor Grade (25%) ◦ P/R/Y Model ***Standards/Expectations:*** **2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems interact to achieve common goals	**2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems interact to achieve common goals	**2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems interact to achieve common goals	interact to achieve common goals	**2d:** describe how technological systems interact to achieve common goals
COMPUTER SCIENCE 2 (8:54 AM - 10:24 AM) **Learning Outcomes:** • I will demonstrate my understanding of how to document game play of	COMPUTER SCIENCE 1 - SECTION 1 (8:54 AM - 10:24 AM) **Learning Outcomes:** • I will demonstrate mastery of recycling existing code to solve a given problem.	COMPUTER SCIENCE 2 (8:54 AM - 10:24 AM) **Learning Outcomes:** • I will demonstrate my understanding of how to document game play of	COMPUTER SCIENCE 1 - SECTION 1 (8:54 AM - 10:24 AM) **Learning Outcomes:** • I will demonstrate my readiness to take the AP Computer Science	COMPUTER SCIENCE 2 (8:54 AM - 10:24 AM) **Learning Outcomes:** • I will demonstrate my understanding of algorithm development to solve the

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the Cracker Barrel Peg Puzzle Game **Warm-Up Assignment:** • None **Review of Prior Knowledge:** • None **Introduction to New Material: (I Do)** • Explain Cracker Barrel Peg Puzzle Game **Guided Practice: (We Do)** • Play Cracker Barrel Peg Puzzle Game **Independent Practice: (You Do)** • Play Cracker Barrel Peg Puzzle Game and Document Moves **Graded Items** • Daily Grades (50%) ◦ Documentation of Moves ***Standards/Expectations:***	• I will demonstrate mastery of algorithm development involving random number generation. **Warm-Up Assignment:** • Review Number Guesser - Take 2 **Review of Prior Knowledge:** • Review Code from Number Guesser - Take 1 **Introduction to New Material: (I Do)** • None **Guided Practice: (We Do)** • Discuss variables that will and will not be needed in "Take 2" of the code. **Independent Practice: (You Do)** • Create Number Guesser - Take 2 **Graded Items** • Daily Grades (50%) ◦ Item(s) • Quiz/Minor Grades (25%)	the Cracker Barrel Peg Puzzle Game **Warm-Up Assignment:** • None **Review of Prior Knowledge:** • None **Introduction to New Material: (I Do)** • Explain Cracker Barrel Peg Puzzle Game **Guided Practice: (We Do)** • Play Cracker Barrel Peg Puzzle Game **Independent Practice: (You Do)** • Play Cracker Barrel Peg Puzzle Game and Document Moves **Graded Items** • Daily Grades (50%) ◦ Documentation of Moves ***Standards/Expectations:***	Principles exam by completing a practice exam in-class. **Warm-Up Assignment:** • None **Review of Prior Knowledge:** • None **Introduction to New Material: (I Do)** • None **Guided Practice: (We Do)** • None **Independent Practice: (You Do)** • AP CS-Principles Practice Exam **Graded Items** • Test/Major Grades (25%) ◦ AP CS-Principles Practice Exam	Cracker Barrel Peg Puzzle Game **Warm-Up Assignment:** • None **Review of Prior Knowledge:** • Review Recursive Algorithm for Tower of Hanoi **Introduction to New Material: (I Do)** • None **Guided Practice: (We Do)** • None **Independent Practice: (You Do)** • Begin Algorithm Development **Graded Items** • Daily Grades (50%) ◦ Start Algorithm Development ***Standards/Expectations:*** **c.4.:** Critical thinking, problem solving, and

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c.4.: Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to: **c.4.F.:** identify, trace, and appropriately use recursion in programming solutions, including algebraic computations; **c.4.J.:** compare and contrast search and sort algorithms, including linear, quadratic, and recursive strategies, for time/space efficiency;	◦ Item(s) • Test/Major Grades (25%) ◦ Item(s) ***Standards/Expectations:*** **c.K.W.:** generate and use random numbers.	**c.4.:** Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to: **c.4.F.:** identify, trace, and appropriately use recursion in programming solutions, including algebraic computations; **c.4.J.:** compare and contrast search and sort algorithms, including linear, quadratic, and recursive strategies, for time/space efficiency;		decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to: **c.4.F.:** identify, trace, and appropriately use recursion in programming solutions, including algebraic computations; **c.4.J.:** compare and contrast search and sort algorithms, including linear, quadratic, and recursive strategies, for time/space efficiency;
ROBOTICS I & II - SECTION 2 (10:28 AM - 12:02 PM) **Engineering Team** • Work Punchlist **Programming Team** • Work Punchlist **Community Engagement Team**	ROBOTICS I & II - SECTION 1 (10:28 AM - 12:02 PM) **Engineering Team** • Work Punchlist **Programming Team** • Work Punchlist **Community Engagement Team**	ROBOTICS I & II - SECTION 2 (10:28 AM - 12:02 PM) **Engineering Team** • Work Punchlist **Programming Team** • Work Punchlist **Community Engagement Team**	ROBOTICS I & II - SECTION 1 (10:28 AM - 12:02 PM) **Engineering Team** • Work Punchlist **Programming Team** • Work Punchlist **Community Engagement Team**	ROBOTICS I & II - SECTION 2 (10:28 AM - 12:02 PM) **Engineering Team** • Work Punchlist **Programming Team** • Work Punchlist **Community Engagement Team**

Mon, Apr 16 (Day B)	Tue, Apr 17 (Day A)	Wed, Apr 18 (Day B)	Thu, Apr 19 (Day A)	Fri, Apr 20 (Day B)
• Develop Hospitality Team and Plan ***Standards/Expectations:*** **c3:** The student participates in team projects in various roles. The student is expected to: **c3A:** explain the importance of teamwork in the field of robotics; **c3B:** apply principles of effective problem solving in teams to collaboration and conflict resolution; and **c3C:** demonstrate proper attitudes as a team leader and team member. **c1D:** recognize the principles of teamwork related to engineering and technology; **c3:** The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:	• Develop Hospitality Team and Plan ***Standards/Expectations:*** **c3:** The student participates in team projects in various roles. The student is expected to: **c3A:** explain the importance of teamwork in the field of robotics; **c3B:** apply principles of effective problem solving in teams to collaboration and conflict resolution; and **c3C:** demonstrate proper attitudes as a team leader and team member. **c1D:** recognize the principles of teamwork related to engineering and technology; **c3:** The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:	• Develop Hospitality Team and Plan ***Standards/Expectations:*** **c3:** The student participates in team projects in various roles. The student is expected to: **c3A:** explain the importance of teamwork in the field of robotics; **c3B:** apply principles of effective problem solving in teams to collaboration and conflict resolution; and **c3C:** demonstrate proper attitudes as a team leader and team member. **c1D:** recognize the principles of teamwork related to engineering and technology; **c3:** The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:	• Develop Hospitality Team and Plan ***Standards/Expectations:*** **c3:** The student participates in team projects in various roles. The student is expected to: **c3A:** explain the importance of teamwork in the field of robotics; **c3B:** apply principles of effective problem solving in teams to collaboration and conflict resolution; and **c3C:** demonstrate proper attitudes as a team leader and team member. **c1D:** recognize the principles of teamwork related to engineering and technology; **c3:** The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:	• Develop Hospitality Team and Plan ***Standards/Expectations:*** **c3:** The student participates in team projects in various roles. The student is expected to: **c3A:** explain the importance of teamwork in the field of robotics; **c3B:** apply principles of effective problem solving in teams to collaboration and conflict resolution; and **c3C:** demonstrate proper attitudes as a team leader and team member. **c1D:** recognize the principles of teamwork related to engineering and technology; **c3:** The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:

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c3A: demonstrate an understanding of and discuss how teams function; **c3B:** apply teamwork to solve problems; **c3C:** follow directions and decisions of responsible individuals of the project team; **c3D:** participate in establishing team procedures and team norms; and	**c3A:** demonstrate an understanding of and discuss how teams function; **c3B:** apply teamwork to solve problems; **c3C:** follow directions and decisions of responsible individuals of the project team; **c3D:** participate in establishing team procedures and team norms; and	**c3A:** demonstrate an understanding of and discuss how teams function; **c3B:** apply teamwork to solve problems; **c3C:** follow directions and decisions of responsible individuals of the project team; **c3D:** participate in establishing team procedures and team norms; and	**c3A:** demonstrate an understanding of and discuss how teams function; **c3B:** apply teamwork to solve problems; **c3C:** follow directions and decisions of responsible individuals of the project team; **c3D:** participate in establishing team procedures and team norms; and	**c3A:** demonstrate an understanding of and discuss how teams function; **c3B:** apply teamwork to solve problems; **c3C:** follow directions and decisions of responsible individuals of the project team; **c3D:** participate in establishing team procedures and team norms; and
PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM) **Learning Outcomes:** • I will demonstrate my existing knowledge of aerospace engineering • I will demonstrate my research abilities to define key terms related to aerospace engineering **Warm-Up Assignment:**	COMPUTER SCIENCE 1 - SECTION 2 (1:06 PM - 2:36 PM) **Learning Outcomes:** • I will demonstrate mastery of recycling existing code to solve a given problem. • I will demonstrate mastery of algorithm development involving random number generation. **Warm-Up Assignment:** • Review Number Guesser - Take 2	PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with	COMPUTER SCIENCE 1 - SECTION 2 (1:06 PM - 2:36 PM) **Learning Outcomes:** • I will demonstrate my readiness to take the AP Computer Science Principles exam by completing a practice exam in-class. **Warm-Up Assignment:** • None **Review of Prior Knowledge:**	PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with

Mon, Apr 16 (Day B)	Tue, Apr 17 (Day A)	Wed, Apr 18 (Day B)	Thu, Apr 19 (Day A)	Fri, Apr 20 (Day B)
• Login to Computer or Chromebook **Review of Prior Knowledge:** • Review expectations for Pre-Test ◦ Mark as DONE in Classroom for grade • Review expectations for Key Terms ◦ Locate assigned key term(s) and define them ◦ Do NOT define terms assigned to other people • Review expectations for Vocabulary Activity ◦ Access Quizlet ◦ Mark as DONE in Classroom for grade **Independent Practice: (You Do)** • Complete Unit 14 Pre-Test http://www.g-wlearning.com/technologyeducation/2852/ch14/pre.htm	**Review of Prior Knowledge:** • Review Code from Number Guesser - Take 1 **Introduction to New Material: (I Do)** • None **Guided Practice: (We Do)** • Discuss variables that will and will not be needed in "Take 2" of the code. **Independent Practice: (You Do)** • Create Number Guesser - Take 2 **Graded Items** • Daily Grades (50%) ◦ Item(s) • Quiz/Minor Grades (25%) ◦ Item(s) • Test/Major Grades (25%) ◦ Item(s) ***Standards/Expectations:*** **c.K.W.:** generate and use random numbers.	an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review pitch, roll, and yaw **Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Draw cut/fold lines on paper • Verify measurements • Have partner verify measurements	• None **Introduction to New Material: (I Do)** • None **Guided Practice: (We Do)** • None **Independent Practice: (You Do)** • AP CS-Principles Practice Exam **Graded Items** • Test/Major Grades (25%) ◦ AP CS-Principles Practice Exam	an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:** • Review pitch, roll, and yaw **Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Assemble Air Skimmer per Instructions **Graded Items** • Daily Grades (50%)

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• Complete Unit 14 Key Terms Google Doc • Complete Unit 14 Quizlet Activity https://quizlet.com/280979598/pae-chapter-14-flash-cards/ **Introduction to New Material: (I Do)** • Demonstrate Pitch, Roll, Yaw on Model Aircraft **Guided Practice: (We Do)** • Build a P/R/Y Model **Graded Items** • Daily Grades (50%) ◦ Unit 14 Pre-Test ◦ Unit 14 Key Terms ◦ Unit 14 Vocabulary Activity in Quizlet • Minor Grade (25%) ◦ P/R/Y Model ***Standards/Expectations:*** **2:** The student investigates the components of engineering and		• Re-verify your own measurements • Cut all parts. **Graded Items** • Daily Grades (50%) ◦ Complete Measured Parts ***Standards/Expectations:*** **2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems interact to achieve common goals		◦ Complete Assembled Air Skimmer ***Standards/Expectations:*** **2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems interact to achieve common goals

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	PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:**		PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM) **Learning Outcomes:** • I will apply my knowledge of basic principles of pitch, roll, and yaw in designing an air skimmer • I will demonstrate mastery of reading exact measurements • I will demonstrate mastery of cutting materials to exact measurements with an acceptable error of no more that 1/16 of an inch **Warm-Up Assignment:** • Login to Computer or Chromebook **Review of Prior Knowledge:**	

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	• Review pitch, roll, and yaw **Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Draw cut/fold lines on paper • Verify measurements • Have partner verify measurements • Re-verify your own measurements • Cut all parts. **Graded Items** • Daily Grades (50%) ◦ Complete Measured Parts		• Review pitch, roll, and yaw **Introduction to New Material: (I Do)** • Demonstrate a Complete Model of an Air Skimmer **Guided Practice: (We Do)** • Review Instructions Document ◦ Focus on units of measure ◦ Focus on meaning of various lines (solid vs dashed) **Independent Practice: (You Do)** • Create Artistic Design on Various Parts **Graded Items** • Daily Grades (50%) ◦ Complete Artistic Parts ***Standards/Expectations:*** **2:** The student investigates the components of engineering and technology systems. The student is expected to:	

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	Standards/Expectations: **2:** The student investigates the components of engineering and technology systems. The student is expected to: **2d:** describe how technological systems interact to achieve common goals		**2d:** describe how technological systems interact to achieve common goals	