

## Animation II

**Time on Task** 4.16 hours per week

### Course Philosophy

In our world, technology is increasing faster than law can regulate it. In order to prepare students to become leaders in the world they inherit, we must teach them to use technology ethically and properly. This communication tool can be both a blessing and a curse, and users must be responsible in their technology use. Students must learn to filter all communications through a Biblical worldview.

### Course Description

Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce and/or postsecondary education. Students apply technical skills to address business applications of emerging technologies.

<p>Southcrest Christian School is teaching a second-year programming class using <u>Alice</u> as its program. <u>Alice</u> is an innovative 3D programming environment that makes it easy to create an animation for telling a story, playing an interactive game, or a video to share on the web. <u>Alice</u> is a freely available teaching tool designed to be a student's first exposure to object-oriented programming. It allows students to learn fundamental programming concepts in the context of creating animated movies and simple video games. In Alice, 3-D objects (e.g., people, animals, and vehicles) populate a virtual world and students create a program to animate the objects.</p> <p>In Alice's interactive interface, students drag and drop graphic tiles to create a program, where the instructions correspond to standard statements in a production oriented programming language, such as Java, C++, and C#. Alice allows students to immediately see how their animation programs run, enabling them to easily understand the relationship between the programming statements and the behavior of objects in their animation. By manipulating the objects in their virtual world, students gain experience with all the programming constructs typically taught in an introductory programming course.</p> <p>This course follows the four strands of technology for all technology courses; but the specific objectives are different. The four strands that are covered in this course are listed below.</p>	<p><b>Scope and Sequence</b>  <b>Appendix A Using Alice</b>  <b>Introduction to Alice</b></p> <ul style="list-style-type: none"> <li>• Getting Started with Alice</li> <li>• Program Design and Implementation</li> <li>• Programming: Putting Together the Pieces</li> </ul> <p><b>Object-Oriented and Event-Driven Programming Concepts</b></p> <ul style="list-style-type: none"> <li>• Classes, Objects, Methods and Parameters</li> <li>• Interaction: Events and Event Handling</li> </ul> <p><b>Using Functions and Control Statements</b></p> <ul style="list-style-type: none"> <li>• Functions and If/Else</li> <li>• Repetition: Definite and Conditional Loops</li> <li>• Repetition: Recursion</li> </ul> <p><b>Advanced Topics</b></p> <ul style="list-style-type: none"> <li>• Lists and List Processing</li> </ul>	<p><b>Spiritual Goals</b>  <b>God's intended purpose for technology:</b></p> <ol style="list-style-type: none"> <li>1. To encourage the use of knowledge and skills in service to God.</li> <li>2. To teach the child that just as there is a logic and order in technology, there is a logic and order in God's plan</li> <li>3. To recognize the ability to communicate with one another is part of His plan for our lives.</li> <li>4. To acknowledge that God is concerned that communication is clear and easily understood.</li> <li>5. To acknowledge that God recognizes writing as a powerful tool to influence people.</li> <li>6. To learn how to communicate with others and with God in a way that glorifies Him.</li> <li>7. To learn to communicate in such a way as to draw men to Christ.</li> <li>8. To learn accuracy and clarity of</li> </ol>
---	--	--

<p><b>Goals and Objectives</b>  <b>Texas Essential Knowledge and Skills (TEKS)</b></p> <p><b>Programming (One-Half to One Credit).</b>  <b>(a) General requirements.</b> The prerequisite is proficiency in the knowledge and skills described in §126.12(c) of this title (relating to Technology Applications (Computer Literacy), Grades 6-8). This course is recommended for students in Grades 9-12</p> <p><b>(b) Introduction.</b></p> <p>(1) The technology applications curriculum has four strands: foundations, information acquisition, work in solving problems, and communication.</p> <p>(2) Through the study of technology applications foundations, including technology-related terms, concepts, and data input strategies, students learn to make informed decisions about technologies and their applications. The efficient acquisition of information includes the identification of task requirements; the plan for using search strategies; and the use of technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results. Students communicate information in different formats and to diverse audiences. A variety of technologies will be used. Students will analyze and evaluate the results.</p> <p><b>(c) Knowledge and skills.</b></p> <p>(1) <b>Foundations.</b> The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.</p> <p>(2) <b>Foundations.</b> The student uses data input skills appropriate to the tasks.</p> <p>(3) <b>Foundations.</b> The student complies with the laws and examines the issues regarding the use of technology in society.</p> <p>(4) <b>Information acquisition.</b> The student uses a variety of strategies to acquire information from electronic resources, with appropriate supervision.</p>	<ul style="list-style-type: none"> <li>• Variables and Revisiting Inheritance</li> <li>• What’s Next?</li> </ul> <p><b>Appendix B Managing the Alice Interface</b></p> <p><b>Correlation with TEKS Learning to Program with Alice</b>  Prentice Hall/Pearson  Student ISBN  978-0-13-208516-8  Teacher ISBN – resources on line</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p>	<p>meaning so as not to cause misunderstanding in communication.</p> <p>9. To learn to appreciate the gift of creativity in written and oral form.</p> <p><b>Biblical Integration Truth Statements</b></p> <p>1. <i>What is prime reality, the really real?</i>  God exists and is the ultimate reality. (Psalm 90:2, Revelation 22:13)</p> <p>a. God designed, created, and sustains His creation. (Genesis 1:1-31)</p> <p>b. God is good, holy, and loving. (Luke 18:19, 1 John 4:16, 1 Peter 1:16, Psalm 145:12)</p> <p>c. God is omniscient – all knowing. (Romans 11:33-36, Psalm 147:5)</p> <p>d. God is sovereign – nothing is beyond His ultimate interest, control, and authority. (Daniel 4:25)</p> <p>e. God is personal and also triune- He is coequally and coeternally God the Father, God the Son, Jesus, and God the Holy Spirit. (Hebrews 1:3)</p> <p>2. <i>What is the nature of external reality, that is, the world around us?</i></p> <p>a. God is the source of everything and created the universe out of nothing. (Genesis 1:1)</p> <p>b. The universe was created by God to be orderly. (Isaiah 45:18, Psalm 147:4)</p>
---	---	--

<p>(5) <b>Information acquisition.</b> The student acquires electronic information in a variety of formats, with appropriate supervision.</p> <p>(6) <b>Information acquisition.</b> The student evaluates the acquired electronic information.</p> <p>(7) <b>Solving problems.</b> The student uses appropriate computer-based productivity tools to create and modify solutions to problems.</p> <p>(8) <b>Solving problems.</b> The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge.</p> <p>(9) <b>Solving problems.</b> The student uses technology applications to facilitate evaluation of work, both process and product.</p> <p>(10) <b>Communication.</b> The student formats digital information for appropriate and effective communication.</p> <p>(11) <b>Communication.</b> The student delivers the product electronically in a variety of media, with appropriate supervision.</p> <p>(12) <b>Communication.</b> The student uses technology applications to facilitate evaluation of communication, both process and product.</p>	<p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p>All Lessons</p> <p><b>Student Activities</b> Lessons Exercises</p> <p><b>Teaching Strategies</b> Direct Instruction Open-ended Questions Discussion Demonstration</p> <p><b>Evaluation Procedures</b> Observation Exercises</p> <p><b>Other Resources and</b></p>	<p>c. God is constantly involved in the unfolding pattern of the ongoing operation of the universe. (Psalm 24:1-2, Psalm 32:13-15)</p> <p>d. The universe reflects His glory. (Psalm 8:1, Psalm 19:1)</p> <p><b>3. <i>What is a human being?</i></b></p> <p>a. God created humans to know Him intimately and to have a loving relationship with Him. (Psalm 100:3)</p> <p>b. Human beings are created in the image of God with the capacity to choose. (Genesis 1:27, Proverbs 8:10)</p> <p>c. Adam and Eve chose disobedience and brought death to themselves and sin entered the world. (Romans 5:12)</p> <p>d. All human beings have a choice and all have chosen sin that brings separation from God. (Romans 3:23)</p> <p>e. Sin is rebellion against God's wishes and ways and this destroys our relationship with God. (Romans 8:7-8)</p> <p>f. God provides a way back to Himself through the death of His son Jesus (the second person of the Trinity), on the cross. (John 3:16, Romans 6:23)</p> <p>g. Human beings must respond to God with repentance of our sins, receiving forgiveness, and accepting Jesus as our Savior. (Romans 10:9-10)</p> <p><b>4. <i>What happens to a person at death?</i></b></p>
---	---	---

	<p><b>Bibliography</b> None</p>	<ul style="list-style-type: none"> <li>a. For each person death is either the gate to life with God and His people or the gate to eternal separation from God. (1 Corinthians 50:52)</li> <li>b. After death, your soul will continue to exist in an eternal way and there is a final judgment by God. (Revelation 20:12)</li> <li>c. Everyone chooses to honor and love Him by accepting Jesus as our Lord and Savior or makes a choice to reject Jesus and grasp for self-fulfillment and personal glory. (Romans 6:23)</li> <li>d. Those who received Jesus as Savior will spend eternity in Heaven with God. (Philippians 4:10-21)</li> <li>e. Those who rejected Jesus as Savior will spend eternity in Hell without God. (Hebrews 10:26-27)</li> </ul> <p><b>5. <i>Why is it possible to know anything at all?</i></b></p> <ul style="list-style-type: none"> <li>a. Human beings can both know the world around them and God Himself because God has built within them the capacity to do so and because He takes an active role in communicating with them. (John 16:13)</li> <li>b. God's own intelligence is the basis of human intelligence. Knowledge is possible because there is something to be known (God and His creation) and someone to know (God and</li> </ul>
--	-------------------------------------	---

		<p>human beings made in His image). (Genesis 1:27)</p> <p>c. God reveals, Himself to us in two basic ways: by general revelation and by special revelation. (Exodus 3:2, Psalm 19:1-4)</p> <p>d. In general revelation, God speaks through the creation of the universe and through His word, the Bible. (2 Samuel 22:31, Psalm 19:1)</p> <ul style="list-style-type: none"> <li>➤ The Bible is internally consistent and unified in its principles and claims.</li> <li>➤ There is tremendous coherence across the many authors and centuries during which the various books were written and in which its stories unfold.</li> <li>➤ It is relevant to all the cultures of the world</li> </ul> <p>e. Special revelation is God revealing Himself through supernatural ways. Jesus Christ is the ultimate special revelation. He showed us what God is like more fully than any other form of revelation can. Because Jesus was also completely human, he spoke more clearly to us than any other form of revelation can. (John 14:7)</p> <p>6. <b><i>How do we know what is right and wrong?</i></b></p> <p>a. Ethics or the knowledge of right</p>
--	--	--

		<p>and wrong is based on the character of God as good (holy and loving). (Psalm 33:4)</p> <p>b. There is an absolute standard by which all moral judgments are measured and God Himself – His character of goodness (holiness and love) – is the standard. (1 Samuel 2:3)</p> <p>c. As a result of sin, morally, we have become less able to discern good and evil and less able to know God as He truly is. (Proverbs 1:7)</p> <p>d. God has revealed His standard in the various laws and principles expressed in the Bible. (Psalm 111:10)</p> <ul style="list-style-type: none"> <li>➤ He has dictated absolute moral truth to us.</li> <li>➤ Every truth must conform to Biblical principles.</li> <li>➤ Every choice must reflect God’s moral truth.</li> <li>➤ We must promote, defend, and teach these truths to others.</li> </ul> <p>7. <b><i>What is the meaning of human history?</i></b></p> <p>a. History is a meaningful sequence of events leading to the fulfillment of God’s purposes for humanity. (Psalm 22:27-28, Psalm 47:3)</p> <p>b. History is going somewhere, directed toward a known end. (Matthew 25:34)</p> <p>c. History is a form of revelation,</p>
--	--	--

		<p>not only does God reveal Himself in history, but the very sequence of events is revelation. (Psalm 33:13-14, Psalm 47:9)</p> <p>d. History has meaning because God is behind all events, not only sustaining all things by His powerful word but also in all things working for the good of those who love Him. (Psalm 40:5, Romans 8:28)</p> <p><b><i>What should our response be to God?</i></b> <b><i>What were we made for?</i></b></p> <p><b>We were made to</b> <b>Love</b> – Matthew 22:37, <b>Worship</b> – Romans 12:1, <b>Obey</b> – 2 John 6, and <b>Give Glory</b> – Psalm 96:3.</p>
--	--	---