Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name: School District No. 73 (Kamloops-Thompson)	**School District/Independent School Authority Number (e.g. SD43, Authority #432):** SD73
Developed by: Andres Ruberg	**Date Developed:** Jan. 7, 2018
School Name: Sa-Hali Secondary	**Principal's Name:** Rachael Sdoutz
Superintendent Approval Date (for School Districts only):	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date:	**Board/Authority Chair Signature:**
Course Name: SD73 Tech Academy 12A	**Grade Level of Course:** 12
Number of Course Credits: 4	**Number of Hours of Instruction:** 120

Course Name: **Grade:**

BIG IDEAS

Game design is a complex process requiring thoughtful planning and time management	Mathematics and Physics underlie every modern game engine and animation program	Programming is a fundamental aspect of video game development	Art skills can be practiced and learned and can result in ability improvement regardless of current proficiency.	Programming is a general skill with many concepts independent of programming language.

Learning Standards

Students are expected to do the following:

Programming:

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Project Management: • Develop unique solutions to problems in a group context • Create a prototype for a game extension within a group • Reflect and iterate on a design **Mathematics & Physics:** • Solve simple problems involving trigonometry and Pythagorean theorem • Analyze and solve problems involving vectors • Illustrate diagrams for simple physics problems involving kinematics	• fundamental equations of kinematics

Big Ideas – Elaborations

None

Curricular Competencies – Elaborations

None

Content – Elaborations

None

Recommended Instructional Components:

Direct Instruction
Demonstration
Modeling
Peer Teaching
Experiential Learning
Reflective Writing
Project-based Learning

Recommended Assessment Components: Ensure alignment with the Principles of Quality Assessment

Journaling
Self-assessment
Performance Assessment
Skills-based Assessment

Formative feedback

Iterative Assessment

One Working Model:

Students will be given formative feedback during the instructional components of the course. This feedback is to help students understand their areas of strength and areas of challenge so that they can properly scope their projects and identify areas in which they may need to seek additional assistance and/or resources.

During formal assessments and projects, key skills will be identified to students at the project outset along with levels of proficiency within each of those skills. Each level of proficiency will have descriptive statements of what a student needs to demonstrate in order to achieve that level. Students will be reminded of this document throughout a project so that they can plan accordingly. At the conclusion of the project students will be asked to self-assess themselves and indicate what proficiency level they believe they have achieved for each skill attached to that project. For each skill students will be asked to provide evidence for the indicated level. The student self-assessment will be considered alongside teacher observations and in the event of a discrepancy the student and teacher will engage in dialogue to ensure a fair outcome.

Skills can be re-assessed at any time a student has new evidence to present that supports of a higher level of achievement. Students are always welcome to ask how they might demonstrate a higher level of achievement and/or request mini-projects that will give them the opportunity to develop additional evidence of improved ability. Several skills will be attached to multiple projects. Only the highest level of achievement will be reported (there is no averaging).

The instructor should make clear what percentage is tied to each level of achievement and how those percents will be averaged. One model is to break each skill into a Basic, Advanced and Mastery levels and attach 60%, 80% and 100% to those levels of achievement (respectively).

Interims summarizing current student ability should be sent home 4 times per semester. All project assessment documents should be available for students and parents to view online at any point for reference.

Learning Resources:

Python Arcade Documentation by Paul Craven: https://media.readthedocs.org/pdf/arcade-book/latest/arcade-book.pdf

DigiPen Technology Academy Manuals (Modules 1-5)

Guide to Writing SMART Goals: https://www.smartsheet.com/blog/essential-guide-writing-smart-goals

Guide to Agile Project Management: https://www.cio.com/article/3156998/agile-development/agile-project-management-a-beginners-guide.html

Khan Academy: https://www.khanacademy.org/

Extra Credits Game Design / Career Videos: https://www.youtube.com/user/ExtraCreditz/featured

Mark Brown Game Design Videos: