Animation: Pixar in a Box

Content Area:	Animation | Technology & Art
Course(s):	STEM
Time Period:	Marking Period 4
Length:	3-4 days
Status:	

Big Idea

Computer animation is driving the entertainment industry. Family films created by Pixar and Dreamworks, tweener films in the superhero genre, and mind-bending science fiction dramas all rely heavily on special effects and character generation facilitated by computers and code. In this unit, students will make 2 animated products: a (physical) flipbook and a computer-animated bouncing ball. This unit is supported by Khan Academy and Pixar's "Pixar in a Box" program. Students will develop self-direction and accountability skills while completing online activities with minimal teacher input- students will create an account and remember their strong password and internet interaction rules.

Enduring Understanding

SWU animation and be able to explain different mediums for animating; SWU how computers and code are used to create animations; SWU how storytelling is enhanced by movement; SWU that careers in computer animation can appeal to artists, coders, tinkerers, and storytellers; SWU how self-directed learning might positively impact their education and engagement.

Skills

SWBAT create a flipbook that shows action(s) over time
SWBAT define animation and give examples of different mediums for creation
SWBAT animate an object within a provided **IDE** *(Integrated Development Environment)*
SWBAT describe and discuss animations in popular culture using academic vocabulary
SWBAT create and maintain a positive online identity

Standards

ISTE 1b	Students build networks and customize their learning environments in ways that support the learning process.
ISTE 2b	Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
ISTE 3d	Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.
ISTE 5d	Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Assessments

Formative Assessment	Ss will receive a check, check plus, or check minus based on their completion of the activity, effort displayed, and academic attitude.
Summative Assessment	Ss will answer questions about this activity and its involved technologies on a summative assessment once per quarter.
Project	Ss will display artifacts of learning on their websites.

Resources/Instructional Materials

- https://www.khanacademy.org/partner-content/pixar/animate#ball
- https://www.nyfa.edu/student-resources/flipbook-animation-techniques-and-examples/
- https://thekidshouldseethis.com/post/how-to-make-a-flipbook-andymation

Modifications

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1. Individual accommodations per student IEPs
2. Enrichment Cards- challenges for advanced students
3. Support Cards- tips and hints for struggling students
4. Peer Tutoring- students paired in high/low tandems or high/med/low trios

Integration of 21st Century Skills

Focus on the development of 21st Century Content Skills:

- Global awareness

Focus on the Development of Learning and Thinking Skills:

- Critical Thinking and Problem Solving Skills
- Communication Skills
- Creativity and Innovation Skills

- Collaboration Skills
- Contextual Learning Skills

Focus on the Development of Life Skills:

- Leadership
- Accountability
- Personal Productivity
- Personal Responsibility
- People Skills
- Self Direction

Interdisciplinary Connections

- Academic and Technical Rigor - Projects are designed to address key learning standards identified by the school or district.
- Authenticity - Projects use a real world context (e.g., community problems) and address issues that matter to the students.
- Applied Learning - Projects engage students in solving problems calling for competencies expected in high-performance work organizations (e.g.,teamwork, problem-solving, communication, etc.).
- Active Exploration - Projects extend beyond the classroom by connecting to community explorations.
- Adult Connections - Projects connect students with the wider community.
- Assessment Practices - Projects involve students in regular, performance-based exhibitions and assessments of their work; evaluation criteria reflect personal, school, and real-world standards of performance.