Grades 9-12 Technology
Digital Game and App Design

History of the Mobile Platform and Applications

Stage 1: Desired Results

Catholic Standards

DOC All Grades DOC: Catholic Standards

The Profession of Faith

Students will be able to

1. Recognize God in the world's order, beauty, and goodness (CCC 32).

8. Understand that the world was made for the glory of God, the Creator of all things (CCC 290; 293).

Life in Christ

Students will be able to

6. Seek the common good together (CCC 1905).

7. Assume personal responsibility (CCC 1914).

14. Demonstrate appropriate care of social communication and technology (CCC 2496).

Christian Prayer

Students will be able to

1. Practice Christian prayer, which is a covenant relationship between God and man in Christ (CCC 2564).

Targeted Standards

ISTE All Grades ISTE: Educational Technology (2007) - OBSOLETE

ISTE Standards for Students

Creativity and Innovation Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

a. apply existing knowledge to generate new ideas, products, or processes.

d. identify trends and forecast possibilities.

Research and Information Fluency Students apply digital tools to gather, evaluate, and use information. Students:

b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

Digital Citizenship Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

c. demonstrate personal responsibility for lifelong learning.

Technology Operations and Concepts Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

a. understand and use technology systems.

b. select and use applications effectively and productively.

d. transfer current knowledge to learning of new technologies.

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ISTE ISTE-S: Grades 912 ISTE-S: Student Profiles - OBSOLETE

for Technology (ICT) Literate Students

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 912 (ages 1418):

6. Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. (4, 5, 6)

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Catholic Identity

DOC All Grades Catholic Identity

Catholic Social Justice Teachings

Life and Dignity of the Human Person

Rights and Responsibilities

The Rights of Children

2. THE RIGHT TO A SAFE ENVIRONMENT that promotes care, protection, and security.

8. THE RIGHT TO LEARN RESPONSIBILITY for themselves and their actions.

Summary

This unit will introduce students to the mobile operating system (OS) and the mobile application. They will investigate the history of the mobile OS as well as the history of applications and how they have changed the way society accesses and receives information.

Unit Goals

1. Students will examine the changes in mobile technologies and evolutions of mobile applications.
2. Students will assess mobile technologies and applications and their role in overall Catholic identity.
3. Students will understand the history of applications and how they have changed the way society accesses and receives information.

Big Ideas

1. app history
2. mobile operating systems
3. mobile applications

Enduring Understandings

1. Mobile OS and applications have emerged as the foreseeable future of computing.
2. Mobile technologies have revolutionized the way society receives and processes information.

Content

1. iOS
2. Android OS
3. Smart phone
4. mobile apps

Skills

1. Compare and contrast the evolution of the mobile device with the evolution of the computer.
2. Estimate the potential of mobile technologies in the future.
3. Evaluate the moral issues that have resulted from the change to mobile technologies.
4. Hypothesize on the future of mobile technology applications.

Essential Questions

1. How have mobile operating systems changed the way we use technology?
2. How has the transition to mobile technologies changed the way people receive, access, and process information?

Stage 2: Assessment Evidence

Hello Mobile . . .

Diagnostic: Quiz

Students will take the mobile device understanding quiz to assess students on how much they know about mobile technologies and mobile devices.

App Presentation

Summative: Research Project

Students will choose a mobile application and research it including the history, function, target audience, evolution, etc. They will visually present this information to the class.

Stage 3: Learning Plan

Learning Experiences

1. **Structured Overview:** Students will accompany the teacher on a journey of the history of mobile phones and applications.
2. **Compare and Contrast:** Students will compare and contrast the types of mobile devices and platforms available in today's market.
3. **Venn Diagram**: Students will use a Venn diagram to compare mobile devices versus traditional computers.
4. **Inquiry :** Students will research the variety of mobile apps available and their functions. They will use this information for a presentation assessment.
5. **Discussion:** Students will discuss how mobile applications apply to and align with Catholicism.

Technology Integration

1. Internet browsers
2. mobile operating systems
3. mobile apps

Resources

* History of Mobile Apps Timeline (<http://www.theguardian.com/media-network/2015/feb/13/history-mobile-apps-future-interactive-timeline>)

Grades 9-12 Technology
Digital Game and App Design

App Design

Stage 1: Desired Results

Catholic Standards

DOC All Grades DOC: Catholic Standards

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Life in Christ

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c. use models and simulations to explore complex systems and issues.

d. identify trends and forecast possibilities.

Communication and Collaboration Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

a. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.

b. communicate information and ideas effectively to multiple audiences using a variety of media and formats

d. contribute to project teams to produce original works or solve problems.

Research and Information Fluency Students apply digital tools to gather, evaluate, and use information. Students:

a. plan strategies to guide inquiry.

c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.

Critical Thinking, Problem-Solving & Decision-Making Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

a. identify and define authentic problems and significant questions for investigation.

b. plan and manage activities to develop a solution or complete a project.

Digital Citizenship Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a. advocate and practice safe, legal, and responsible use of information and technology.

b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.

Technology Operations and Concepts Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

a. understand and use technology systems.

b. select and use applications effectively and productively.

c. troubleshoot systems and applications.

d. transfer current knowledge to learning of new technologies.

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Catholic Identity

DOC All Grades Catholic Identity

Catholic Social Justice Teachings

Life and Dignity of the Human Person

Rights and Responsibilities

The Dignity of Work and the Rights of Workers

Care for God's Creation

The Rights of Children

9. THE RIGHT TO MAKE RESPONSIBLE DECISIONS founded on religious conviction.

Summary

In this unit, students will learn the fundamentals of planning for and the steps for designing a mobile application. They will outline a vision, design colors and graphics, and outline functionality. They will do this for two applications. For one application, they will work alone and design a fun app. For the second, they will work collaboratively and focus on an application directed toward Catholic Social teaching.

Unit Goals

1. Students will compose a complete and clear paper prototype of multiple mobile applications.
2. Students will formulate a clear vision and goal for multiple mobile apps individually and as a group.

Big Ideas

1. mobile app
2. prototype
3. vision and goal user-friendliness

Enduring Understandings

1. Planning a successful app will make the programming process easier and increase user interest.
2. Designing an app with a vision and a goal in mind is essential to success.

Content

1. Android OS
2. prototype
3. graphics
4. desktop illustrating software
5. wireframe

Skills

1. Design a paper prototype of a mobile application.
2. Plan a mobile application with Catholicism in mind.
3. Forecast how mobile students' applications will be used.
4. Design applications with users in mind. Formulate a vision associated with an application.

Essential Questions

1. How will successful planning of mobile applications affect user interest in apps?
2. How does differentiation help to make a mobile app stand out?

Stage 2: Assessment Evidence

"Fun" App Prototype

Formative: Technology Project

Students will create a wireframe, purpose and vision, goal, etc. for a "fun" app. This will help them prepare to work toward their prototype for the socially minded app assignment.

Paper Prototype

Summative: Cooperative Group Work

Students will create a prototype for their group app. The prototype will highlight vision and goal, wireframe, graphics, colors, purpose, etc. They will present the paper prototype to the class in an organized fashion.

Compare Apps

Summative: Comparative Study

Students will work in pairs to develop a comparison of similar apps. They will determine which is superior in several categories including design, functionality, usability, etc.

Stage 3: Learning Plan

Learning Experiences

1. **Drill and Practice:** Students can learn the parts and facets of wireframe. They will then practice this type of design structure.
2. **Brainstorming**: Students can brainstorm the important pieces of an app including colors, graphics, user interface, etc.
3. **Drill and Practice**: Students can first review and then practice their skills using desktop design software to prepare themselves to design graphics for their app.
4. **Guided Reading:** Students can examine articles related to the design process of a mobile application. They will respond to questions as they read.
5. **Structured overview:** Students can experience a guided demonstration of the various necessary parts of a mobile application.

Technology Integration

1. Android OS
2. Internet browsers
3. Adobe Illustrator
4. Adobe Photoshop

Resources

* Design Tips for Mobile Apps (<http://www.creativebloq.com/app-design/16-killer-design-tips-creating-mobile-apps-11513821>)

Grades 9-12 Technology
Digital Game and App Design

Application Creation and Deployment

Stage 1: Desired Results

Catholic Standards

DOC All Grades DOC: Catholic Standards

The Profession of Faith

Students will be able to

9. Know that we are created in God's image to serve Him and to rule over all creatures (CCC 380).

17. Understand that charity is the soul of holiness to which we are all called (CCC 826).

18. Respond to the call of evangelization (CCC 905).

Life in Christ

Students will be able to

2. Know that we must assume responsibility for the acts we perform (CCC 1781).

3. Cultivate the theological virtues of faith, hope, and charity; and practice the cardinal virtues of prudence, justice, fortitude, and temperance (CCC 1834; 1841).

6. Seek the common good together (CCC 1905).

7. Assume personal responsibility (CCC 1914).

14. Demonstrate appropriate care of social communication and technology (CCC 2496).

Christian Prayer

Students will be able to

1. Practice Christian prayer, which is a covenant relationship between God and man in Christ (CCC 2564).

Targeted Standards

ISTE All Grades ISTE: Educational Technology (2007) - OBSOLETE

ISTE Standards for Students

Creativity and Innovation Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

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b. create original works as a means of personal or group expression.

Communication and Collaboration Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

a. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.

b. communicate information and ideas effectively to multiple audiences using a variety of media and formats

c. develop cultural understanding and global awareness by engaging with learners of other cultures.

d. contribute to project teams to produce original works or solve problems.

Critical Thinking, Problem-Solving & Decision-Making Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

a. identify and define authentic problems and significant questions for investigation.

b. plan and manage activities to develop a solution or complete a project.

d. use multiple processes and diverse perspectives to explore alternative solutions.

Digital Citizenship Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a. advocate and practice safe, legal, and responsible use of information and technology.

c. demonstrate personal responsibility for lifelong learning.

Technology Operations and Concepts Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

a. understand and use technology systems.

b. select and use applications effectively and productively.

c. troubleshoot systems and applications.

d. transfer current knowledge to learning of new technologies.

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ISTE ISTE-S: Grades 912 ISTE-S: Student Profiles - OBSOLETE

for Technology (ICT) Literate Students

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 912 (ages 1418):

3. Select digital tools or resources to use for a real-world task and justify the selection based on their efficiency and effectiveness. (3, 6)

4. Employ curriculum-specific simulations to practice critical-thinking processes. (1, 4)

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Catholic Identity

DOC All Grades Catholic Identity

Catholic Social Justice Teachings

Life and Dignity of the Human Person

Rights and Responsibilities

The Dignity of Work and the Rights of Workers

Call to Family, Community, and Participation

Option for the Poor and Vulnerable

Solidarity

Care for God's Creation

The Rights of Children

3. THE RIGHT TO BE RESPECTED AS INDIVIDUALS with human dignity.

8. THE RIGHT TO LEARN RESPONSIBILITY for themselves and their actions.

Summary

In this unit, students will use the MIT App Inventor to make their prototypes a reality. They will beta their designs on mobile devices and use peer review to edit for a functional user experience. Students will then present their app to the class with vision and purpose in mind.

Unit Goals

1. Students will design an app centered on Catholic Social Justice teaching using MIT App Inventor.

Students will construct improvements on existing apps based on peer feedback and the revision process.

Big Ideas

1. app development
2. debugging
3. Catholic Social Justice Teaching

Enduring Understandings

1. Implementing a concrete plan helps minimize the risk of mistakes in a design process.
2. User feedback is essential in creating an app that is both functional and marketable.

Content

1. API
2. Java
3. beta
4. app development
5. debugging
6. MIT app inventor
7. prototype

Skills

1. Create an app using the guide they created in the previous unit.
2. Modify their app using user feedback and results from the debugging process.
3. Analyze other students' finished products and compare basic facets across applications.
4. Design a final app presentation and share completed application with the class.

Essential Questions

1. In what ways does the app design process help improve problem solving skills?
2. How can mobile technology play a role in addressing Catholic Social Justice issues?

Stage 2: Assessment Evidence

Beta App Review

Formative: Technology Project

Students will share a beta version of their app with another group and will judge apps based on a set of criteria. Students will use this feedback to improve the app for the final presentation.

Beta App Creation

Formative: Technology Project

Students will work through the steps necessary to create a beta version of their mobile application. This will include graphic creation, page layering, page mapping, researching resources that fit into the application, etc.

Social Justice App Presentation

Summative: Technology Project

Students will present their finished app to the class by walking the class through the various parts of the completed application.

Stage 3: Learning Plan

Learning Experiences

1. **Discussion**: In groups, students will discuss the findings of the beta review of their application.
2. **Drill and Practice:** Students will use their "fun" app prototype to learn the various facets and functions of this Android app developer software.
3. **Self-Monitoring**: Students judge and evaluate their own performance after the initial "submission" of their app in order to judge their own app's performance.
4. **Technology**: Students publish their apps. This will enable the app to be assessed by the student body and others. Students will use social media to share their apps and publicize their purpose to a specific audience.
5. **Structured Overview:** Students will be guided through ways to create the various parts of their app using the MIT App Inventor.
6. **Reflective Writing:** Students will create surveys and send them out to other students or participants who have used the app to gain feedback. The students can then write a reflection or make any necessary changes to their app in response to the collected data.

Technology Integration

1. MIT App Inventor
2. Internet browsers
3. presentation software

Resources

* Building a Mobile App Part 1 (<http://experts.allbusiness.com/12-step-guide-to-building-your-first-mobile-app/11193/#.VcpVy-vjZ95>)

Grades 9-12 Technology
Digital Game and App Design

Fundamentals of Game Design

Stage 1: Desired Results

Catholic Standards

DOC All Grades DOC: Catholic Standards

The Profession of Faith

Students will be able to

1. Recognize God in the world's order, beauty, and goodness (CCC 32).

8. Understand that the world was made for the glory of God, the Creator of all things (CCC 290; 293).

9. Know that we are created in God's image to serve Him and to rule over all creatures (CCC 380).

Life in Christ

Students will be able to

6. Seek the common good together (CCC 1905).

7. Assume personal responsibility (CCC 1914).

14. Demonstrate appropriate care of social communication and technology (CCC 2496).

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Students will be able to

1. Practice Christian prayer, which is a covenant relationship between God and man in Christ (CCC 2564).

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ISTE Standards for Students

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b. communicate information and ideas effectively to multiple audiences using a variety of media and formats

Critical Thinking, Problem-Solving & Decision-Making Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

a. identify and define authentic problems and significant questions for investigation.

b. plan and manage activities to develop a solution or complete a project.

c. collect and analyze data to identify solutions and/or make informed decisions.

Digital Citizenship Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a. advocate and practice safe, legal, and responsible use of information and technology.

Technology Operations and Concepts Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

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ISTE ISTE-S: Grades 912 ISTE-S: Student Profiles - OBSOLETE

for Technology (ICT) Literate Students

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 912 (ages 1418):

1. Design, develop, and test a digital learning game to demonstrate knowledge and skills related to curriculum content. (1, 4)

4. Employ curriculum-specific simulations to practice critical-thinking processes. (1, 4)

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OH Grades 11-12 OH: Literacy in History/Social Studies, Science, & Technical Subjects 6-12

Capacities of the Literate Individual

Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, & Language

They demonstrate independence.

Catholic Identity

DOC All Grades Catholic Identity

Catholic Social Justice Teachings

Life and Dignity of the Human Person

Rights and Responsibilities

The Dignity of Work and the Rights of Workers

The Rights of Children

2. THE RIGHT TO A SAFE ENVIRONMENT that promotes care, protection, and security.

3. THE RIGHT TO BE RESPECTED AS INDIVIDUALS with human dignity.

4. THE RIGHT TO WORK ACTIVELY TOWARD THEIR OWN EMPOWERMENT through the development of their gifts and talents.

7. THE RIGHT TO LEARN THE SKILL OF SELF PROTECTION by identifying safe and unsafe situations.

8. THE RIGHT TO LEARN RESPONSIBILITY for themselves and their actions.

9. THE RIGHT TO MAKE RESPONSIBLE DECISIONS founded on religious conviction.

Summary

In this unit, students learn principles and strategies for designing games. Students play and analyze a variety of games, exploring both game structure and how the games are played. Students create a reverse-design document of an existing game. They unpack the design elements of the game and identify components and featuressuch as game play, level of challenge, and the games visual environmentthat make the game engaging. Students also learn about the software they will use to create the game for their project in the next unit.

Unit Goals

1. Students will write a critique of an existing video game using backwards design.
2. Students will reflect on the structures of games and write an analysis of a chosen game’s pros and cons.

Big Ideas

1. reverse design
2. problem-solving skills
3. User Interface Design

Enduring Understandings

1. Game design develops problem-solving skills.
2. Various elements are common to most video games.

Content

1. game elements and features
2. critiques
3. game development software
4. wireframes
5. user interface

Skills

1. Explain common elements and features of games.
2. Critique various video games.
3. Evaluate various game development software packages.
4. Construct a game design using wireframes and user interface.

Essential Questions

1. Why do people play video games?
2. How are video games structured?

Stage 2: Assessment Evidence

Game Design Analysis Using Backward Design

Summative: Written Assessment

Students will use backward design to analyze the design of mobile games. They will write up their findings in essay format.

Game Poll

Summative: Research Project

Students will poll peers, community members, parents, siblings, etc., regarding gaming. They will then post poll results in a digital format and draw conclusions from the data that they gathered and submit them in written form.

Resources

* Game Design Document Example (<https://docs.google.com/document/d/1ct5-qyUZC9cAKn-iLUgtOczDkERmPzNNwPLDfT9Hgjs/preview>)

Stage 3: Learning Plan

Learning Experiences

1. **Direct Instruction**: After a mini lesson on the Introduction to Gaming is taught explaining the history of games, students draw conclusions in order to judge the future of gaming in our lives.
2. **Research:** Students will poll peers, community members, parents, siblings, etc., regarding gaming. They will then post poll results in a digital format and draw conclusions from the data that they gathered.
3. **Concept Attainment:** Students explore a game from the website Games for Change to work backwards to complete a blank game design document in the next unit. (See Link in Resources.)
4. **Compare and Contrast.** Students can play, describe, analyze, and critique a game on their own each week.
5. **Problem Solving:** Students can play different games, identify common game elements and features that distinguish games from one another, and discuss the kinds of games they like to play and why they like to play them.

Technology Integration

1. Adobe Illustrator
2. Adobe Photoshop
3. Game Salad
4. Notepad/Programming Application
5. HTML/Java/C++

Resources

* Institute of Play ([www.instituteofplay.com](http://www.instituteofplay.com))

Grades 9-12 Technology
Digital Game and App Design

Game Development

Stage 1: Desired Results

Catholic Standards

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The Profession of Faith

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a. advocate and practice safe, legal, and responsible use of information and technology.

b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.

d. exhibit leadership for digital citizenship.

Technology Operations and Concepts Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

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b. select and use applications effectively and productively.

d. transfer current knowledge to learning of new technologies.

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ISTE ISTE-S: Grades 912 ISTE-S: Student Profiles - OBSOLETE

for Technology (ICT) Literate Students

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 912 (ages 1418):

1. Design, develop, and test a digital learning game to demonstrate knowledge and skills related to curriculum content. (1, 4)

4. Employ curriculum-specific simulations to practice critical-thinking processes. (1, 4)

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Catholic Identity

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Catholic Social Justice Teachings

Life and Dignity of the Human Person

Rights and Responsibilities

The Dignity of Work and the Rights of Workers

Call to Family, Community, and Participation

Care for God's Creation

The Rights of Children

2. THE RIGHT TO A SAFE ENVIRONMENT that promotes care, protection, and security.

3. THE RIGHT TO BE RESPECTED AS INDIVIDUALS with human dignity.

8. THE RIGHT TO LEARN RESPONSIBILITY for themselves and their actions.

9. THE RIGHT TO MAKE RESPONSIBLE DECISIONS founded on religious conviction.

Summary

Students work with their project teams to develop their video game idea, write a treatment, and create a game design document. They build wireframes for the game, develop game art, and create the game. Paired teams engage in a round of play-testing, and teams refine their games based on feedback.

Unit Goals

1. Students will design all components of an interactive video game.
2. Students will create a video game using game creation software according to predefined specifications.
3. Students will peer review and edit video game project.

Big Ideas

1. game design principles
2. digital design and animation
3. video game creation

Enduring Understandings

1. Developing video games takes thorough planning, design skills, computer and graphic design tools.
2. Visual and mechanic elements interact to attract and engage particular populations to video games.

Content

1. Adobe Illustrator or similar application for graphic design
2. Game Design Documents
3. character analysis and development

Skills

1. Develop and deploy a video game.
2. Construct video game elements and characters using digital graphic arts software.
3. Integrate animation into a game design with characters and setting using html, Java, and other programming languages.
4. Analyze and critique a peer's video game project.

Essential Questions

1. How can I design a video game that creates an engaging experience for a player?
2. How do game-play mechanics and visual elements interact to create an engaging and compelling game?
3. Why do people play video games?
4. What are the principles of good game design?

Stage 2: Assessment Evidence

Game Design Document

Formative: Written Assessment

Students will plan, document, and summarize all components of their video game in a written Game Design Document. They will use a template for a Game Design Document.

Design a Video Game

Summative: Technology Project

Each student will design his/her own video game that includes building wireframes for the game, developing game art, and actually creating the game. Paired teams will engage in a round of play-testing after which students will refine their games based on feedback.

Resources

* Game Design Rubric - Modified from Tech Girls | Karen R @ ScratchEd (<https://docs.google.com/document/d/1QMgUfhSmig_uv8cxMkQhGolqnrNLXPnCUSkK0K1OMqA/edit?usp=sharing>)

Stage 3: Learning Plan

Learning Experiences

1. **Direct Instruction:** Students will use active listening to take notes on the attributes of Adobe Illustrator or a similar application for graphic design.
2. **Writing for Organizational Planning and Development:** Students will design a Game Design Document, a large document that reveals, organizes, and gives specific details to a game they plan to create. This document will help them outline the “rules” and necessary commands that will need to be written to help students make characters, icons, etc., specific to the web.
3. **Character Construction:** Students create a character adding attributes and animation assigned to that character (depending on the teacher’s chosen software).
4. **Game Trials:** Students perform one to three trial runs of their video games. Students have to play the game, evaluate problems, reprogram and run another trial. One trial must be accompanied by a peer or performed by a peer. Students chart their observations during the trials.
5. **Reflection:** Students will evaluate their original Game Design Document and their trial reflections to determine if they met their goals or not.
6. **Problem Solving:** Students will critique an existing video using the reverse-design model. They will work as part of a team to analyze a video game by “pulling apart” its different components to find out how the parts were put together by the original game designer.
7. **Concept Formation:** Students will choose an idea for a new game, and with their team, they will develop that idea into a new video game.
8. **Peer Partner Learning:** Students will describe their game by writing a short treatment of the video game idea and presenting it to classmates.
9. **Writing to Inform:** Students will complete a Game Design Document where they describe specific elements and features of their game and describe their targeted audience.
10. **Creativity:** Students will create user interface wireframes. They will draw sketches of different game screens that show how players will interact with the game.
11. **Graphic Design:** Students will create art to use in their video game or create concept art for the game.
12. **Game Development:** Students will use game development software to create their game.
13. **Cooperative Learning:** Students will test their game with their classmates. They will partner with another team to give and receive feedback on each other’s games.
14. **Game Revision:** Students will revise their games using peer feedback.
15. **Demonstration:** Students will present their games to the class and other audiences.

Technology Integration

1. desktop publishing application or software
2. photo editing application or software
3. Game Salad
4. Notepad/Programming Application
5. HTML/Java/C++

Resources

* Illustrator Foundations Course (<http://teamtreehouse.com/library/illustrator-foundations>)