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USING SKETCHUP IN THE CLASSROOM

Instructor
RAY PALASZ

Materials

Video modules, Handouts, Transcripts, MP3 Files, PDF of Powerpoint Slides, Completion Certificate

Course length

6 modules
55 minutes of video
2 credit hours

Course Description

Instructor Ray Palasz leads this introductory course in using SketchUp in the classroom.

This course is broken down into five easy modules. One, downloading the program. Two, getting started with using the program. Three, drawing two and three-dimensional objects. Four, using the 3D warehouse, which will save you and your students tons of time. And five, a sample assignment and assessment for your students.

Each module also comes with a handout with visuals from SketchUp to guide you through the process. You will learn how SketchUp can add so much to your program.

About the Instructor

Ray Palasz is a high school teacher and has been teaching technical theatre and directing high school productions for over 12 years.

Ray attended Valparaiso University, where he majored in English Education and Theatre and Television Arts. While at Valpo, Ray worked on many productions as actor, director, designer, stage manager, and technician.

He currently is the Co-Chapter Director for the Indiana Thespians, and has served on the nominating committee for the Educational Theatre Association. He is also a member of the United States Institute for Theatre Technology.

In 2012 Ray earned his MA in literature and composition from Purdue University Calumet.

Course Curriculum

Module 0: Introduction 1:44

An introduction to the course and a description of each of the modules.

Module 1: Downloading SketchUp 6:43

This module walks through how to download the SketchUp program and get it ready to run.

Module 2: The Basics 9:18

This module covers the basic elements of SketchUp, including dimensioning, using the axes, and the camera view.

Module 3: Drawing Capabilities 12:05

This module focused on the drawing capabilities of SketchUp, including 2 and 3 dimensional objects, color and texture, and finding the correct dimensions.

Module 4: SketchUp 3D Warehouse 12:20

This module introduces the 3D warehouse and teaches how to search for objects, place them on drawings, and resize them.

Module 5: Set Design Project 13:25

This module lays out a sample assignment on set design using SketchUp, including assessment tools.

Standards Connections

National Core Arts Standards

Generate and conceptualize artistic ideas and work - Grade 6

TH:Cr1.1.6.b - Identify solutions to design challenges in a drama/theatre work.

Generate and conceptualize artistic ideas and work - Grade 7

TH:Cr1.1.7.b - Explain and present solutions to design challenges in a drama/ theatre work.

Generate and conceptualize artistic ideas and work - High School Proficient

TH:Cr1.1.HSI.b - Explore the impact of technology on design choices in a drama/theatre work.

Generate and conceptualize artistic ideas and work - High School Accomplished

TH:Cr1.1.HSII.b - Understand and apply technology to design solutions for a drama/theatre work.

Develop and refine artistic techniques and work for presentation - Grade 6

TH:Pr5.1.6.b - Articulate how technical elements are integrated into a drama/ theatre work.

Develop and refine artistic techniques and work for presentation - Grade HS Accomplished

TH:Pr5.1.HSII.b - Apply technical elements and research to create a design that communicates the concept of a drama/theatre production.

Apply criteria to evaluate artistic work - Grade 7

TH:Re9.1.7.b - Consider the aesthetics of the production elements in a drama/theatre work.

Refine new work through play, drama processes and theatre experiences using critical analysis and experimentation - Grade HS Proficient

TH:Cr3.1.HSI.c - Refine technical design choices to support the story and emotional impact of a devised or scripted drama/ theatre work.

Apply criteria to evaluate artistic work - Grade HS Proficient

TH:Re9.1.HSI.b - Consider the aesthetics of the production elements in a drama/theatre work.

California VAPA Standards (2019)

6.TH:Cr1 Generate and conceptualize artistic ideas and work

6.TH:Cr1.c - Identify solutions to design challenges in a drama/theatre work.

7.TH:Cr1 Generate and conceptualize artistic ideas and work

7.TH:Cr1.c - Explain and present solutions to design challenges in a drama/ theatre work.

Prof.TH:Cr1 Generate and conceptualize artistic ideas and work

Prof.TH:Cr1.c - Explore the impact of technical theatre elements on design choices in a drama/theatre work.

Acc.TH:Cr1 Generate and conceptualize artistic ideas and work.

Acc.TH:Cr1.c - Understand and apply technical theatre elements to design solutions for a drama/theatre work.

6.TH:Pr5 Develop and refine artistic techniques and

work for presentation.

6.TH:Pr5.b - Articulate how technical theatre elements are integrated into a drama/ theatre work.

Acc.TH:Pr5 Develop and refine artistic techniques and work for presentation.

Acc.TH:Pr5.b - Apply technical theatre elements and research to create a design that communicates the concept of a drama/theatre production.

7.TH:Re9 Apply criteria to evaluate artistic work.

7.TH:Re9.c - Analyze and evaluate the aesthetics of the technical theatre elements in a drama/theatre work.

Prof.TH:Re9 Apply criteria to evaluate artistic work.

Prof.TH:Re9.c - Analyze and evaluate the aesthetics and effect of the technical theatre elements in a drama/theatre work.

Prof.TH:Cr3 Refine and complete artistic work.

Prof.TH:Cr3.c - Refine design choices using technical theatre elements to support the story and emotional impact of a devised or scripted drama/theatre work.

Colorado Academic Standards - Drama and Theatre Arts

Sixth Grade

DT.6.1.1.b - Students Can: Identify possible solutions to design challenges in a drama/theatre work.

DT.6.2.2.b - Students Can: Articulate how technical elements are integrated into a drama/theatre work.

Seventh Grade

DT.7.1.1.b - Students Can: Explain and present possible solutions to design challenges in a drama/theater work.

DT.7.3.4.b - Students Can: Examine the aesthetics of the production elements in a drama/theatre work.

High School - Fundamental Pathway

DT.H1.1.1.b - Students Can: Explore the impact of technology on design choices in a drama/theatre work.

DT.H1.1.4.c - Students Can: Refine technical design choices to support the story and emotional impact of a devised or scripted drama/theatre work.

DT.H1.3.4.b - Students Can: Evaluate the aesthetics of the production elements in a drama/theatre work.

High School - Advanced Pathway

DT.H2.1.1.b - Students Can: Understand and apply technology to design solutions for a drama/theatre work.

DT.H2.2.2.b - Students Can: Apply technical elements and research to create a design that communicates the concept of a drama/theatre production.

Common Core

Speaking and Listening

CCSS.ELA-LITERACY.CCRA.SL.1 - Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-LITERACY.CCRA.SL.2 - Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-LITERACY.CCRA.SL.6 - Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Language

CCSS.ELA-LITERACY.CCRA.L.1 - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Language

CCSS.ELA-LITERACY.L.9-10.1 - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Florida Sunshine State Standards

Innovation, Technology & the Future

TH.912.F.1.4 - Research the cause-and-effect relationship between production needs and new and emerging technologies to support creativity and innovation in theatre.

Organizational Structure

TH.912.O.3.6 - Apply standard drafting conventions for scenic, lighting, and sound design to create production design documents.

Skills, Techniques & Processes

TH.912.S.2.1 - Create one or more technical design documents for a theatrical production.

Georgia Performance Standards - Theatre Arts

Grade 6 - Creating

TA6.CR.1 - Organize, design, and refine theatrical work., a. Identify artistic choices, utilize theatre vocabulary, and demonstrate non-verbal communication skills in the rehearsal process., b. Interpret a character's motivation by understanding the relationship between their background and their behavior., c. Identify the variety of relationships between characters., d. Identify, define, and classify character traits., e. Recognize and demonstrate the roles, responsibilities, and skills associated with collaborative performance., f. Use resources to identify and create technical elements of theatre.

Grade 7 - Performing

TA7.PR.2 - Execute artistic and technical elements of theatre., a. Select a variety of technical elements that can be applied to a theatrical work., b. Incorporate artistic and technical elements into a theatre performance.

Grade 8 - Performing

TA8.PR.2 - Execute artistic and technical elements of theatre., a. Incorporate artistic and technical elements into a theatre production., b. Resolve conflicts in technical applications.

Grades 9-12 - TECHNICAL THEATRE LEVELS I-IV - Creating

TAHSTT.CR.1 - Create technical elements of theatre (e.g. sets, props, costumes, makeup, lighting, sound)., a. Explore and utilize the elements of design and principles of composition for a theatrical context., b. Create basic to advanced technical elements by choosing appropriate materials, tools, and techniques., c. Analyze and/or develop choices in technical elements (e.g. sets, lights, costumes, sound) of informal and formal productions and theatrical texts as a part of the design process, considering mood, tone, and symbolism., d. Create industry standard paperwork (e.g. budgets, cut lists, materials, cue sheets, lighting and costume plots, schedules, calendars) as it relates to completing design renderings and/or models., e. Conceptualize and/or generate

design elements for a dramatic work (e.g. scene, one act, full-length, musical).

Grades 9-12 - TECHNICAL THEATRE LEVELS I-IV - Producing

TAHSTT.PR.1 - Produce technical elements in theatre., a. Identify, explain, and demonstrate standard safety guidelines and operating procedures for tools and equipment used in formal and informal theatre productions., b. Identify and interpret design and construction documentation, materials, techniques, and procedures for production., c. Differentiate between stock and non-standard material, scenic, or technical elements related to a production., d. Conduct initial research about design to inform further development of the production concept., e. Explore and/or produce an appropriate series of design documentation for a theatrical production (e.g. thumbnail sketches, swatches, first renderings, mixed media presentation).

North Carolina Essential Standards 2024

Beginning High School Create

B.CR.1.3 - Incorporate introductory technical elements using available facilities, technology, and tools to enhance theatrical works.

Intermediate High School Create

I.CR.1.3 - Implement original technical designs into theatrical works using available facilities, technology, and tools.

Accomplished High School Connect

AC.CN.2.2 - Analyze how technical elements enhance theatrical works.

Accomplished High School Create

AC.CR.1.3 - Implement original technical designs reflecting specific situations, styles, or genres incorporating available facilities, technology, and tools.

Accomplished High School Present

AC.PR.2.3 - Implement technical designs to tailor theatrical works for a range of audiences, spaces, or budgets.

Advanced High School Present

AD.PR.2.3 - Implement technical elements effectively from design through actualization to enhance theatrical works.

North Carolina Essential Standards 2010

Beginning High School Standards - Aesthetics

B.AE.1.1 - Understand the major technical elements, such as sound, lights, set, and costumes, and their interrelationships.

Intermediate High School Standards - Aesthetics

I.AE.1.1 - Use technical knowledge and design skills to formulate designs.

Proficient High School Standards - Aesthetics

PAE.1.1 - Analyze design concepts for aesthetic impact of technical elements.

PAE.1.2 - Apply working knowledge to solve problems in the major technical elements, such as sound, lights, set, and costumes, for formal or informal audiences.

Advanced High School Standards - Aesthetics

A.AE.1.2 - Use the knowledge and skills associated with

technical roles, such as lighting operator, prop master, or stage manager, in an appropriate and effective manner.

Texas Essential Knowledge and Skills for Theatre Arts

MS 117.211 LI - Creative Expression: production

C.3.B - create suitable environments for dramatizations.

MS 117.213 LIII - Creative Expression: production

B.3.A - recognize and select specific technical elements to suggest environment, establish mood, and support character and actions for performance.

HS 117.315 LI - Creative Expression: production

C.3.A - develop and practice technical theatre skills.

C.3.C - perform a role such as actor, director, designer, technician, or editor in production decision making and collaborate with others in a production role to tell a story through live theatre or media performance.

C.3.D - demonstrate responsibility, artistic discipline, and creative problem solving by concentrating in one or more areas of theatre production such as acting, technical theatre, or theatre management.

HS 117.316 LII - Creative Expression: production

C.3.B - read and analyze cultural, social, and political aspects of a script to determine technical elements.

C.3.C - analyze characters, themes, duties, and elements of a script to determine artistic roles and technical assignments.

C.3.E - develop responsibility, artistic discipline, and creative problem solving by concentrating in one or more areas of theatre production such as acting, technical theatre, or theatre management.

Alberta, Canada

Technical Theatre/Design 10-20-30 - Management - Set

1 - demonstrate understanding of the purpose of stage scenery

10 - demonstrate understanding of and use ground plans

11 - demonstrate understanding of proper placement of stage scenery: balancing, angling, masking, sight lines, backdrops, scrims

2 - recognize the importance of illusion in set design

3 - recognize the importance of artistic unity in set design

4 - recognize and use theatre terminology related to the proscenium

6 - recognize different types of stages: proscenium, thrust, arena, flexible

8 - recognize different types of scenery: bare stage, curtain set, drop and wing set, box set, unit set, suggestive or selective set, flats, projections, scrims, cyclorama

9 - demonstrate understanding of and use scale

Junior Orientation

focus concentration on one task at a time

generate imaginative and creative solutions to problems

meet deadlines and follow through on individual and group commitments

Junior Goal I Objectives

develop a sense of responsibility and commitment

develop the ability to initiate, organize and present a project within a given set of guidelines

develop the willingness to make a decision, act upon it and

accept the results

extend the ability to explore meaning through abstract concepts

extend the ability to think imaginatively and creatively

strengthen powers of concentration

Technical Theatre - Levels I, II, III - Awareness

1 - recognize the basic terminology associated with the component being studied

2 - demonstrate understanding of the basic functions of the component being studied.

3 - show awareness of the importance of research

4 - show awareness of available resources pertaining to the component being studied; e.g., supplies, libraries and theatre companies

5 - demonstrate understanding of the various conventions of the components being studied

Technical Theatre - Levels I, II, III - Readiness

10 - demonstrate understanding of and use appropriate methods and tools for designing the project; e.g., makeup charts, cue sheets, working drawing

11 - arrange and sequence time, ideas, information, materials and/or personnel for achievement of the project

6 - demonstrate understanding of the importance of planning and organization

7 - select a project appropriate to the component being studied

8 - demonstrate understanding of the use of colour, shape and texture to achieve a desired effect

9 - use sketching to explore ideas for the project

Senior Goal III Objectives

develop an awareness of aesthetics in visual and performing arts

Orientation Drama 10

listen to self and others

make effective decisions or choices

share ideas confidently

work with abstract concepts

British Columbia (2018)

GRADE 6 - ARTS - Exploring and creating

Intentionally select and apply materials, movements, technologies, environments, tools, and techniques by combining and arranging artistic elements, processes, and principles in art making

GRADE 6 - ARTS - Reasoning and reflecting

Develop and refine ideas, processes, and technical skills in a variety of art forms to improve the quality of artistic creations

Research, describe, interpret and evaluate how artists (dancers, actors, musicians, and visual artists) use processes, materials, movements, technologies, tools, techniques, and environments in the arts

GRADE 7 - ARTS - Exploring and creating

Intentionally select and apply materials, movements, technologies, environments, tools, and techniques by combining and arranging artistic elements, processes, and principles in art making

GRADE 8 - ARTS - Exploring and creating

Intentionally select and apply materials, movements,

technologies, environments, tools, and techniques by combining and arranging artistic elements, processes, and principles in art making

GRADE 8 - ARTS - Reasoning and reflecting

Develop, refine ideas, and critically appraise ideas, processes, and technical skills in a variety of art forms to improve the quality of artistic creations

GRADE 10 - DRAMA - Explore and Create

Experiment with a range of props, processes, and technologies

GRADE 11 - DRAMA - Explore and Create

Experiment with a range of materials, props, processes, and technologies to create and refine performances

GRADE 12 - DRAMA - Explore and Create

Experiment with a range of props, processes, and technologies to create and refine innovative dramatic works

Ontario, Canada

Grades 9 & 10 - Foundations - Concepts and Terminology

C.1.3 - demonstrate an understanding of production roles, practices, and terminology when planning and presenting drama works (e.g., set design, costume design, lighting plot, light cue sheet, sound cue sheet, prompt book, set sketch, set model)

Grades 9 & 10 - Creating and Presenting - Presentation Techniques & Technologies

A.3.3 - use a variety of technological tools (e.g., light, sound, set design, props, models) to enhance the impact of drama works