WESTFIELD PUBLIC SCHOOLS
Westfield, New Jersey

Office of Instruction

Course of Study

ARCHITECTURAL DESIGN II

School .....Westfield High School
Department.....Practical Arts
Length of Course..... Full Year
Credits.....5
Grade Level(s) 10-12
Prerequisite .....Architectural Design I
Date .....

I. RATIONALE, DESCRIPTION AND PURPOSE

Architectural Design II is a full-year practical arts course open to sophomores, juniors and seniors who have taken Introduction to Architecture and wish to expand their knowledge of architectural design. Students will enhance their techniques by way of larger and more complex projects. This course is intended to expose students to real-world projects and expectations, which in the process will continue to build their perseverance, design development, and collaboration and communication skills.

Architectural Design II serves as a powerful addition to the growing STEM movement in our schools. Similar to Introduction to Architecture, instruction is highly personalized for each student. The classroom environment is collaborative and positive, which will continue to enhance the overall learning experience.

Students will broaden their architectural knowledge in construction detailing and building codes by way of commercial projects. They will explore various commercial settings such as hotels, restaurants and retail spaces. Architectural Design II will ask students to design a space that meets the requirements of their commercial client's criteria and budget while also keeping in mind the impact the space will have on the community. Throughout the design process, students will apply technical and functional architecture methods and standards. Through these design challenges, students will further build their resilience and problem-solving strategies.

Presentation and documentation of designs and processes will be created using computer software such as Autodesk REVIT, further exposing students to real-world programs used at the collegiate level and in the architecture industry. Model making will again be utilized to further enhance students' own design experience and ability to showcase their thoughts to clients. Students also will gain exposure to professional-level presentation techniques and standards. Students will enhance their own confidence and abilities to "sell" their designs and communicate their ideas through peer review, classroom pin-ups, and formal presentations called critiques. Outside feedback from industry professionals will be included to enhance the

learning experience and students' real-world exposure to the industry. Communication and collaboration is key no matter where one's career path goes, so exposure to this learning experience throughout the course is highly beneficial to all students.

At its core, this course gives students who have an interest in design and architecture a chance to truly envelope themselves in coursework that encourages and fosters design thinking. Students will explore realistic project scenarios, use industry software, and engage in active problem solving, while all the while allowing them the freedom to design and create in an inclusive environment.

II. OBJECTIVES

The following objectives are aligned with the New Jersey Student Learning Standards for: Technology, 21st Century Life and Careers, Science, Career Ready Practices, English Language Arts, and the New Jersey Competencies for Social and Emotional Learning.

A. Identify and practice the norms and habits of mind of an architect.
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Career Ready Practices CRP6, CRP8
New Jersey Competencies for SEL: Responsible Decision-Making
NJ Student Learning Standards for English Language Arts: NJSLSA.W5

B. Develop the skills to design one's own design work through documentation
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
NJ Student Learning Standards for English Language Arts: NJSLSA.W5
New Jersey Competencies for SEL: Self-Awareness, Self-Management, Responsible Decision-Making

C. Develop the ability to ideate, create and construct
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
New Jersey Competencies for SEL: Self-Awareness, Self-Management, Responsible Decision-Making

D. Develop the ability to problem-solve, experiment and navigate ambiguity
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
New Jersey Competencies for SEL: Self-Awareness, Self-Management, Responsible Decision-Making

E. Communicate with and learn from others in exploring solutions
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Career Ready Practices CRP4, CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Self-Awareness, Social Awareness, Relationship Skills

F. Share ideas, feedback, solutions and successes with others
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Career Ready Practices CRP4, CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Social Awareness, Relationship Skills

G. Practice and learn from the act of deconstructing.
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
New Jersey Competencies for SEL: Responsible Self-Awareness, Responsible Decision-Making

H. Collaborate with peers through student partnerships
NJ Career Ready Practice CRP4
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Social Awareness, Relationship Skills

III. CONTENT, SCOPE AND SEQUENCE

Note: Projects, drawings and models may be used throughout each unit

A. Architectural History II: Fundamentals of Commercial Architecture (~2 weeks)
1. Bauhaus
2. Modern Architecture movement
3. Concept development in commercial spaces

B. Space planning of Commercial Spaces (~2 weeks)
1. Spatial awareness for commercial settings
2. Proper adjacencies
3. Scale and proportion
4. Hierarchy
5. Schematic design development review

C. FF&E (furniture, finishes, and equipment) (~2 weeks)
1. Commercial furniture, finishes, and equipment companies
   a. selection of finishes and furniture for types of spaces
2. Lighting
3. Spreadsheets
4. Budgets

D. Commercial Building Codes & ADA (~2 weeks)
    1. Circulation & fire egress
    2. American Disabilities Act (ADA) codes & proper layout/ application

E. Commercial Architectural standards & detailing (~ 4 weeks)
    1. Architecture scale
    2. Structure
    3. Commercial architecture standards
        a. Wall
        b. Doors
        c. Windows
        d. Furniture
        e. Millwork
    1. Stairs, ramps, elevators
    2. Wall details
    3. MEP (mechanical, electrical, & plumbing)
    4. Millwork details & standards

F. Review of Autodesk REVIT (~2 weeks)
    1. Model space
    2. Save/ save as
    3. Modeling vs. drawing
    4. Sheets for views & scale
    5. Dimensions & annotations
    6. Drawing walls, doors, windows, structure & custom furniture
    7. Families
    8. Renderings

G. Project #1 (~ 6 weeks)
    1. Commercial project (~500-750 sq feet)
        a. Completion in REVIT
    2. Introduction to client & project requirements
    3. Concept development & schematic design
    4. Mid-critique presentation for constructive feedback
    5. Design Development
    6. Construction Documentation
    7. MEP
    8. Furniture, fixtures, and equipment (FF&E) selections
    9. Model building
        a. Foam core, matte board, cardboard, and/or balsa wood
    10. Final Critique to panel of jurors

H. Project #2 (~ 8 weeks)
    1. Commercial project (~1000 sq feet)
        a. Completion in REVIT
    2. Introduction to client & project requirements
    3. Concept development & schematic design
    4. Mid-critique presentation for constructive feedback
    5. Design Development
    6. Construction Documentation
    7. MEP
    8. Furniture, fixtures, and equipment (FF&E) selections
    9. Model building
        a . Foam core, matte board, cardboard, and/or balsa wood
    10. Final Critique to panel of jurors

I. Final project (~ 12 weeks)
    1. Commercial project (~2000-3000 sq feet)
        a. Completion in REVIT
    2. Introduction to client, budget, & project requirements
    3. Concept development & schematic design
    4. Mid-critique presentation for constructive feedback
    5. Design Development
    6. Construction Documentation
    7. MEP
    8. Budget spreadsheet
    9. FF&E selections & spreadsheets
    10. Model building
        a. Foam core, matte board, cardboard, and/or balsa wood
    11. Final Critique to panel of jurors

IV. INSTRUCTIONAL TECHNIQUES

Teachers employ a variety of teaching methodologies and instructional approaches to accommodate differences in readiness levels, learning styles and the diversity of learners. In order to differentiate instruction based upon student readiness, the teacher will vary the pace, complexity and depth of instruction. Techniques include, but are not limited to:

A. Demonstration/modeling
B. Teacher-directed, whole-group instruction
C. Discussion
D. Reading
E. Hands-on activities: small, collaborative groups & individual work
F. Experimentation, problem-solving
G. Feedback
H. Simulation
I. Video with corresponding activities
J. Projects and student-generated presentations
K. Flexible grouping

L. Use of technology and computer software
M. In-class presentations from professionals in the industry
N. Formal presentations/ critiques to panel of jurors
O. For strategies to differentiate for special education students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans, please consult the Accommodations and Modifications appendix in the appendices section of this document.

V. EVALUATION

Multiple techniques are employed to measure and assess student performance in this hands-on, creation-based course. Evaluation tools include, but are not limited to, the following:

A. Exercises and projects
B. Evaluation of project work
C. Self- and peer review/ pin-ups
D. Presentations/ Critiques

VI. PROFESSIONAL DEVELOPMENT

The following recommended activities support the curriculum and provide opportunities for the teacher's continued professional development:

A. Professional development within district
B. Additional professional development outside district, including workshops and courses
C. State and national conferences
D. Visiting and/or networking with colleagues in New Jersey schools
E. Professional organizations.

APPENDIX I

New Jersey Student Learning Standards For Technology

NJSLS 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

STANDARD 8.2 Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.

The entire standards document may be viewed at https://www.nj.gov/education/aps/cccs/tech/

APPENDIX II

New Jersey Student Learning Standards for 21st Century Life and Careers

Career Cluster® : Architecture & Construction (AC)

9.3.12.AC.1 Use vocabulary, symbols and formulas common to architecture and construction.

9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.

9.3.12.AC.3 Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
9.3.12.AC.4 Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy.
9.3.12.AC.5 Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.
9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC.7 Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways.

Pathway: Design/Pre-construction (AC-DES)

9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.
9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.

9.3.12.AC-DES.3 Describe the requirements of the integral systems that impact the design of buildings.
9.3.12.AC-DES.4 Apply building codes, laws and rules in the project design.
9.3.12.AC-DES.5 Identify the diversity of needs, values and social patterns in project design, including accessibility standards. 9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
9.3.12.AC-DES.7 Employ appropriate representational media to communicate concepts and project design.
9.3.12.AC-DES.8 Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.

Career Cluster® : Science, Technology, Engineering & Mathematics (ST)

9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.

9.3.ST.3 Describe and follow safety, health and environmental standards related to science, technology, engineering and mathematics (STEM) workplaces.

Pathway: Engineering & Technology Career Pathway (ST-ET)

9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.

9.3.ST-ET.2 Display and communicate STEM information.

9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.

9.3.ST-ET.4 Apply the elements of the design process.

9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.

Pathway: Science & Mathematics Career Pathway (ST-SM)

9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities.

9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.

9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.

Design Thinking Standards: Engineering Design

8.2.12.ED.1: Use research to design and create a product or system that addresses a problem and make modifications based on input from potential consumers.

8.2.12.ED.2: Create scaled engineering drawings for a new product or system and make modification to increase optimization based on feedback.

8.2.12.ED.5: Evaluate the effectiveness of a product or system based on factors that are related to its requirements, specifications, and constraints (e.g., safety, reliability, economic considerations, quality control, environmental concerns, manufacturability, maintenance and repair, ergonomics)

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2014/career/93.pdf

APPENDIX III

New Jersey Student Learning Standards for Science / Next Generation Science Standards

Engineering Design

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

HS-ETS1-4. Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

The entire standards document may be viewed at https://www.nj.gov/education/cccs/2016/science/HS-ETS1.pdf

APPENDIX IV

New Jersey Career Ready Practices

CRP1. Act as a responsible and contributing citizen and employee.

CRP4. Communicate clearly and effectively and with reason.

CRP5. Consider the environmental, social and economic impacts of decisions.

CRP6. Demonstrate creativity and innovation.

CRP7. Employ valid and reliable research strategies.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf

APPENDIX V

New Jersey Student Learning Standards for English Language Arts

Anchor Standards for Speaking and Listening

NJSLSA.SL1. 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.

NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

NJSLSA.SL3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

NJSLSA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2016/ela/g0910.pdf

Progress Indicators for Reading Science and Technical Subjects

RST.11-12.1. Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.

RST.11-12.2. Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

RST.11-12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

RST.11-12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.

RST.11-12.5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

RST.11-12.6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. Integration of Knowledge and Ideas

RST.11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

RST.11-12.8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

RST.11-12.9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

RST.11-12.10. By the end of grade 12, read and comprehend science/technical texts in the grades 11-CCR text complexity band independently and proficiently.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2016/ela/CompanionG1112.pdf

APPENDIX VI

New Jersey Competencies for Social and Emotional Learning

Social and emotional learning (SEL) refers to the process by which children and adults acquire and effectively apply the knowledge, attitudes and skills necessary to do the following: understand and manage emotions; set and achieve positive goals; feel and show empathy for others; and make responsible decisions. Students in SEL programs are more likely to attend school and receive better grades, and are less likely to have conduct problems. Successful infusion of SEL can resultin positive behaviors, increased academic success, and caring communities.

The New Jersey Department of Education has been promoting social and emotional learning to enhance the building of positive school climates and the healthy development of young people.

The entire competency document may be viewed at https://www.state.nj.us/education/students/safety/sandp/sel/

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APPENDIX VII

New Jersey Student Learning Standards - Social Studies Practices

Social Studies practices are the skills that individuals who work in the field of social sciences use on a regular basis. Because the purpose of social studies is to provide students with the knowledge, skills and attitudes they need to be active, informed, responsible individuals and contributing members of their communities, many of the practices can be applied to daily life.

Practice	Description
Developing Questions and Planning Inquiries	Developing insightful questions and planning effective inquiry involves identifying the purposes of different questions to understand the human experience, which requires addressing real world issues. Inquiries incorporating questions from various social science disciplines build understanding of the past, present and future; these inquiries investigate the complexity and diversity of individuals, groups, and societies.
Gathering and Evaluating Sources	Finding, evaluating and organizing information and evidence from multiple sources and perspectives are the core of inquiry. Effective practice requires evaluating the credibility of primary and secondary sources, assessing the reliability of information, analyzing the context of information, and corroborating evidence across sources. Discerning opinion from fact and interpreting the significance of information requires thinking critically about ourselves and the world.
Seeking Diverse Perspectives	Making sense of research findings requires thinking about what information is included, whether the information answers the question, and what may be missing, often resulting in the need to complete additional research. Developing an understanding of our own and others' perspectives builds understanding about the complexity of each person and the diversity in the world. Exploring diverse perspectives assists students in empathizing with other individuals and groups of people; quantitative and qualitative information provides insights into specific people, places, and events, as well as national, regional, and global trends.
Developing Claims and Using Evidence	Developing claims requires careful consideration of evidence, logical organization of information, self-awareness about biases, application of analysis skills, and a willingness to revise conclusions based on the strength of evidence. Using evidence responsibly means developing claims based on factual evidence, valid reasoning, and a respect for human rights.
Presenting Arguments and Explanations	Using a variety of formats designed for a purpose and an authentic audience forms the basis for clear communication. Strong arguments contain claims with organized evidence and valid reasoning that respects the diversity of the world and the dignity of each person. Writing findings and engaging in civil discussion with an audience provides a key step in the process of thinking critically about conclusions and continued inquiry.

Engaging in Civil Discourse and Critiquing Conclusions	Assessing and refining conclusions through metacognition, further research, and deliberative discussions with diverse perspectives sharpens the conclusions and improves thinking as a vital part of the process of sense making. Responsible citizenship requires respectfully listening to and critiquing claims by analyzing the evidence and reasoning supporting them. Listening to and understanding contrary views can deepen learning and lay the groundwork for seeking consensus.
Taking Informed Action	After thoroughly investigating questions, taking informed action means building consensus about possible actions and planning strategically to implement change. Democracy requires citizens to practice discussion, negotiation, coalition-seeking, and peaceful conflict resolution. When appropriate, taking informed action involves creating and/or implementing action plans designed to solve problems and create positive change.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2020/2020%20NJSLS-SS.pdf

APPENDIX VIII

Integrated Accommodations and Modifications for Special Education Students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans

Teachers and administrators can consult these accommodations and modifications in order to:

- implement additional ideas to meet the needs of the students in these subgroups
- meet the minimum number of interventions before referring to I&RS
- include them in the Instructional Techniques section of the Curriculum Revision/Writing template
- assist any students or whole group that might benefit from them.

Special Education
ENVIRONMENT

Preferential Seating
Adjust time for completion of assignments when needed
Adjust length of assignments when needed
Allow additional oral response time
Break tasks (including long range assignments) into manageable steps
Provide copies of notes
Reduce the number of problems on a page
Provide assistance with organizing a notebook or folder
Repeat/ clarify directions when needed
Make frequent checks for work/assignment completion.
Modify homework and class work if needed
Extend time on tests/quizzes
Provide study guides for tests

Provide oral component when needed
Modify format when needed- (ex: limit choices, word bank, shortened written responses)
Allow a private workspace when needed (study carrel, separate desk, desk away from the group)
Allow opportunities for movement (e.g., help with supplies, change to different part of room to work, carry messages to office)
Assist the student to keep only the materials required for the lesson on the desktop
Provide a seat away from distractions (or noise)
MATERIAL/BOOKS/EQUIPMENT
Allow use of a calculator
Allow use of a number line
Allow use of counting chips
Modify worksheets
Provide visual aids (pictures, flash cards, etc.)
Provide auditory aids (cues, tapes, etc.)

Use manipulatives
Provide hands-on learning activities
INSTRUCTIONAL STRATEGIES
Check work in progress
Provide immediate feedback
Provide extra drill/practice
Provide review sessions
Provide models
Highlight key words
Provide pictures/charts
Use mnemonics
Support auditory presentations with visuals
Have student restate information

Provide lecture notes/outline
Give oral reminders
Give visual reminders
Review directions
Use graphic organizers
Assign partners
Repeat instructions
Display key vocabulary
Monitor assignments
Provide visual reinforcement
Provide concrete examples
Use vocabulary word bank
ORGANIZATION

Post assignments
Provide a desktop list of tasks

Give one paper at a time
Provide extra space for work
List sequential steps
Provide folders to hold work
Post routines
Use pencil box for tools
Reorganize poorly designed worksheets to create simple, easy-to-follow layouts and formats
Give advance warning when transition is going to take place
Provide structure for success
Provide a contract, timer, etc., for self-monitoring
Give the student a prompt when he/she is off task (e.g., move close to the student, speak to the student, etc.)

TEST/QUIZZES/TIME
Give prior notice of test
Provide oral testing
Provide extra time for written work
Provide modified tests
Rephrase test questions/directions
Preview test procedures
Provide shortened tasks
Provide extra time for tests
Read test to student
Provide test study guides
Limit multiple choice options
Provide extra time for projects

Pace long term projects
Simplify test wording
Provide hands-on projects
Allow extra response time

ENGLISH LANGUAGE LEARNERS
GRADING
Standard Grades vs. Pass/Fail
CONTINUUM OF ENGLISH LANGUAGE DEVELOPMENT
Pre K-K WIDA CAN DO Descriptors
Grades 1-2 WIDA CAN DO Descriptors
Grades 3-5 WIDA CAN DO Descriptors
Grades 6-8 WIDA CAN DO Descriptors
Grades 9-12 WIDA CAN DO Descriptors
SIOP COMPONENTS AND FEATURES

PREPARATION
Write content objectives clearly for students
Write language objectives clearly for students
Choose content concepts appropriate for age and educational background levels of students
Identify supplementary materials to use
Adapt content to all levels of students proficiency
Plan meaningful activities that integrate lesson concepts with language practices opportunities for reading, writing, listening, and/or speaking
BUILDING BACKGROUND
Explicitly link concepts to students' backgrounds and experiences
Explicitly link past learning and new concepts
Emphasize key vocabulary for students
COMPREHENSIBLE INPUT
Use speech appropriate for students' proficiency level
Explain academics tasks clearly
Use a variety of techniques to make content concepts clear (e.g. modeling, visuals, hands-on activities, demonstrations, gestures, body language)
STRATEGIES

Provide ample opportunities for students to use strategies (e.g. problem solving, predicting, organizing, summarizing, categorizing, evaluating, self-monitoring)
Use scaffolding techniques consistently throughout lesson
Use a variety of question types including those that promote higher-order thinking skills throughout the lesson
INTERACTION
Provide frequent opportunities for interaction and discussion between teacher/students and among students about lessons concepts, and encourage elaborated responses
Use group configurations that support language and content objectives of the lesson
Provide sufficient wait time for student responses consistently
Give ample opportunities for students to clarify key concepts in LI as needed with aide, peer, or LI text
PRACTICE/APPLICATION
Provide hands-on materials and/ manipulatives for students to practice using new content knowledge
Provide activities for students to apply content and language knowledge in the classroom
Provide activities that integrate all language skills
LESSON DELIVERY
Support content objectives clearly

Support language objectives clearly
Engage students approximately 90-100% of the period
Pace the lesson appropriately to the students' ability level
REVIEW/EVALUATION
Give a comprehensive review of key vocabulary
Give a comprehensive review of key content concepts
Provide feedback to students regularly on their output
Conduct assessments of students comprehension and learning throughout lesson and all lesson objectives

STUDENTS AT RISK OF SCHOOL FAILURE (I&RS RESOURCE MANUAL)
ACADEMICS
Provide necessary services (Lit Support, Math Support, OT, PT, speech, etc.)
Literacy Support Interventions (Appendix B of IS forms)
Prompt before directions/questions are verbalized with visual cue between teacher and student

Task list laminated and placed on desk for classroom routines and organization
Preferential seating
Provide structure and positive reinforcements
Sustained working time connected to reward (If/Then statement)
Frequently check for understanding
Graphic organizers
Tracker
Slant board
Access to accurate notes
Additional time to complete tasks/long-term projects with adjusted due dates
Limit number of items student is expected to learn at one time
Break down tasks into manageable units
Directions repeated, clarified, or reworded

Frequent breaks during class
Allow verbal rather than written responses
Modify curriculum content based on student's ability level
Reduce readability level of materials
Allow typed rather than handwritten responses
Use of calculator
Use of a math grid
Provide models/organizers to break down independent tasks
Access to electronic text (e.g. Downloaded books)
Provide books on tape, CD, or read aloud computer software
Provide opportunities for using a Chromebook as well as assistive technologies
Provide buddy system
Adjust activity, length of assignment, and/or number of problems, including homework

Provide assessments in a small group setting
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance
Communication with parents
Gradual release of responsibility related to writing prompts (Proximity, Sentence Starter, Attempt independently)
Rubric-based checklist
Target specific number of details and focus on organization with post-its
Accept late work/homework without penalty
Previewing material (access to PowerPoint slides, novels, syllabus, study guides when available)
SOCIAL/EMOTIONAL
Children's books addressing presenting problem
Student jots down presenting problem and erase when it goes away
Meet with guidance counselor
Student jots down presenting problem and erase when it goes away

Attendance plan
Utilize nurse during episodes of presenting problem
Provide short breaks
Attendance plan
Communication with parents
Assign "jobs" to reduce symptoms
Counseling check-ins
Praise whenever possible
ATTENTION/FOCUS
Seat student near front of room
Preferential seating
Monitor on-task performance
Arrange private signal to cue student to off-task behavior

Establish and maintain eye contact when giving oral directions
Stand in proximity to student to focus attention
Provide short breaks when refocusing is needed
Use study carrel
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Refocusing and redirection
Behavior/time management system
Group directions 1 step at a time
Assign "jobs" to reduce symptoms
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance

Extended time on assignments/assessments
Provide assessments in a small group setting
Provide buddy system
Establish and maintain eye contact when giving oral directions
Permit the use of headphones while working
SCHOOL REFUSAL/ELEVATED ABSENTEEISM
Attendance plan
GIFTED AND TALENTED STUDENTS
CURRICULUM
Acceleration
Compacting
Telescoping
Advanced Placement Courses
INSTRUCTION

Grouping
Independent Study
Differentiated Conferencing
Project-Based Learning
Competitions
Cluster Grouping Model with Flexible Grouping
Differentiated Instruction
Summer Work
Parent Communication

WESTFIELD PUBLIC SCHOOLS
Westfield, New Jersey

Office of Instruction

Course of Study

COMPUTER-AIDED DESIGN

School .....Westfield High School
Department.....Practical Arts
Length of Course.....Half Year
Credits 2.5
Grade Level(s) 9-12
Prerequisite .....None
Date .....October 2021

I. RATIONALE, DESCRIPTION AND PURPOSE

Computer-Aided Design (CAD) is a half-year practical arts elective course open to freshmen, sophomores, juniors and seniors who wish to draw digitally in two and three dimensions. CAD can be taken on its own, or as a prerequisite for Engineering & Design (required starting in the 2022-23 school year). An important and powerful tool for designers, CAD enables one to digitally manifest an idea. These digital documents can be presented to others to showcase a scaled model of an idea, and they can also be exported into a file format that can be 3-D printed or laser cut. CAD is the crucial middle step between idea development and physical prototype.

In this course, students will learn how to use the basic tools of a CAD program, such as Onshape, as a way to prototype in the context of Design Thinking, which guides students to design using empathy, definition, ideation, prototyping, and testing. Students will apply their skills to create digital versions of actual or imagined products. As students progress through the course, designs will become more complex, involving multiple parts, assemblies, and motion. Teamwork is a necessary component for drawing highly complex products, and it allows students to model the real-world practice of outsourcing.

CAD courses are offered in many high schools throughout the state. A CAD course in Westfield High School offers students an opportunity to learn the foundational skills necessary for designing useful products. By the end of the course, students will create files ready for a patent examiner as well as for manufacturing. The course gives students of all grade and skill levels the chance to translate their creative ideas into concrete plans.

II. OBJECTIVES

The following objectives are aligned with the New Jersey Student Learning Standards for: Technology, 21st Century Life and Careers, Computer Science/Design Thinking, Career Ready Practices, English Language Arts, and the New Jersey Competencies for Social and Emotional Learning.

A. Develop the skills to draw an object two-dimensionally using a CAD program
NJ Student Learning Standards for Technology 8.1
NJ Student Learning Standards for 21st Century Life and Careers 9.3.12.AC-DES.6
NJ Career Ready Practices CRP8
NJ Student Learning Standards for English Language Arts NJSLSA.SL2, RST.11-12.4, RST.11-12.7
New Jersey Competencies for SEL: Relationship Skills

B. Develop the skills to draw an object three-dimensionally using a CAD program
NJ Student Learning Standards for Technology 8.1
NJ Student Learning Standards for 21st Century Life and Careers 9.3.12.AC-DES.6
NJ Career Ready Practices CRP8
NJ Student Learning Standards for English Language Arts NJSLSA.SL2, RST.11-12.4, RST.11-12.7
New Jersey Competencies for SEL: Relationship Skills

C. Assemble multiple parts in CAD and animate their realistic movement
NJ Student Learning Standards for Technology 8.1
NJ Student Learning Standards for 21st Century Life and Careers 9.3.12.AC-DES.6, 9.3.ST-SM.2
NJ Career Ready Practices CRP8
NJ Student Learning Standards for English Language Arts NJSLSA.SL2, RST.11-12.4, RST.11-12.7
New Jersey Competencies for SEL: Relationship Skills

D. Develop the ability to identify product flaws, conduct research, and brainstorm ideas
NJ Student Learning Standards for Technology 8.1, 8.2
NJ Student Learning Standards for Computer Science and Design Thinking 8.2.12.ED1, 8.2.12.ED.2, 8.2.12.ED.5, 8.2.12.ITH.2, 8.2.12.NT.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.12.AC-DES.6, 9.3.ST-ET.1, 9.3.ST-ET.4, 9.3.ST-SM.2
NJ Career Ready Practices CRP4, CRP6, CRP7, CRP8
NJ Student Learning Standards for English Language Arts NJSLSA.SL4, RST.11-12.7
New Jersey Competencies for SEL: Responsible Decision-Making

E. Communicate with and learn from others in exploring solutions
NJ Student Learning Standards for Technology 8.1
NJ Student Learning Standards for Computer Science and Design Thinking 8.2.12.NT.1
NJ Career Ready Practices CRP1, CRP4
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Self-Awareness, Social Awareness, Relationship Skills

F. Share ideas, feedback, solutions and successes with others
NJ Student Learning Standards for Technology 8.1
NJ Student Learning Standards for Computer Science and Design Thinking 8.2.12.NT.1
NJ Career Ready Practices CRP1, CRP4
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Self-Awareness, Social Awareness, Relationship Skills

G. Practice both hands-on experimentation and simulations to further understand a product
NJ Student Learning Standards for Technology 8.1, 8.2
NJ Student Learning Standards for Computer Science and Design Thinking 8.2.12.ED1, 8.2.12.ED.5
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Career Ready Practices CRP7, CRP8
New Jersey Competencies for SEL: Responsible Decision-Making

H. Collaborate with peers through student partnerships
NJ Career Ready Practices CRP1, CRP4
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Self-Awareness, Social Awareness, Relationship Skills

III. CONTENT, SCOPE AND SEQUENCE

A. Introduction to CAD (~1 week)
1. Class norms
2. Three-dimensional objects
   a. Planes
   b. Views
   c. Orthographic projection
   d. Dimensions

B. CAD Basics (~8 weeks)
1. Workspace navigation
   a. Sketch planes
   b. Features and parts
   c. Mass properties
   d. Drawing tools
   e. Workspace units
   f. Part Studio, Assembly, and Drawing tabs
2. Two-dimensional drawing
   a. Sketch tools: Line, Arc, Rectangle, Circle, Polygon, Spline
   b. Dimensions
   c. Constraints
   d. Patterns
3. Three-dimensional object creation
   a. Basic tools: Extrude, Revolve, Sweep, Loft
   b. Features: Fillet, Chamfer, Draft, Rib, Shell, Hole, Pattern, Mirror
   c. Additional tools: Offset Plane, Offset Surface, Helix, Gear
   d. Part List: Rename, Assign Material, Edit Appearance
   e. Exportation
4. Assembly
   a. Importation
   b. Mate tools
   c. Animation
   d. Offsets and Limits
5. Drawing Exportation
   a. Views
   b. Dimensions
   c. Notes
   d. Drawing information
   e. Cutaways

C. CAD Projects (~9 weeks)
    1. Object replication
        a. Accurate dimensions
        b. Shape, color, material of each part
        c. Part connection and motion
    2. Object redesign
        a. Flaw identification
        b. New dimensions, shapes, parts
        c. Colors and materials
    3. Object creation
        a. Need identification
        b. Dimensions, shapes, parts, motion, materials
    4. Teamwork
        a. Personal strength identification - skills
        b. Division of labor
        c. Troubleshooting
        d. Proper dimensions and scale

IV. INSTRUCTIONAL TECHNIQUES

Teachers employ a variety of teaching methodologies and instructional approaches to accommodate differences in readiness levels, learning styles and the diversity of learners. In order to differentiate instruction based upon student readiness, the teacher will vary the pace, complexity and depth of instruction. Techniques include, but are not limited to:

A. Demonstration/modeling
B. Teacher-directed, whole-group instruction
C. Discussion
D. Reading
E. Hands-on activities: small, collaborative groups & individual work
F. Problem-solving
G. Feedback
H. Simulation
I. Video with corresponding activities
J. Projects and student-generated presentations
K. Flexible grouping
L. Use of technology
M. For strategies to differentiate for special education students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans, please consult the Accommodations and Modifications appendix in the appendices section of this document.

V. EVALUATION

Multiple techniques are employed to measure and assess student performance in this hands-on, creation-based course. Evaluation tools include, but are not limited to, the following:

A. Exercises and projects
B. Evaluation of project work
C. Presentations
D. Self- and peer critiques.

VI. PROFESSIONAL DEVELOPMENT

The following recommended activities support the curriculum and provide opportunities for the teacher's continued professional development:

A. Professional development within district
B. Additional professional development outside district, including workshops and courses
C. State and national conferences
D. Visiting and/or networking with colleagues in New Jersey schools
E. Professional organizations.

APPENDIX I

New Jersey Student Learning Standards For Technology

NJSLS 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

STANDARD 8.2 Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.

The entire standards document may be viewed at https://www.nj.gov/education/aps/cccs/tech/

APPENDIX II

New Jersey Student Learning Standards for Computer Science and Design Thinking

8.2.12.ED.1: Use research to design and create a product or system that addresses a problem and make modifications based on input from potential consumers.

8.2.12.ED.2: Create scaled engineering drawings for a new product or system and make modification to increase optimization based on feedback.

8.2.12.ED.5: Evaluate the effectiveness of a product or system based on factors that are related to its requirements, specifications, and constraints (e.g., safety, reliability, economic considerations, quality control, environmental concerns, manufacturability, maintenance and repair, ergonomics).

8.2.12.ITH.2: Propose an innovation to meet future demands supported by an analysis of the potential costs, benefits, trade-offs, and risks related to the use of the innovation.

8.2.12.NT.1: Explain how different groups can contribute to the overall design of a product.

8.2.12.NT.2: Redesign an existing product to improve form or function.

The entire standards document may be viewed at https://www.nj.gov/education/cccs/2020/2020%20NJSLS-CSDT.pdf

APPENDIX III

New Jersey Student Learning Standards for 21st Century Life and Careers

Pathway: Design/Pre-construction (AC-DES)

9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.

Pathway: Engineering & Technology Career Pathway (ST-ET)

9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.

9.3.ST-ET.4 Apply the elements of the design process.

Pathway: Science & Mathematics Career Pathway (ST-SM)

9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2014/career/93.pdf

APPENDIX IV

New Jersey Career Ready Practices

CRP1. Act as a responsible and contributing citizen and employee.

CRP4. Communicate clearly and effectively and with reason.

CRP6. Demonstrate creativity and innovation.

CRP7. Employ valid and reliable research strategies.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf

APPENDIX V

New Jersey Student Learning Standards for English Language Arts

Anchor Standards for Speaking and Listening

NJSLSA.SL1. 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.

NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

*The entire standards document may be viewed at **https://www.state.nj.us/education/cccs/2016/ela/g0910.pdf***

Progress Indicators for Reading Science and Technical Subjects

RST.11-12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.

RST.11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2016/ela/CompanionG1112.pdf

APPENDIX VI

New Jersey Competencies for Social and Emotional Learning

Social and emotional learning (SEL) refers to the process by which children and adults acquire and effectively apply the knowledge, attitudes and skills necessary to do the following: understand and manage emotions; set and achieve positive goals; feel and show empathy for others; and make responsible decisions. Students in SEL programs are more likely to attend school and receive better grades, and are less likely to have conduct problems. Successful infusion of SEL can result in positive behaviors, increased academic success, and caring communities.

The New Jersey Department of Education has been promoting social and emotional learning to enhance the building of positive school climates and the healthy development of young people.

The entire competency document may be viewed at https://www.state.nj.us/education/students/safety/sandp/sel/.

APPENDIX VII

New Jersey Student Learning Standards - Social Studies Practices

Social Studies practices are the skills that individuals who work in the field of social sciences use on a regular basis. Because the purpose of social studies is to provide students with the knowledge, skills and attitudes they need to be active, informed, responsible individuals and contributing members of their communities, many of the practices can be applied to daily life.

Practice	Description
Developing Questions and Planning Inquiries	Developing insightful questions and planning effective inquiry involves identifying the purposes of different questions to understand the human experience, which requires addressing real world issues. Inquiries incorporating questions from various social science disciplines build understanding of the past, present and future; these inquiries investigate the complexity and diversity of individuals, groups, and societies.
Gathering and Evaluating Sources	Finding, evaluating and organizing information and evidence from multiple sources and perspectives are the core of inquiry. Effective practice requires evaluating the credibility of primary and secondary sources, assessing the reliability of information, analyzing the context of information, and corroborating evidence across sources. Discerning opinion from fact and interpreting the significance of information requires thinking critically about ourselves and the world.

Seeking Diverse Perspectives	Making sense of research findings requires thinking about what information is included, whether the information answers the question, and what may be missing, often resulting in the need to complete additional research. Developing an understanding of our own and others' perspectives builds understanding about the complexity of each person and the diversity in the world. Exploring diverse perspectives assists students in empathizing with other individuals and groups of people; quantitative and qualitative information provides insights into specific people, places, and events, as well as national, regional, and global trends.
Developing Claims and Using Evidence	Developing claims requires careful consideration of evidence, logical organization of information, self-awareness about biases, application of analysis skills, and a willingness to revise conclusions based on the strength of evidence. Using evidence responsibly means developing claims based on factual evidence, valid reasoning, and a respect for human rights.
Presenting Arguments and Explanations	Using a variety of formats designed for a purpose and an authentic audience forms the basis for clear communication. Strong arguments contain claims with organized evidence and valid reasoning that respects the diversity of the world and the dignity of each person. Writing findings and engaging in civil discussion with an audience provides a key step in the process of thinking critically about conclusions and continued inquiry.
Engaging in Civil Discourse and Critiquing Conclusions	Assessing and refining conclusions through metacognition, further research, and deliberative discussions with diverse perspectives sharpens the conclusions and improves thinking as a vital part of the process of sense making. Responsible citizenship requires respectfully listening to and critiquing claims by analyzing the evidence and reasoning supporting them. Listening to and understanding contrary views can deepen learning and lay the groundwork for seeking consensus.
Taking Informed Action	After thoroughly investigating questions, taking informed action means building consensus about possible actions and planning strategically to implement change. Democracy requires citizens to practice discussion, negotiation, coalition-seeking, and peaceful conflict resolution. When appropriate, taking informed action involves creating and/or implementing action plans designed to solve problems and create positive change.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2020/2020%20NJSLS-SS.pdf

APPENDIX VIII

Integrated Accommodations and Modifications for Special Education Students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans

Teachers and administrators can consult these accommodations and modifications in order to:

- implement additional ideas to meet the needs of the students in these subgroups
- meet the minimum number of interventions before referring to I&RS
- include them in the Instructional Techniques section of the Curriculum Revision/Writing template
- assist any students or whole group that might benefit from them.

Special Education
ENVIRONMENT
Preferential Seating
Adjust time for completion of assignments when needed
Adjust length of assignments when needed
Allow additional oral response time
Break tasks (including long range assignments) into manageable steps
Provide copies of notes
Reduce the number of problems on a page

Provide assistance with organizing a notebook or folder
Repeat/ clarify directions when needed
Make frequent checks for work/assignment completion.
Modify homework and class work if needed
Extend time on tests/quizzes
Provide study guides for tests
Provide oral component when needed
Modify format when needed- (ex: limit choices, word bank, shortened written responses)
Allow a private workspace when needed (study carrel, separate desk, desk away from the group)
Allow opportunities for movement (e.g., help with supplies, change to different part of room to work, carry messages to office)
Assist the student to keep only the materials required for the lesson on the desktop
Provide a seat away from distractions (or noise)
MATERIAL/BOOKS/EQUIPMENT

Allow use of a calculator
Allow use of a number line
Allow use of counting chips
Modify worksheets
Provide visual aids (pictures, flash cards, etc.)
Provide auditory aids (cues, tapes, etc.)
Use manipulatives
Provide hands-on learning activities
INSTRUCTIONAL STRATEGIES
Check work in progress
Provide immediate feedback
Provide extra drill/practice
Provide review sessions

Provide models
Highlight key words
Provide pictures/charts
Use mnemonics
Support auditory presentations with visuals
Have student restate information
Provide lecture notes/outline
Give oral reminders
Give visual reminders
Review directions
Use graphic organizers
Assign partners
Repeat instructions

Display key vocabulary
Monitor assignments
Provide visual reinforcement
Provide concrete examples
Use vocabulary word bank
ORGANIZATION
Post assignments
Provide a desktop list of tasks

Give one paper at a time
Provide extra space for work
List sequential steps
Provide folders to hold work
Post routines

Use pencil box for tools
Reorganize poorly designed worksheets to create simple, easy-to-follow layouts and formats
Give advance warning when transition is going to take place
Provide structure for success
Provide a contract, timer, etc., for self-monitoring
Give the student a prompt when he/she is off task (e.g., move close to the student, speak to the student, etc.)
TEST/QUIZZES/TIME
Give prior notice of test
Provide oral testing
Provide extra time for written work
Provide modified tests
Rephrase test questions/directions
Preview test procedures

Provide shortened tasks
Provide extra time for tests
Read test to student
Provide test study guides
Limit multiple choice options
Provide extra time for projects
Pace long term projects
Simplify test wording
Provide hands-on projects
Allow extra response time

ENGLISH LANGUAGE LEARNERS
GRADING

Standard Grades vs. Pass/Fail
CONTINUUM OF ENGLISH LANGUAGE DEVELOPMENT
Pre K-K WIDA CAN DO Descriptors
Grades 1-2 WIDA CAN DO Descriptors
Grades 3-5 WIDA CAN DO Descriptors
Grades 6-8 WIDA CAN DO Descriptors
Grades 9-12 WIDA CAN DO Descriptors
SIOP COMPONENTS AND FEATURES
PREPARATION
Write content objectives clearly for students
Write language objectives clearly for students
Choose content concepts appropriate for age and educational background levels of students
Identify supplementary materials to use
Adapt content to all levels of students proficiency
Plan meaningful activities that integrate lesson concepts with language practices opportunities for reading, writing, listening, and/or speaking
BUILDING BACKGROUND

Explicitly link concepts to students' backgrounds and experiences
Explicitly link past learning and new concepts
Emphasize key vocabulary for students
COMPREHENSIBLE INPUT
Use speech appropriate for students' proficiency level
Explain academics tasks clearly
Use a variety of techniques to make content concepts clear (e.g. modeling, visuals, hands-on activities, demonstrations, gestures, body language)
STRATEGIES
Provide ample opportunities for students to use strategies (e.g. problem solving, predicting, organizing, summarizing, categorizing, evaluating, self-monitoring)
Use scaffolding techniques consistently throughout lesson
Use a variety of question types including those that promote higher-order thinking skills throughout the lesson
INTERACTION
Provide frequent opportunities for interaction and discussion between teacher/students and among students about lessons concepts, and encourage elaborated responses
Use group configurations that support language and content objectives of the lesson
Provide sufficient wait time for student responses consistently

Give ample opportunities for students to clarify key concepts in LI as needed with aide, peer, or LI text
PRACTICE/APPLICATION
Provide hands-on materials and/ manipulatives for students to practice using new content knowledge
Provide activities for students to apply content and language knowledge in the classroom
Provide activities that integrate all language skills
LESSON DELIVERY
Support content objectives clearly
Support language objectives clearly
Engage students approximately 90-100% of the period
Pace the lesson appropriately to the students' ability level
REVIEW/EVALUATION
Give a comprehensive review of key vocabulary
Give a comprehensive review of key content concepts
Provide feedback to students regularly on their output
Conduct assessments of students comprehension and learning throughout lesson and all lesson objectives

STUDENTS AT RISK OF SCHOOL FAILURE (I&RS RESOURCE MANUAL)
ACADEMICS
Provide necessary services (Lit Support, Math Support, OT, PT, speech, etc.)
Literacy Support Interventions (Appendix B of IS forms)
Prompt before directions/questions are verbalized with visual cue between teacher and student
Task list laminated and placed on desk for classroom routines and organization
Preferential seating
Provide structure and positive reinforcements
Sustained working time connected to reward (If/Then statement)
Frequently check for understanding
Graphic organizers
Tracker

Slant board
Access to accurate notes
Additional time to complete tasks/long-term projects with adjusted due dates
Limit number of items student is expected to learn at one time
Break down tasks into manageable units
Directions repeated, clarified, or reworded
Frequent breaks during class
Allow verbal rather than written responses
Modify curriculum content based on student's ability level
Reduce readability level of materials
Allow typed rather than handwritten responses
Use of calculator
Use of a math grid

Provide models/organizers to break down independent tasks
Access to electronic text (e.g. Downloaded books)
Provide books on tape, CD, or read aloud computer software
Provide opportunities for using a Chromebook as well as assistive technologies
Provide buddy system
Adjust activity, length of assignment, and/or number of problems, including homework
Provide assessments in a small group setting
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance
Communication with parents
Gradual release of responsibility related to writing prompts (Proximity, Sentence Starter, Attempt independently)
Rubric-based checklist
Target specific number of details and focus on organization with post-its
Accept late work/homework without penalty

Previewing material (access to PowerPoint slides, novels, syllabus, study guides when available)
SOCIAL/EMOTIONAL
Children's books addressing presenting problem
Student jots down presenting problem and erase when it goes away
Meet with guidance counselor
Student jots down presenting problem and erase when it goes away
Attendance plan
Utilize nurse during episodes of presenting problem
Provide short breaks
Attendance plan
Communication with parents
Assign "jobs" to reduce symptoms
Counseling check-ins

Praise whenever possible
ATTENTION/FOCUS
Seat student near front of room
Preferential seating
Monitor on-task performance
Arrange private signal to cue student to off-task behavior
Establish and maintain eye contact when giving oral directions
Stand in proximity to student to focus attention
Provide short breaks when refocusing is needed
Use study carrel
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Refocusing and redirection

Behavior/time management system
Group directions 1 step at a time
Assign "jobs" to reduce symptoms
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance
Extended time on assignments/assessments
Provide assessments in a small group setting
Provide buddy system
Establish and maintain eye contact when giving oral directions
Permit the use of headphones while working
SCHOOL REFUSAL/ELEVATED ABSENTEEISM
Attendance plan
GIFTED AND TALENTED STUDENTS

CURRICULUM
Acceleration
Compacting
Telescoping
Advanced Placement Courses
INSTRUCTION
Grouping
Independent Study
Differentiated Conferencing
Project-Based Learning
Competitions
Cluster Grouping Model with Flexible Grouping
Differentiated Instruction

Summer Work
Parent Communication

WESTFIELD PUBLIC SCHOOLS
Westfield, New Jersey

Office of Instruction

Course of Study

INTRODUCTION TO ARCHITECTURE

School .....Westfield High School
Department.....Practical Arts
Length of Course..... Full Year
Credits 5
Grade Level(s) 9-12
Prerequisite .....None
Date .....

I. RATIONALE, DESCRIPTION AND PURPOSE

Introduction to Architecture is a full-year practical arts course open to freshmen, sophomores, juniors and seniors who wish to explore the world of architectural design. The course will serve as a foundational course designed to introduce students to methods of solving architectural problems. Students will engage in active problem solving and learn how to create unique and innovative spaces to meet specific client needs. This course can be taken on its own or can precede Architectural Design II. This course is intended to expose students to real-world projects and expectations, which in the process will build their perseverance, design development, and collaboration & communication skills.

Architecture is a common STEM course at many schools in the area. Introduction to Architecture offers students a hands-on approach to learning and is a robust addition to the growing STEM movement in our schools. Instruction in this type of learning atmosphere is highly personalized for each student by conducting individual critiques with each student and allowing for peer review. Constructive feedback of this type will help them hone their communication and collaboration skills and help create a positive classroom environment.

Students will develop their skills to think up, design, and sell unique and enticing spaces. Presentation and documentation of their designs and processes will be created using computer software such as Autodesk REVIT, further exposing them to real-world applications used at the collegiate level and in the architecture industry. Model-making will also be utilized to further enhance students' learning experience.

Students explore a world in which they can develop their own solutions and ideas for an architectural problem. Giving every student the same client requirements and seeing how they all approach that problem in a different way is a substantial learning opportunity. It shows students that there isn't one answer or "best" way to approach a problem. This type of mindset will allow students to show growth in their ability to innovate, problem-solve, persevere and

create. In essence, the course gives students of all grade and skill levels the chance to dive into hands-on activities while at the same time helping them learn how to learn.

II. OBJECTIVES

The following objectives are aligned with the New Jersey Student Learning Standards for: Technology, 21st Century Life and Careers, Science, Career Ready Practices, English Language Arts, and the New Jersey Competencies for Social and Emotional Learning.

A. Identify and practice the norms and habits of mind of an architect.
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Career Ready Practices CRP6, CRP8
New Jersey Competencies for SEL: Responsible Decision-Making
NJ Student Learning Standards for English Language Arts: NJSLSA.W5

B. Develop the skills to draft one's own design work through documentation
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
NJ Student Learning Standards for English Language Arts: NJSLSA.W5
New Jersey Competencies for SEL: Self-Awareness, Self-Management, Responsible Decision-Making

C. Develop the ability to ideate, create and construct
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
New Jersey Competencies for SEL: Self-Awareness, Self-Management, Responsible Decision-Making

D. Develop the ability to problem-solve, experiment and navigate ambiguity
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
New Jersey Competencies for SEL: Self-Awareness, Self-Management, Responsible Decision-Making

E. Communicate with and learn from others in exploring solutions
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Career Ready Practices CRP4, CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Self-Awareness, Social Awareness, Relationship Skills

F. Share ideas, feedback, solutions and successes with others
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Career Ready Practices CRP4, CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Social Awareness, Relationship Skills

G. Practice and learn from the act of deconstructing
NJ Student Learning Standards for Technology 8.2
NJ Student Learning Standards for 21st Century Life and Careers 9.3.ST-ET
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CI 1-3
NJ Student Learning Standards for 21st Century Life and Careers 9.4.CT 1-3
NJ Career Ready Practices CRP6, CRP8
NJ Student Learning Standards for Science: HS-ETS1-2
New Jersey Competencies for SEL: Responsible Self-Awareness, Responsible Decision-Making

H. Collaborate with peers through student partnerships
NJ Career Ready Practice CRP4
NJ Student Learning Standards for English Language Arts: NJSLSA.SL1
New Jersey Competencies for SEL: Social Awareness, Relationship Skills

III. CONTENT, SCOPE AND SEQUENCE

Note: Projects, drawings and models may be used throughout each unit

A. Introduction to Architectural History: The Fundamentals of architecture (~2 weeks)
1. Early architecture
2. Rome & Greece

B. Introduction to architecture standards (~4 weeks)
1. Structure: columns, beams, cross bracing
2. Walls
3. Doors
4. Windows
5. Furniture & lighting
6. Plumbing fixtures
7. Standards for room layouts
    a. Bathroom, kitchens, bedrooms, etc.
8. Typical heights, width, depths for architectural elements

C. Measuring, Surveying & Architectural scale (~3 weeks)
1. Reading a 1/16” ruler
2. How to calculate square footages
3. How to properly read & notate feet and inches on a drawing
    a. 1’-6” (example)
4. How to conduct a survey
    a. Principles of sketching/ reviewing an existing space on paper
    b. Use of measuring tape
    c. Principles of notation
    d. Accuracy

5. How to read an architectural scale
    a. Reading and creating drawings to scale

D. Introduction to concept development (~1 week)
    a. Introduction to project and client
    b. Creation of a "big idea" or "concept" for the space
    c. Model making

E. Introduction to Space Planning & Schematic Design (~ 2 weeks)
1. Interpretation and review of project requirements
2. Application of square footages and scale
3. Proper adjacencies
4. Circulation & flow
5. Design iteration
    a. Translation of "big ideas" into one's architecture through schematic design hand sketches
    b. Discussion of informal peer & teacher review/ pin-ups

F. Introduction to Design Development (2 weeks)
1. Application of chosen design and "big idea" to design
2. Use of peer-to-peer review pin-ups for constructive feedback
    a. Use of feedback to move design forward
3. Development of 3D views
4. Furniture, fixtures, and equipment (FF&E) selections and digital presentations

G. Introduction to REVIT (~9 weeks)
1. Introduction to software (~5 weeks)
    a. Model space
    b. Save/ save as
    c. Modeling vs. drawing
    d. Sheets for views & scale
    e. Dimensions & annotations
    f. Drawing of walls, doors, windows, structure & custom furniture
    g. Families
    h. Renderings
2. Project #1 (~ 4 weeks)

Use of project as an opportunity to apply REVIT software as it is taught.
Residential project (~500 square feet)

Project may be a renovation of an existing space
    a. Introduction to client & project requirements
    b. Concept development (see part F)
    c. Space planning & Schematic design (see part G)
    d. Design Development
    e. 3D modeling

H. Project #2 (~ 6 weeks)
    1. Residential project (~750-1000 sq feet)
        a. Completion in REVIT
    2. Introduction to client & project requirements
    3. Concept development & schematic design
    4. Mid-critique presentation for constructive feedback
    5. Design Development
    6. Furniture, fixtures, and equipment (FF&E) selections
    7. Modeling of building (~ 2 weeks)
        a. Foam core, matte board, cardboard, and/or balsa wood
        b. Build a scale foam core/ matte board model of their design
        c. Use model for final presentation to client
    8. Final Critique

I. Introduction to Construction Documentation (~ 3 weeks)
    1. Development of a set of construction drawings:
        a. Floor plans
        b. Elevations/ Sections
        c. Axonometric
    2. Application of proper architectural standards to drawings

J. Final project/ Project #3 (~ 8 weeks)
    1. Residential project (~1200-1500 square feet)
        a. Completion in REVIT
    2. Introduction to client & project requirements
    3. Concept development & schematic design
    4. Mid-critique presentation for constructive feedback
    5. Design Development
    6. Construction Documentation
    7. Furniture, fixtures, and equipment (FF&E) selections
    8. Model building (~ 2 weeks)
        a. Foam core, matte board, cardboard, and/or balsa wood
        b. Building of a scale foam core/ matte board model of student's design
        c. Use of model for final presentation to client
    9. Final Critique

IV. INSTRUCTIONAL TECHNIQUES

Teachers employ a variety of teaching methodologies and instructional approaches to accommodate differences in readiness levels, learning styles and the diversity of learners. In order to differentiate instruction based upon student readiness, the teacher will vary the pace, complexity and depth of instruction. Techniques include, but are not limited to:

A. Demonstration/modeling
B. Teacher-directed, whole-group instruction
C. Discussion
D. Reading

E. Hands-on activities: small, collaborative groups & individual work
F. Experimentation, problem-solving
G. Feedback
H. Video with corresponding activities
I. Projects and student-generated presentations
J. Flexible grouping
K. Use of technology and computer software
L. In-class presentations from professionals in the industry
M. For strategies to differentiate for special education students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans, please consult the Accommodations and Modifications appendix in the appendices section of this document.

V. EVALUATI ON

Multiple techniques are employed to measure and assess student performance in this hands-on, creation-based course. Evaluation tools include, but are not limited to, the following:

A. In-class activities
B. Digital portfolios and presentations
C. Evaluation of project work
D. Self- and peer review
E. Oral Presentations

VI. PROFESSIONAL DEVELOPMENT

The following recommended activities support the curriculum and provide opportunities for the teacher's continued professional development:

A. Professional development within district
B. Additional professional development outside district, including workshops and courses
C. State and national conferences
D. Visiting and/or networking with colleagues in New Jersey schools
E. Professional organizations.

APPENDIX I

New Jersey Student Learning Standards For Technology

NJSLS 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

STANDARD 8.2 Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.

The entire standards document may be viewed at https://www.nj.gov/education/aps/cccs/tech/

APPENDIX II

New Jersey Student Learning Standards for 21st Century Life and Careers

Career Cluster® : Architecture & Construction (AC)

9.3.12.AC.1 Use vocabulary, symbols and formulas common to architecture and construction.

9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.

9.3.12.AC.3 Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
9.3.12.AC.4 Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy.
9.3.12.AC.5 Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.
9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC.7 Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways.

Pathway: Design/Pre-construction (AC-DES)

9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.
9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.

9.3.12.AC-DES.3 Describe the requirements of the integral systems that impact the design of buildings.
9.3.12.AC-DES.4 Apply building codes, laws and rules in the project design.
9.3.12.AC-DES.5 Identify the diversity of needs, values and social patterns in project design, including accessibility standards. 9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
9.3.12.AC-DES.7 Employ appropriate representational media to communicate concepts and project design.
9.3.12.AC-DES.8 Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.

Career Cluster® : Science, Technology, Engineering & Mathematics (ST)

9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.

9.3.ST.3 Describe and follow safety, health and environmental standards related to science, technology, engineering and mathematics (STEM) workplaces.

Pathway: Engineering & Technology Career Pathway (ST-ET)

9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.

9.3.ST-ET.2 Display and communicate STEM information.

9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.

9.3.ST-ET.4 Apply the elements of the design process.

9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.

Pathway: Science & Mathematics Career Pathway (ST-SM)

9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities.

9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.

9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.

Design Thinking Standards: Engineering Design

8.2.12.ED.1: Use research to design and create a product or system that addresses a problem and make modifications based on input from potential consumers.

8.2.12.ED.2: Create scaled engineering drawings for a new product or system and make modification to increase optimization based on feedback.

8.2.12.ED.5: Evaluate the effectiveness of a product or system based on factors that are related to its requirements, specifications, and constraints (e.g., safety, reliability, economic considerations, quality control, environmental concerns, manufacturability, maintenance and repair, ergonomics)

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2014/career/93.pdf

APPENDIX III

New Jersey Student Learning Standards for Science / Next Generation Science Standards

Engineering Design

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

HS-ETS1-4. Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

The entire standards document may be viewed at https://www.nj.gov/education/cccs/2016/science/HS-ETS1.pdf

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2016/science/HS-ESS3.pdf

APPENDIX IV

New Jersey Career Ready Practices

CRP1. Act as a responsible and contributing citizen and employee.

CRP4. Communicate clearly and effectively and with reason.

CRP5. Consider the environmental, social and economic impacts of decisions.

CRP6. Demonstrate creativity and innovation.

CRP7. Employ valid and reliable research strategies.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf

APPENDIX V

New Jersey Student Learning Standards for English Language Arts

Anchor Standards for Speaking and Listening

NJSLSA.SL1. 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.

NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

NJSLSA.SL3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

NJSLSA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2016/ela/g0910.pdf

Progress Indicators for Reading Science and Technical Subjects

RST.11-12.1. Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.

RST.11-12.2. Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

RST.11-12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

RST.11-12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.

RST.11-12.5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

RST.11-12.6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.
Integration of Knowledge and Ideas

RST.11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

RST.11-12.8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

RST.11-12.9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

RST.11-12.10. By the end of grade 12, read and comprehend science/technical texts in the grades 11-CCR text complexity band independently and proficiently.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2016/ela/CompanionG1112.pdf

APPENDIX VI

New Jersey Competencies for Social and Emotional Learning

Social and emotional learning (SEL) refers to the process by which children and adults acquire and effectively apply the knowledge, attitudes and skills necessary to do the following: understand and manage emotions; set and achieve positive goals; feel and show empathy for others; and make responsible decisions. Students in SEL programs are more likely to attend school and receive better grades, and are less likely to have conduct problems. Successful infusion of SEL can result in positive behaviors, increased academic success, and caring communities.

The New Jersey Department of Education has been promoting social and emotional learning to enhance the building of positive school climates and the healthy development of young people.

The entire competency document may be viewed at https://www.state.nj.us/education/students/safety/sandp/sel/

APPENDIX VII

New Jersey Student Learning Standards - Social Studies Practices

Social Studies practices are the skills that individuals who work in the field of social sciences use on a regular basis. Because the purpose of social studies is to provide students with the knowledge, skills and attitudes they need to be active, informed, responsible individuals and contributing members of their communities, many of the practices can be applied to daily life.

Practice	Description
Developing Questions and Planning Inquiries	Developing insightful questions and planning effective inquiry involves identifying the purposes of different questions to understand the human experience, which requires addressing real world issues. Inquiries incorporating questions from various social science disciplines build understanding of the past, present and future; these inquiries investigate the complexity and diversity of individuals, groups, and societies.
Gathering and Evaluating Sources	Finding, evaluating and organizing information and evidence from multiple sources and perspectives are the core of inquiry. Effective practice requires evaluating the credibility of primary and secondary sources, assessing the reliability of information, analyzing the context of information, and corroborating evidence across sources. Discerning opinion from fact and interpreting the significance of information requires thinking critically about ourselves and the world.
Seeking Diverse Perspectives	Making sense of research findings requires thinking about what information is included, whether the information answers the question, and what may be missing, often resulting in the need to complete additional research. Developing an understanding of our own and others' perspectives builds understanding about the complexity of each person and the diversity in the world. Exploring diverse perspectives assists students in empathizing with other individuals and groups of people; quantitative and qualitative information provides insights into specific people, places, and events, as well as national, regional, and global trends.
Developing Claims and Using Evidence	Developing claims requires careful consideration of evidence, logical organization of information, self-awareness about biases, application of analysis skills, and a willingness to revise conclusions based on the strength of evidence. Using evidence responsibly means developing claims based on factual evidence, valid reasoning, and a respect for human rights.
Presenting Arguments and Explanations	Using a variety of formats designed for a purpose and an authentic audience forms the basis for clear communication. Strong arguments contain claims with organized evidence and valid reasoning that respects the diversity of the world and the dignity of each person. Writing findings and engaging in civil discussion with an audience provides a key step in the process of thinking critically about conclusions and continued inquiry.

Engaging in Civil Discourse and Critiquing Conclusions	Assessing and refining conclusions through metacognition, further research, and deliberative discussions with diverse perspectives sharpens the conclusions and improves thinking as a vital part of the process of sense making. Responsible citizenship requires respectfully listening to and critiquing claims by analyzing the evidence and reasoning supporting them. Listening to and understanding contrary views can deepen learning and lay the groundwork for seeking consensus.
Taking Informed Action	After thoroughly investigating questions, taking informed action means building consensus about possible actions and planning strategically to implement change. Democracy requires citizens to practice discussion, negotiation, coalition-seeking, and peaceful conflict resolution. When appropriate, taking informed action involves creating and/or implementing action plans designed to solve problems and create positive change.

The entire standards document may be viewed at
https://www.state.nj.us/education/cccs/2020/2020%20NJSLS-SS.pdf

APPENDIX VIII

Integrated Accommodations and Modifications for Special Education Students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans

Teachers and administrators can consult these accommodations and modifications in order to:

- implement additional ideas to meet the needs of the students in these subgroups
- meet the minimum number of interventions before referring to I&RS
- include them in the Instructional Techniques section of the Curriculum Revision/Writing template
- assist any students or whole group that might benefit from them.

Special Education
ENVIRONMENT

Preferential Seating
Adjust time for completion of assignments when needed
Adjust length of assignments when needed
Allow additional oral response time
Break tasks (including long range assignments) into manageable steps
Provide copies of notes
Reduce the number of problems on a page
Provide assistance with organizing a notebook or folder
Repeat/ clarify directions when needed
Make frequent checks for work/assignment completion.
Modify homework and class work if needed
Extend time on tests/quizzes
Provide study guides for tests

Provide oral component when needed
Modify format when needed- (ex: limit choices, word bank, shortened written responses)
Allow a private workspace when needed (study carrel, separate desk, desk away from the group)
Allow opportunities for movement (e.g., help with supplies, change to different part of room to work, carry messages to office)
Assist the student to keep only the materials required for the lesson on the desktop
Provide a seat away from distractions (or noise)
MATERIAL/BOOKS/EQUIPMENT
Allow use of a calculator
Allow use of a number line
Allow use of counting chips
Modify worksheets
Provide visual aids (pictures, flash cards, etc.)
Provide auditory aids (cues, tapes, etc.)

Use manipulatives
Provide hands-on learning activities
INSTRUCTIONAL STRATEGIES
Check work in progress
Provide immediate feedback
Provide extra drill/practice
Provide review sessions
Provide models
Highlight key words
Provide pictures/charts
Use mnemonics
Support auditory presentations with visuals
Have student restate information

Provide lecture notes/outline
Give oral reminders
Give visual reminders
Review directions
Use graphic organizers
Assign partners
Repeat instructions
Display key vocabulary
Monitor assignments
Provide visual reinforcement
Provide concrete examples
Use vocabulary word bank
ORGANIZATION

Post assignments
Provide a desktop list of tasks

Give one paper at a time
Provide extra space for work
List sequential steps
Provide folders to hold work
Post routines
Use pencil box for tools
Reorganize poorly designed worksheets to create simple, easy-to-follow layouts and formats
Give advance warning when transition is going to take place
Provide structure for success
Provide a contract, timer, etc., for self-monitoring
Give the student a prompt when he/she is off task (e.g., move close to the student, speak to the student, etc.)

TEST/QUIZZES/TIME
Give prior notice of test
Provide oral testing
Provide extra time for written work
Provide modified tests
Rephrase test questions/directions
Preview test procedures
Provide shortened tasks
Provide extra time for tests
Read test to student
Provide test study guides
Limit multiple choice options
Provide extra time for projects

Pace long term projects
Simplify test wording
Provide hands-on projects
Allow extra response time

ENGLISH LANGUAGE LEARNERS
GRADING
Standard Grades vs. Pass/Fail
CONTINUUM OF ENGLISH LANGUAGE DEVELOPMENT
Pre K-K WIDA CAN DO Descriptors
Grades 1-2 WIDA CAN DO Descriptors
Grades 3-5 WIDA CAN DO Descriptors
Grades 6-8 WIDA CAN DO Descriptors
Grades 9-12 WIDA CAN DO Descriptors
SIOP COMPONENTS AND FEATURES

PREPARATION
Write content objectives clearly for students
Write language objectives clearly for students
Choose content concepts appropriate for age and educational background levels of students
Identify supplementary materials to use
Adapt content to all levels of students proficiency
Plan meaningful activities that integrate lesson concepts with language practices opportunities for reading, writing, listening, and/or speaking
BUILDING BACKGROUND
Explicitly link concepts to students' backgrounds and experiences
Explicitly link past learning and new concepts
Emphasize key vocabulary for students
COMPREHENSIBLE INPUT
Use speech appropriate for students' proficiency level
Explain academics tasks clearly
Use a variety of techniques to make content concepts clear (e.g. modeling, visuals, hands-on activities, demonstrations, gestures, body language)
STRATEGIES

Provide ample opportunities for students to use strategies (e.g. problem solving, predicting, organizing, summarizing, categorizing, evaluating, self-monitoring)
Use scaffolding techniques consistently throughout lesson
Use a variety of question types including those that promote higher-order thinking skills throughout the lesson
INTERACTION
Provide frequent opportunities for interaction and discussion between teacher/students and among students about lessons concepts, and encourage elaborated responses
Use group configurations that support language and content objectives of the lesson
Provide sufficient wait time for student responses consistently
Give ample opportunities for students to clarify key concepts in LI as needed with aide, peer, or LI text
PRACTICE/APPLICATION
Provide hands-on materials and/ manipulatives for students to practice using new content knowledge
Provide activities for students to apply content and language knowledge in the classroom
Provide activities that integrate all language skills
LESSON DELIVERY
Support content objectives clearly

Support language objectives clearly
Engage students approximately 90-100% of the period
Pace the lesson appropriately to the students' ability level
REVIEW/EVALUATION
Give a comprehensive review of key vocabulary
Give a comprehensive review of key content concepts
Provide feedback to students regularly on their output
Conduct assessments of students comprehension and learning throughout lesson and all lesson objectives

STUDENTS AT RISK OF SCHOOL FAILURE (I&RS RESOURCE MANUAL)
ACADEMICS
Provide necessary services (Lit Support, Math Support, OT, PT, speech, etc.)
Literacy Support Interventions (Appendix B of IS forms)
Prompt before directions/questions are verbalized with visual cue between teacher and student

Task list laminated and placed on desk for classroom routines and organization
Preferential seating
Provide structure and positive reinforcements
Sustained working time connected to reward (If/Then statement)
Frequently check for understanding
Graphic organizers
Tracker
Slant board
Access to accurate notes
Additional time to complete tasks/long-term projects with adjusted due dates
Limit number of items student is expected to learn at one time
Break down tasks into manageable units
Directions repeated, clarified, or reworded

Frequent breaks during class
Allow verbal rather than written responses
Modify curriculum content based on student's ability level
Reduce readability level of materials
Allow typed rather than handwritten responses
Use of calculator
Use of a math grid
Provide models/organizers to break down independent tasks
Access to electronic text (e.g. Downloaded books)
Provide books on tape, CD, or read aloud computer software
Provide opportunities for using a Chromebook as well as assistive technologies
Provide buddy system
Adjust activity, length of assignment, and/or number of problems, including homework

Provide assessments in a small group setting
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance
Communication with parents
Gradual release of responsibility related to writing prompts (Proximity, Sentence Starter, Attempt independently)
Rubric-based checklist
Target specific number of details and focus on organization with post-its
Accept late work/homework without penalty
Previewing material (access to PowerPoint slides, novels, syllabus, study guides when available)
SOCIAL/EMOTIONAL
Children's books addressing presenting problem
Student jots down presenting problem and erase when it goes away
Meet with guidance counselor
Student jots down presenting problem and erase when it goes away

Attendance plan
Utilize nurse during episodes of presenting problem
Provide short breaks
Attendance plan
Communication with parents
Assign "jobs" to reduce symptoms
Counseling check-ins
Praise whenever possible
ATTENTION/FOCUS
Seat student near front of room
Preferential seating
Monitor on-task performance
Arrange private signal to cue student to off-task behavior

Establish and maintain eye contact when giving oral directions
Stand in proximity to student to focus attention
Provide short breaks when refocusing is needed
Use study carrel
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Refocusing and redirection
Behavior/time management system
Group directions 1 step at a time
Assign "jobs" to reduce symptoms
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance

Extended time on assignments/assessments
Provide assessments in a small group setting
Provide buddy system
Establish and maintain eye contact when giving oral directions
Permit the use of headphones while working
SCHOOL REFUSAL/ELEVATED ABSENTEEISM
Attendance plan
GIFTED AND TALENTED STUDENTS
CURRICULUM
Acceleration
Compacting
Telescoping
Advanced Placement Courses
INSTRUCTION

Independent Study
Differentiated Conferencing
Project-Based Learning
Competitions
Cluster Grouping Model with Flexible Grouping
Differentiated Instruction
Summer Work
Parent Communication

WESTFIELD PUBLIC SCHOOLS

Westfield, New Jersey

Office of Instruction

Course of Study

WORLD LANGUAGES – ELEMENTARY

Schools..... Elementary Schools
Department..... World Languages
Length of Course..... 18-36 hours
Grade Level.....3-5
Date .....

I. RATIONALE, DESCRIPTION AND PURPOSE

The Westfield Public Schools Department of World Languages seeks to provide a well-articulated program in order to prepare students to become responsible citizens in a multicultural and diverse global society. Language skills and cultural awareness support cognitive development and academic achievement. There are many benefits of learning a second language at the elementary level, including enhanced abilities in problem solving, critical-thinking, and skills addressing all language domains. Early exposure to second language learning also enhances memory, concentration, and promotes open-mindedness. The study of a world language promotes knowledge, understanding and respect for the perspectives, practices, and products of different cultures. Knowing a language other than English enables students to converse in the target language and become familiar with the history, customs, and current issues of the peoples the target language represents. The language skills and cultural awareness that students develop in learning another language are of great value, particularly in education, business, world trade, travel, community and diplomacy.

The primary goal of the elementary world languages program is to develop basic communicative proficiency with an emphasis on oral production through an immersion classroom setting where the target language is spoken most of the time. In third grade, Spanish is offered once a week for thirty minutes each period. In fourth and in fifth grades, Spanish is offered twice a week for thirty minutes each period. This curriculum is designed to build and expand on basic language skills and structures addressing the interpretive, interpersonal and presentational modes. In addition tothe linguistic content, students have the opportunity to experience cultural products through the lens of native speakers of Spanish and the countries they represent.

The content is presented through a recursive approach to challenge students to apply previously learned material. The program also emphasizes an understanding of, and appreciation for the relationship between the Spanish language and the Hispanic cultures.

II. OBJECTIVES

The elementary world languages curriculum is aligned with the NJ Student Learning Standards for World Languages. These objectives also align with NJ Students Learning Standards for Visual and Performing Arts, English Language Arts, Social Studies, Technology, Career Readiness, Life Literacies, and Key Skills.

Students:

A. Interpretive Communication Mode

Identify a few memorized and practiced words contained in oral, viewed, and written chunks of language in culturally authentic materials when supported by visual cues such as pictures and gestures and text support such as bolded words, bulleted lists, and/or captions
New Jersey Student Learning Standards for World Languages 7.1.NL.IPRET.1
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

Respond with physical actions and/or gestures to simple oral directions, commands, and requests
New Jersey Student Learning Standards for World Languages 7.1.NL.IPRET.2
New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills 9.1

Recognize a few common gestures associated with the target culture(s)
New Jersey Student Learning Standards for World Languages 7.1.NL.IPRET.3
New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills 9.1

Recognize a few memorized words related to weather and climate in the target culture(s) and in students' own cultures in highly contextualized oral texts
New Jersey Student Learning Standards for World Languages 7.1.NL.IPRET.4

B. Interpersonal Communication Mode

Respond to a few simple questions on very familiar topics using memorized words and phrases that have been repeatedly practiced
New Jersey Student Learning Standards for World Languages 7.1.NL.IPERS.1
New Jersey Student Learning Standards for ELA.SL1
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

With the help of gestures and/or visuals, share with others basic needs on very familiar topics using memorized words and phrases that have been repeatedly practiced
New Jersey Student Learning Standards for World Languages 7.1.NL.IPERS.2
New Jersey Student Learning Standards for ELA.SL1
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

Tell others a few basic preferences and/or feelings using memorized words and phrases, often supported by gestures or visuals
New Jersey Student Learning Standards for World Languages 7.1.NL.IPERS.3
New Jersey Student Learning Standards for ELA.SL1
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

React to a few procedural instructions, directions, and commands in classroom situations
New Jersey Student Learning Standards for World Languages 7.1.NL.IPERS.4
New Jersey Student Learning Standards for ELA.SL1
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

Enact a few culturally authentic gestures when greeting others and during leave-takings
New Jersey Student Learning Standards for World Languages 7.1.NL.IPERS.5
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

Share with others the names of a few memorized and practiced words and phrases related to climate change in the target culture(s) and in students' own cultures
New Jersey Student Learning Standards for World Languages 7.1.NL.IPERS.6
New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills 9.1
New Jersey Student Learning Standards for Computer Science and Design Thinking 8.1

C. Presentational Communication Mode

Present very familiar personal information using memorized words and phrases that have been repeatedly practiced, often using gestures and visuals to support communication
New Jersey Student Learning Standards for World Languages 7.1.NL.PRSNT.1
New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills 9.1
New Jersey Student Learning Standards for Visual and Performing Arts 1.2
New Jersey Student Learning Standards for ELA.SL4
New Jersey Student Learning Standards for Social Studies 6.2

Express a few basic preferences and/or feelings using memorized words and phrases that are supported by gestures or visuals
New Jersey Student Learning Standards for World Languages 7.1.NL.PRSNT.2
New Jersey Student Learning Standards for ELA.SL5
New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills 9.1
New Jersey Student Learning Standards for Visual and Performing Arts 1.2
New Jersey Student Learning Standards for Social Studies 6.2

Imitate a few culturally authentic gestures when greeting others and during leave-takings
New Jersey Student Learning Standards for World Languages 7.1.NL.PRSNT.3
New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills 9.1
New Jersey Student Learning Standards for Visual and Performing Arts 1.4.5.Cn10a
New Jersey Student Learning Standards for Social Studies 6.2

III. CONTENT, SCOPE, AND SEQUENCE

The following themes are interwoven to provide the framework by which students communicate as they explore cultural products, make connections, comparisons, and prepare to participate in local and global communities:

Grade 3

A. Introduction to basic skills (8-9 weeks)
   1. greetings and introductions
   2. the alphabet
   3. basic colors
   4. numbers 0-31
   5. basic classroom objects and expressions

B. The calendar (8-9 weeks)
   1. date, days of the week, and months of the year
   2. international standards for calendar in the Spanish-speaking world
   3. weather expressions
   4. the seasons
   5. birthdays

C. Family relationships (8-9 weeks)
   1. kinship terms
   2. using “se llama” to share names of family members
   3. expressing age

D. About me (8-9 weeks)
   1. basic personal information
   2. gender
   3. my address and phone number
   4. express favorite numbers, colors, and seasons
   5. holidays and celebrations.

Grade 4

A. Extension of basic skills and concepts (7-8 weeks)
   1. greetings and introductions
   2. the alphabet
   3. basic colors
   4. numbers 0-100
   5. useful classroom expressions
   6. calendar related vocabulary

B. Sports (7-8 weeks)
   1. different kinds of sports
   2. likes/dislikes
   3. popular sports in Spanish-speaking countries

C. Animals (7-8 weeks)
   1. different kinds of animals
   2. animal habitats
   3. description of movement
   4. favorite animals

D. The body (7-8 weeks)
   1. parts of the body
   2. feelings and emotions
   3. expressions of pain or discomfort

E. Clothing (7-8 weeks)
   1. basic articles of clothing
   2. clothing categories
   3. description of ensembles
   4. favorite types of clothing

F. Food (7-8 weeks)
   1. basic categories
   2. fruits
   3. meal times
   4. typical foods in Spanish-speaking countries.

Grade 5

A. Review and expansion of basic skills and concepts (8-9 weeks)
   1. the alphabet
   2. colors
   3. numbers 0-1,000 (patterns)
   4. useful classroom expressions
   5. calendar-related vocabulary
   6. weather conditions

B. School (8-9 weeks)
   1. faculty members in the school
   2. classroom objects
   3. introduction of prepositions
   4. subjects/specials
   5. student schedule
   6. maps
   7. cardinal points

C. Daily routines (8-9 weeks)
   1. telling time
   2. morning/afternoon/night
   3. standard/military time
   4. typical school day
   5. mealtimes

   Family (8-9 weeks)
   1. extended family members
   2. relationships between family members
   3. birthdays and age
   4. physical appearances
   5. personality traits

IV. INSTRUCTIONAL TECHNIQUES

Differentiated instruction creates a student-centered environment that seeks to accommodate the diverse learners and provides multiple pathways to learning. A variety of instructional approaches is employed to involve all students in the learning process and accommodate differences in readiness levels, interests and learning styles. The target language is used as the primary means of communication by providing an immersion setting in which both teachers and students use the target language at least 95% of the time. Instructional techniques include but are not limited to:

A. Teacher-directed, whole-group instruction
B. Small-group instruction
C. Flexible grouping
D. Technology-based instruction
E. Hands-on activities
F. Guided reading and discussion
G. Think-Pair-Share student partner activities
H. Total Physical Response (TPR)
I. For strategies to differentiate for special education students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans, please consult the Accommodations and Modifications appendix in the appendices section of this document.

V. EVALUATION

The purpose of assessment is to improve student learning, gauge student progress and make necessary adjustments in methodology when needed. Student assessment practices include but are not limited to:

A. Informal Assessments
   1. Total physical response
   2. Aural practice
   3. Role-play
   4. Classroom observations during coupled and group activities
   5. Games

B. Formal Assessments
   1. Oral presentations
   2. Written quizzes and tests
   3. Aural assessments
   4. Projects.

VI. PROFESSIONAL DEVELOPMENT

The following activities support this curriculum:

A. Collaboration with colleagues through discussion and observation
B. Department meetings to plan and coordinate curriculum and activities
C. Visitation to districts that implement innovative language programs
D. Visitation of colleagues within our own district
E. Professional development through courses or conferences.

APPENDIX I

New Jersey Student Learning Standards for World Languages

STANDARD 7.1 All students will be able to use a world language in addition to English to engage in meaningful conversation, to understand and interpret spoken and written language, and to present information, concepts, and ideas, while also gaining an understanding of the perspectives of other cultures. Through language study, they will make connections with other content areas, compare the language and culture studied with their own, and participate in home and global communities.

Interpretive Mode

7.1.NL.IPRET.1	Identify a few memorized and practiced words contained in oral, viewed, and written chunks of language in culturally authentic materials when supported by visual cues such as pictures and gestures and text support such as bolded words, bulleted lists, and/or captions.
7.1.NL.IPRET.2	Respond with physical actions and/or gestures to simple oral directions, commands, and requests.
7.1.NL.IPRET.3	Recognize a few common gestures associated with the target culture(s).
7.1.NL.IPRET.4	Recognize a few memorized words related to weather and climate in the target culture(s) and in students' own cultures in highly contextualized oral texts.

Interpersonal Mode

7.1.NL.IPERS.1	Respond to a few simple questions on very familiar topics using memorized words and phrases that have been repeatedly practiced.
7.1.NL.IPERS.2	With the help of gestures and/or visuals, share with others basic needs on very familiar topics using memorized words and phrases that have been repeatedly practiced.
7.1.NL.IPERS.3	Tell others a few basic preferences and/or feelings using memorized words and phrases, often supported by gestures or visuals.

7.1.NL.IPERS.4 React to a few procedural instructions, directions, and commands in classroom situations.

7.1.NL.IPERS.5 Enact a few culturally authentic gestures when greeting others and during leave-takings.

7.1.NL.IPERS.6 Share with others the names of a few memorized and practiced words and phrases related to climate change in the target culture(s) and in students' own cultures.

Presentational Mode

7.1.NL.PRSNT.1 Present very familiar personal information using memorized words and phrases that have been repeatedly practiced, often using gestures and visuals to support communication.

7.1.NL.PRSNT.2 Express a few basic preferences and/or feelings using memorized words and phrases that are supported by gestures or visuals.

7.1.NL.PRSNT.3 Imitate a few culturally authentic gestures when greeting others and during leave takings.

7.1.NL.PRSNT.4 State the names of a few memorized and practiced words and phrases related to climate change in the target culture(s) and in students' own cultures.

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2020/2020%20NJSLS-WL.pdf

APPENDIX II

New Jersey Student Learning Standards for Social Studies

STANDARD 6.1 All students will acquire the knowledge and skills to think analytically about how past and present interactions of people, cultures, and the environment shape the American heritage. Such knowledge and skills enable students to make informed decisions that reflect fundamental rights and core democratic values as productive citizens in local, national, and global communities.

STANDARD 6.2 All students will acquire the knowledge and skills to think analytically and systematically about how past interactions of people, cultures, and the environment affect issues across time and cultures. Such knowledge and skills enable students to make informed decisions as socially and ethically responsible world citizens in the 21st century.

The entire standards document may be viewed at http://www.state.nj.us/education/cccs/

APPENDIX III

New Jersey Student Learning Standards - Social Studies Practices

Social Studies practices are the skills that individuals who work in the field of social sciences use on a regular basis. Because the purpose of social studies is to provide students with the knowledge, skills and attitudes they need to be active, informed, responsible individuals and contributing members of their communities, many of the practices can be applied to daily life.

Practice	Description
Developing Questions and Planning Inquiries	Developing insightful questions and planning effective inquiry involves identifying the purposes of different questions to understand the human experience, which requires addressing real world issues. Inquiries incorporating questions from various social science disciplines build understanding of the past, present and future; these inquiries investigate the complexity and diversity of individuals, groups, and societies.
Gathering and Evaluating Sources	Finding, evaluating and organizing information and evidence from multiple sources and perspectives are the core of inquiry. Effective practice requires evaluating the credibility of primary and secondary sources, assessing the reliability of information, analyzing the context of information, and corroborating evidence across sources. Discerning opinion from fact and interpreting the significance of information requires thinking critically about ourselves and the world.
Seeking Diverse Perspectives	Making sense of research findings requires thinking about what information is included, whether the information answers the question, and what may be missing, often resulting in the need to complete additional research. Developing an understanding of our own and others' perspectives builds understanding about the complexity of each person and the diversity in the world. Exploring diverse perspectives assists students in empathizing with other individuals and groups of people; quantitative and qualitative information provides insights into specific people, places, and events, as well as national, regional, and global trends.
Developing Claims and Using Evidence	Developing claims requires careful consideration of evidence, logical organization of information, self-awareness about biases, application of analysis skills, and a willingness to revise conclusions based on the strength of evidence. Using evidence responsibly means developing claims based on factual evidence, valid reasoning, and a respect for human rights.

Presenting Arguments and Explanations	Using a variety of formats designed for a purpose and an authentic audience forms the basis for clear communication. Strong arguments contain claims with organized evidence and valid reasoning that respects the diversity of the world and the dignity of each person. Writing findings and engaging in civil discussion with an audience provides a key step in the process of thinking critically about conclusions and continued inquiry.
Engaging in Civil Discourse and Critiquing Conclusions	Assessing and refining conclusions through metacognition, further research, and deliberative discussions with diverse perspectives sharpens the conclusions and improves thinking as a vital part of the process of sense making. Responsible citizenship requires respectfully listening to and critiquing claims by analyzing the evidence and reasoning supporting them. Listening to and understanding contrary views can deepen learning and lay the groundwork for seeking consensus.
Taking Informed Action	After thoroughly investigating questions, taking informed action means building consensus about possible actions and planning strategically to implement change. Democracy requires citizens to practice discussion, negotiation, coalition-seeking, and peaceful conflict resolution. When appropriate, taking informed action involves creating and/or implementing action plans designed to solve problems and create positive change.

The entire standards document may be viewed at https://www.state.nj.us/education/cccs/2020/2020%20NJSLS-SS.pdf

APPENDIX IV

New Jersey Student Learning Standards for English Language Arts

STANDARD A.R2: Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas

The entire standards document may be viewed at http://www.state.nj.us/education/cccs/

APPENDIX V

New Jersey Student Learning Standards for Visual & Performing Arts

STANDARD 1.2: (History of the Arts and Culture) all students will understand the role, development, and influence of the arts throughout history and across cultures.

The entire standards document may be viewed at http://www.state.nj.us/education/cccs/

APPENDIX VI

New Jersey Student Learning Standards for Technology

STANDARD 8.1: (Educational Technology) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

The entire standards document may be viewed at http://www.state.nj.us/education/cccs/

APPENDIX VII

New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills

STANDARD 9.4 Life Literacies and Key Skills: This standard outlines key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.

The entire standards document may be viewed at https://www.nj.gov/education/cccs/2020/2020%20NJSLS-CLKS.pdf

APPENDIX VIII

Integrated Accommodations and Modifications for Special Education Students, English Language Learners, Students at Risk of School Failure, Gifted and Talented Students, and Students with 504 Plans (N.J.A.C. 6A: 8)

Special Education
ENVIRONMENT
Preferential Seating
Adjust time for completion of assignments when needed

Adjust length of assignments when needed
Allow additional oral response time
Break tasks (including long range assignments) into manageable steps
Provide copies of notes
Reduce the number of problems on a page
Provide assistance with organizing a notebook or folder
Repeat/ clarify directions when needed
Make frequent checks for work/assignment completion.
Modify homework and class work if needed
Extend time on tests/quizzes
Provide study guides for tests
Provide oral component when needed
Modify format when needed- (ex: limit choices, word bank, shortened written responses)
Allow a private workspace when needed (study carrel, separate desk, desk away from the group)

Allow opportunities for movement (e.g., help with supplies, change to different part of room to work, carry messages to office)
Assist the student to keep only the materials required for the lesson on the desktop
Provide a seat away from distractions (or noise)
MATERIAL/BOOKS/EQUIPMENT
Allow use of a calculator
Allow use of a number line
Allow use of counting chips
Modify worksheets
Provide visual aids (pictures, flash cards, etc.)
Provide auditory aids (cues, tapes, etc.)
Use manipulatives
Provide hands-on learning activities
INSTRUCTIONAL STRATEGIES
Check work in progress

Provide immediate feedback
Provide extra drill/practice
Provide review sessions
Provide models
Highlight key words
Provide pictures/charts
Use mnemonics
Support auditory presentations with visuals
Have student restate information
Provide lecture notes/outline
Give oral reminders
Give visual reminders
Review directions
Use graphic organizers

Assign partners
Repeat instructions
Display key vocabulary
Monitor assignments
Provide visual reinforcement
Provide concrete examples
Use vocabulary word bank
ORGANIZATION
Post assignments
Provide a desktop list of tasks
Give one paper at a time
Provide extra space for work
List sequential steps
Provide folders to hold work

Post routines
Use pencil box for tools
Reorganize poorly designed worksheets to create simple, easy-to-follow layouts and formats
Give advance warning when transition is going to take place
Provide structure for success
Provide a contract, timer, etc., for self-monitoring
Give the student a prompt when he/she is off task (e.g., move close to the student, speak to the student, etc.)
TEST/QUIZZES/TIME
Give prior notice of test
Provide oral testing
Provide extra time for written work
Provide modified tests
Rephrase test questions/directions
Preview test procedures

Provide shortened tasks
Provide extra time for tests
Read test to student
Provide test study guides
Limit multiple choice options
Provide extra time for projects
Pace long term projects
Simplify test wording
Provide hands-on projects
Allow extra response time
ENGLISH LANGUAGE LEARNERS
GRADING
Standard Grades vs. Pass/Fail
CONTINUUM OF ENGLISH LANGUAGE DEVELOPMENT

Pre K-K WIDA CAN DO Descriptors
Grades 1-2 WIDA CAN DO Descriptors
Grades 3-5 WIDA CAN DO Descriptors
Grades 6-8 WIDA CAN DO Descriptors
Grades 9-12 WIDA CAN DO Descriptors
SIOP COMPONENTS AND FEATURES
PREPARATION
Write content objectives clearly for students
Write language objectives clearly for students
Choose content concepts appropriate for age and educational background levels of students
Identify supplementary materials to use
Adapt content to all levels of students proficiency
Plan meaningful activities that integrate lesson concepts with language practices opportunities for reading, writing, listening, and/or speaking
BUILDING BACKGROUND
Explicitly link concepts to students' backgrounds and experiences

Explicitly link past learning and new concepts
Emphasize key vocabulary for students
COMPREHENSIBLE INPUT
Use speech appropriate for students' proficiency level
Explain academics tasks clearly
Use a variety of techniques to make content concepts clear (e.g. modeling, visuals, hands-on activities, demonstrations, gestures, body language)
STRATEGIES
Provide ample opportunities for students to use strategies (e.g. problem solving, predicting, organizing, summarizing, categorizing, evaluating, self-monitoring)
Use scaffolding techniques consistently throughout lesson
Use a variety of question types including those that promote higher-order thinking skills throughout the lesson
INTERACTION
Provide frequent opportunities for interaction and discussion between teacher/students and among students about lessons concepts, and encourage elaborated responses
Use group configurations that support language and content objectives of the lesson
Provide sufficient wait time for student responses consistently

Give ample opportunities for students to clarify key concepts in LI as needed with aide, peer, or LI text
PRACTICE/APPLICATION
Provide hands-on materials and/ manipulatives for students to practice using new content knowledge
Provide activities for students to apply content and language knowledge in the classroom
Provide activities that integrate all language skills
LESSON DELIVERY
Support content objectives clearly
Support language objectives clearly
Engage students approximately 90-100% of the period
Pace the lesson appropriately to the students' ability level
REVIEW/EVALUATION
Give a comprehensive review of key vocabulary
Give a comprehensive review of key content concepts
Provide feedback to students regularly on their output
Conduct assessments of students comprehension and learning throughout lesson and all lesson objectives

STUDENTS AT RISK OF SCHOOL FAILURE (I&RS RESOURCE MANUAL)
ACADEMICS
Provide necessary services (Lit Support, Math Support, OT, PT, speech, etc.)
Literacy Support Interventions (Appendix B of IS forms)
Prompt before directions/questions are verbalized with visual cue between teacher and student
Task list laminated and placed on desk for classroom routines and organization
Preferential seating
Provide structure and positive reinforcements
Sustained working time connected to reward (If/Then statement)
Frequently check for understanding
Graphic organizers
Tracker
Slant board
Access to accurate notes

Additional time to complete tasks/long-term projects with adjusted due dates
Limit number of items student is expected to learn at one time
Break down tasks into manageable units
Directions repeated, clarified, or reworded
Frequent breaks during class
Allow verbal rather than written responses
Modify curriculum content based on student's ability level
Reduce readability level of materials
Allow typed rather than handwritten responses
Use of calculator
Use of a math grid
Provide models/organizers to break down independent tasks
Access to electronic text (e.g. Downloaded books)
Provide books on tape, CD, or read aloud computer software
Provide opportunities for using a Chromebook as well as assistive technologies

Provide buddy system
Adjust activity, length of assignment, and/or number of problems, including homework
Provide assessments in a small group setting
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance
Communication with parents
Gradual release of responsibility related to writing prompts (Proximity, Sentence Starter, Attempt independently)
Rubric-based checklist
Target specific number of details and focus on organization with post-its
Accept late work/homework without penalty
Previewing material (access to PowerPoint slides, novels, syllabus, study guides when available)
SOCIAL/EMOTIONAL
Children's books addressing presenting problem
Student jots down presenting problem and erase when it goes away
Meet with guidance counselor

Student jots down presenting problem and erase when it goes away
Attendance plan
Utilize nurse during episodes of presenting problem
Provide short breaks
Attendance plan
Communication with parents
Assign "jobs" to reduce symptoms
Counseling check-ins
Praise whenever possible
ATTENTION/FOCUS
Seat student near front of room
Preferential seating
Monitor on-task performance
Arrange private signal to cue student to off-task behavior
Establish and maintain eye contact when giving oral directions

Stand in proximity to student to focus attention

Provide short breaks when refocusing is needed
Use study carrel
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Refocusing and redirection
Behavior/time management system
Group directions 1 step at a time
Assign "jobs" to reduce symptoms
Arrange physical layout to limit distractions
Frequently ask questions to engage student
Educate/train relevant staff with regards to the signs/symptoms, promote tolerance of needs, and/or providing assistance
Extended time on assignments/assessments
Provide assessments in a small group setting

Provide buddy system
Establish and maintain eye contact when giving oral directions
Permit the use of headphones while working
SCHOOL REFUSAL/ELEVATED ABSENTEEISM
Attendance plan
GIFTED AND TALENTED STUDENTS
CURRICULUM
Acceleration
Compacting
Telescoping
Advanced Placement Courses
INSTRUCTION
Grouping
Independent Study
Differentiated Conferencing

Project-Based Learning
Competitions
Cluster Grouping Model with Flexible Grouping
Differentiated Instruction
Summer Work
Parent Communication