

21st CENTURY SUCCESS SKILLS (300)

DESCRIPTION

The 21st Century Success Skills standards represent the fundamental, yet critical, personal traits, knowledge, and skills that each person should possess to successfully transition from secondary education into the workforce and post-secondary education. These skills and knowledge can be applied to any industry or subject matter. They are “success” skills and knowledge to be used and further developed throughout one’s life.

GUIDING PRINCIPLES FOR STANDARDS STRUCTURE

Precision Exams 21st Century Success Skills standards are specifically organized to help solve the problem of implementing the broad scope of knowledge and skills covered under the 21st Century Skills umbrella to any other subject or course—knowing that it would be uncommon to have students take a specific 21st Century Skills course. To that end, Precision Exams designed its 21st Century Success Skills standards with four goals in mind:

1. Must easily provide educators the ability to apply the 21st Century Success Skills to ANY other course or subject area, by aligning it to already used teaching and learning methodologies.
2. Should align with the scientific method, and include basic STEM outcomes—specifically applied reading and applied math skills.
3. Designed to reflect the skills and attributes employers and colleges expect from graduating 12th grade students, but presented in a way that these skills and attributes can be taught to and learned by freshmen—then built upon and developed throughout a student’s education career.
4. Designed so the scope and sequence of the standards in their foundational form can legitimately be covered in one standard semester’s worth of instruction, and then be referred to and built upon in every following course.

STANDARDS MODEL STRUCTURE – UNIQUE AND EASY TO IMPLEMENT

The resulting standards model structure categorizes all the knowledge and skills into five simple to follow, common sense, and already implemented teaching and learning methodologies; thus, allowing the standards to be easily be implemented jointly with any other course or program of study.

Standard 1: Personal Success Traits

The personal traits that increase one’s productivity and employability in any situation and across all other standards.

Standard 2: Research (research/learn information)

Gain a thorough understanding of a specific problem, question, project, or situation through relevant and resourceful means—learn all you can (or need) about what you need to accomplish.

Standard 3: Reason (analyze information)

Objectively analyze, critically think through, and systematically organize your research and knowledge in preparation for making sound decisions regarding a specific problem, question, project or situation.



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Standard 4: Relate (apply information to situation)

Mentally and experimentally relate and apply what has been learned to a specific problem, question, project or situation—this is the problem solving step that starts to combine knowledge with solutions.

Standard 5: Results (do, record, act, produce outcome)

Produce quality results, that can be observed by others, that combine personal traits, research, and applied analysis to a specific problem, question, project or situation—this is the doing, the recording, the acting, and the producing of a desired outcome.

APPLICATION EXAMPLE

The following provides a simplified example of how the flow of the Precision Exams 21st Century Success Skills standards can easily be applied to the current flow of any other course.

Course: Woodworking

Problem, Question, Project, Situation: Build a nightstand, within the semester, to be sold at a school auction. They must work on the project in the school shop, utilizing limited number of tools, and only during class time and before or after school according to the teacher's schedule.

Standard 1: Personal Success Traits

- To accomplish the project, students must be positive about the task and those they work with (St. 1.1), be motivated and work independently (St. 1.2), attend class regularly (St. 1.5), show respect for others' time and possessions (St. 1.6), and be flexible because of the shared resources and schedules.

Standard 2: Research (research/learn information)

- Students must learn about different aspects of woodworking, including different woods, glues, nails, screws, hardware, stains and other finishes.
- Students must understand who their intended audience is to produce products that will sell quickly and at a desired price.

Standard 3: Reason (analyze)

- Students must assimilate the information they've learned and gathered to better determine how they want to build their nightstands.
- Students can categorize different stains and finishes in several ways to determine best use: stains or paints, oil-based or other type, color saturation per wood used, etc.
- Students must separate their own personal likes for the nightstands and seek to understand what their potential customers will want to purchase.
- Students will need to implement critical thinking skills to logically determine how one decision will affect another decision and their desired outcome.

Standard 4: Relate (apply)

- Students must distill their research into usable decisions about producing their nightstand.
- Students must apply math, reading, and problem-solving skills to properly design and document their decisions about their nightstand.
- Students will need to think creatively to produce a product that will be unique enough to be purchased, but still meets the needs of their target audience.



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Standard 5: Results Record (do, result, outcome)

- Students must interact and communicate positively with others to share and schedule limited resources.
- Students must seek and take direction from their instructor so they can create the best product possible.
- Students must document their designs in a written format.
- Students will need to positively resolve conflicts regarding the scheduling and use of tools and machinery, as well as scheduling conflicts with their instructor.
- Students must set SMART goals to effectively manage and complete their projects on time.
- Students must produce quality work both for a grade and to sell their nightstand to customers.

THE SCIENTIFIC METHOD ALIGNMENT

At Precision Exams, we think the “scientific method” can and should be applied to everyday work, education, and personal life situations. At its core, the scientific method aligns to the 21st Century Success Skills. To that end, we have outlined the scientific method into six steps and aligned those steps to the standards covered in the 21st Century Success Skills.

Scientific Method Steps		21 st Century Success Skills Standards
Step 1	Question (form a question – what do you want/need to learn?)	• Standard 2: Research
Step 2	Research (do initial research to find out as much as possible/or as needed about the question from other sources)	• Standard 2: Research
Step 3	Hypothesize (develop a hypothesis about the question – while remaining open to new facts, make an educated guess about the answer to the question)	• Standard 2: Research • Standard 3: Reason
Step 4	Experiment (test your hypothesis – experiment to find out if the hypothesis is correct)	• Standard 2: Research • Standard 3: Reason
Step 5	Analyze (analyze your data – record and evaluate what is found, then draw an educated conclusion)	• Standard 3: Reason • Standard 4: Relate
Step 6	Communicate (communicate your findings to others in a proper way given the situation)	• Standard 4: Relate • Standard 5: Results



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STANDARD 1

◆ PERSONAL SUCCESS TRAITS

Students will understand and demonstrate the personal traits that encourage productivity, quality work, self-initiative, and employability. Applies personal traits to all situations. Understand that these traits must be practiced and developed.

21st Century Key Words: Positive Attitude, Respectful, Responsible, Self-motivated, Self-disciplined, Work Independent, Honest, Integrity, Helpful, Dependable, Self-improvement, Life Long Learner, Professional, Adaptable, Flexible, Listens to Feedback, Teachable, Work Ethic, Hard Worker, Resourceful, Dresses Appropriately, Applied Reading Skills, Personal Characteristics, Personal Attributes, Personal Traits

- 1.1. Presents a positive attitude about work, learning, challenges, and about other people.
- 1.2. Is self-motivated and self-disciplined, and can work and think independently.
- 1.3. Deals honestly and with integrity in all situations.
- 1.4. Is helpful and finds ways to provide value.
- 1.5. Is dependable in all situations, including regular and on-time attendance, and completing assigned tasks on-time.
- 1.6. Shows respect for others and others' time and possessions (including your coworkers and employer, and personal time vs. work time).
- 1.7. Demonstrates eagerness for self-improvement and continues to be a self-directed learner professionally and personally.
- 1.8. Is adaptable and flexible to change and setbacks.
- 1.9. Is teachable and accepts feedback.
- 1.10. Takes responsibility for own actions.
- 1.11. Works hard at any given task – has good work ethic.
- 1.12. Resourcefully produces results regardless of challenges or tedious tasks.
- 1.13. Dresses and acts appropriately for the situation.

STANDARD 2

◆ RESEARCH (RESEARCH/LEARN INFORMATION)

Students will understand and demonstrate how to search for and locate information for any given subject. Understand that research is an integral part of everyday life and work, and that effective research skills enhance work and personal life.

Scientific Method Step: 1-Question, 2-Research, 3-Hypothesize, 4-Experiment

21st Century Key Words: Information Literacy, Applied Reading Skills, Scientific Principles and Procedures, Information Use, Locates Information, Technology Use, Technology as a Tool, Digital Technologies, Research



- 2.1 Developing and Asking the Right Questions
 - 2.1.1 Ask relevant and pertinent (i.e. “right”) questions to focus research efforts given a specific situation
 - 2.1.2 Properly use interrogative questions to research the needed information (who, what, where, why, when, which, how).
 - 2.1.3 Understand how and when to use the following questioning strategies: yes and No questions, probing questions, leading questions and rhetorical questions.
- 2.2. Information Literacy – Gathering and Discerning Relevant Information
 - 2.2.1 Locate and gather relevant information in printed and digital formats from various sources, including:
 - Different browsers and search engine results
 - Libraries, colleges and universities
 - Community and industry groups, associations, publications, and businesses
 - Subject matter experts
 - 2.2.2. Differentiate between primary, secondary and tertiary sources, and understand the basic pros and cons of each source type.
 - 2.2.3. Understand the difference between quantitative and qualitative information.
 - 2.2.4. Discern between relevant and credible sources versus irrelevant and questionable sources.
 - Understand how and why (for what purposes) different information (messages, content, media, advertising, research, etc.) is developed and presented.
 - Recognize bias or spin within the messages presented.
 - Recognize when information becomes propaganda and how it might influence beliefs and behaviors.
- 2.3. Proper Use of Gathered Information
 - 2.3.1. Understand the ethical and legal issues surrounding the access and use of information, including:
 - Basic copyright and fair use laws.
 - Difference between paraphrasing and plagiarism.

STANDARD 3

REASON (ANALYZE INFORMATION)

Students will understand how to critically think and objectively analyze and reason through information using primary and secondary sources, empirical data, experience and common sense.



Scientific Method Step: 3-Hypothesize, 4-Experiment, 5-Analyze

21st Century Key Words: Reason Effectively, Critical Thinking, Systems Thinking, Problem Solving, Reasoning, Observes Carefully, Information Literacy, Applied Reading Skills, Applied Mathematical Skills, Scientific Principles and Procedures, Information Use, Analyze Information, Technology Use, Technology as a Tool, Digital Technologies, Research

3.1. Organize Information For Useful Analysis

- 3.1.1. Quickly assimilate needed and relevant data from irrelevant information.
- 3.1.2. Use technology as a tool to help organize and evaluate information.
- 3.1.3. Conceptualize and reorganize gathered information into useful forms.
- 3.1.4. Narrow the gathered research by categorizing it into appropriate sub-groups.

3.2. Apply Critical Thinking Skills to Objectively Evaluate and Analyze Information

- 3.2.1. Understand how bias and ego can affect objective reasoning.
- 3.2.2. Distinguish between fact and opinion, truth and error.
- 3.2.3. Recognize past and current trends, patterns, or cycles in research.
- 3.2.4. Understand and apply different reasoning methods appropriate to the situation to logically analyze and test assumptions.
 - Understand and apply cause and effect reasoning (or “if, then” logic) to study possible conclusions in various situations.
 - Understand and apply the concept of “opportunity costs” to various situations.
 - Understand and apply the “pros versus cons” methodology to reasoning in various situations.
 - Understand and apply inductive reasoning (or “generalizing”) to various situations (Inductive reasoning takes specific observable instances and creates a general rule/law from those specific instances).
 - Understand and apply deductive reasoning (or “deduction”) to various situations (Deductive reasoning takes a generally known rule/law and applies that rule to specific observable instances).

3.3. Applied Reading and Interpretation Skills

- 3.3.1. With minimal instruction, read, monitor, interpret, and understand information presented in various formats or tools (i.e. news articles, journal articles, charts, graphs, tables, flow charts, gauges, dials, signs, controls, etc., that may be found in a various work situations).

3.4. Use Systems Thinking to Analyze Information

- 3.4.1. Learn and analyze how individual parts, persons, and actions contribute to, interact with, and affect each other to produce overall outcomes, products, and environments in complex systems.



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STANDARD 4

◆ RELATE (APPLY INFORMATION TO SITUATION)

Students will understand how to effectively relate, apply, and adapt information and experiences to any personal, workplace, or educational situation.

Scientific Method Step: 5-Analyze, 6-Communicate

21st Century Key Words: Relate Information, Think Creatively, Critical Thinking, Problem Solving, Sound Decisions, Systems Thinking, Observes Carefully, Information Literacy, Applied Reading Skills, Applied Writing Skills, Applied Mathematical Skills, Scientific Principles and Procedures, Information Use, Technology Use, Technology as a Tool, Digital Technologies

4.1. Relate Information for Problem Solving

- 4.1.1. Clearly conceptualize, document, and communicate a problem or question to be solved.
- 4.1.2. Understand the true purpose and intent of solving the problem or question.
- 4.1.3. Consider the opinions of other people, times and places, different from one's own.
- 4.1.4. Relate potential solutions to different people and situations to try and understand potential effects.
- 4.1.5. Relate, infer, and apply the gathered research to the specific situation, problem or question.

4.2. Use Creative Thinking to Solve Problems

- 4.2.1. Develop new ideas that contribute to a given situation using various techniques, including brainstorming and "thinking outside the box".
- 4.2.2. Seek to understand the situation from another stakeholder's point-of-view (i.e. a customer, colleague, etc.)
- 4.2.3. Ask questions which challenge prevailing assumptions, including one's own assumptions and ideas.
- 4.2.4. Identify and ask clarifying questions that may lead to better solutions (ex. Who will do x? What will happen if x? Where will x be located? Why will x work? When could x be done? Which x works best? How will x happen?)

4.3. Apply Fundamental Work and Personal Mathematics

- 4.3.1. Apply basic work and personal mathematics including addition, subtraction, and basic algebra to a given situation.

4.4. Make Effective Judgments and Decisions

- 4.4.1. Evaluate the gathered and analyzed information, evidence, and alternative points of view.
- 4.4.2. Apply decision-making processes appropriate to the situation and required policies.
- 4.4.3. Make a decision based on achieving the desired/proper outcome.
- 4.4.4. Understand that every decision and action has consequences (intended or unintended).



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STANDARD 5

◆ RESULTS (DO, RECORD, ACT, PRODUCE OUTCOME)

Students will understand and demonstrate how to produce results by doing, recording, communicating, acting and leading from information studied and learned, and do so in verbal and written communications, and in both group and individual situations.

Scientific Method Step: 5-Analyze, 6-Communicate

21st Century Key Words: Communicate Clearly, Effective Communication, Plans, Organizes, Teamwork, Diverse Groups, Apply, Application, Customer Needs, Leadership, Conflict Resolution, Resource Management, Manage Project, Multi-task, Problem Solving, Sound Decisions, Information Literacy, Applied Reading Skills, Applied Writing Skills, Applied Mathematical Skills, Scientific Principles and Procedures, Information Use, Technology Use, Technology as a Tool, Digital Technologies, Record

5.1 Effectively Communicate With Others

- 5.1.1 Understand the intended/target audience, including an understanding of background, culture, environments, and demographics.
- 5.1.2 Understand and demonstrate positive and negative verbal and non-verbal communication.
- 5.1.3 Clearly and concisely communicate verbally and non-verbally in the following situations: formal/structured and impromptu speech, debate, collaborative discussion, and interview.
- 5.1.4 Clearly and concisely communicate in writing (using proper grammar, spelling, capitalization, word choice, etc.) using the following: resume, general letter, set of instructions, basic presentation, email, persuasive letter, business report.
- 5.1.5 Apply the four basic parts of writing to any written communication. The four basic parts are:
 - Basic information (title, author, contact information)
 - Introduction (quick statement of purpose and intent to entice attention)
 - Body (presentation of details related to one's intent)
 - Conclusion (focused summary of most important parts of content, including one's findings, recommendation, and/or call to action)
- 5.1.6 Regarding standard work-related productivity software, demonstrate competency in the basic use of, understanding the purpose for, and determining the best software for a particular job. Focus should be given on:
 - Word processor software
 - Spreadsheets software
 - Presentation software
 - Browser software



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5.2. Effectively Interact and Collaborate with Others – peers, colleagues/coworkers, employer, customers

5.2.1. Work effectively and respectfully with diverse teams:

- Value the individual contributions of each group member and be open to new and diverse perspectives.
- Show sensitivity to cultural differences.
- Actively participate and contribute in group discussions and assignments.
- Proactively accept and complete assigned tasks.
- Understand the importance of having a positive attitude while working in group situations.
- Respectfully accept and incorporate input and feedback from others about one's own work.

5.2.2. Understand the role of active listening in effective interpersonal communication and demonstrate active listening skills.

5.2.3. Demonstrate how to appropriately deal with difficult individuals (client/customer, coworker, boss, peer) by doing the following:

- Show empathy and understanding.
- Do not minimize the individual's problem/concern.
- Ensure understanding by clarifying the individual's statements using appropriate questioning and listening techniques (ask open ended questions to narrow the scope of the problem, restate what is said to verify understanding).
- Avoid arguing with the individual while interacting with them.
- Provide possible solutions, either in part or complete.
- Provide ways for follow-up or next steps.

5.3. Effectively Manage Projects

5.3.1. Set and meet S.M.A.R.T. goals, even in the face of obstacles and competing pressures.

- Specific – focused on a specific thing
- Measurable – can be quantified in some way
- Achievable – can be realistically accomplished with the means and time available
- Relevant – it will make a difference and applies appropriately to the desired outcome
- Timely – timeframe when results should be achieved

5.3.2. Plan and prioritize tasks and work-flow to achieve desired outcomes.

5.3.3. Understand how to multi-task (managing multiple projects during the same period of time).



5.4. Effectively Guide and Lead Others

- 5.4.1. Expect quality results from one's self and from others.
- 5.4.2. Be positive about others abilities and efforts.
- 5.4.3. Leverage the strengths of others to accomplish a common goal.
- 5.4.4. Demonstrate integrity and ethical behavior in using influence and power.
- 5.4.5. Work to better every situation.
- 5.4.6. Proactively seek the next task to be done, and appropriately work to accomplish that task.
- 5.4.7. Encourage others to demonstrate positive personal traits.
- 5.4.8. Effectively lead a meeting.
 - Provide a meeting agenda to participants
 - Start and stop on-time
 - Provide clear purpose for meeting
 - Allot sufficient time to discuss desired topics
 - Make specific assignments to specific individuals/groups
 - Record decisions and assignments for follow-up

