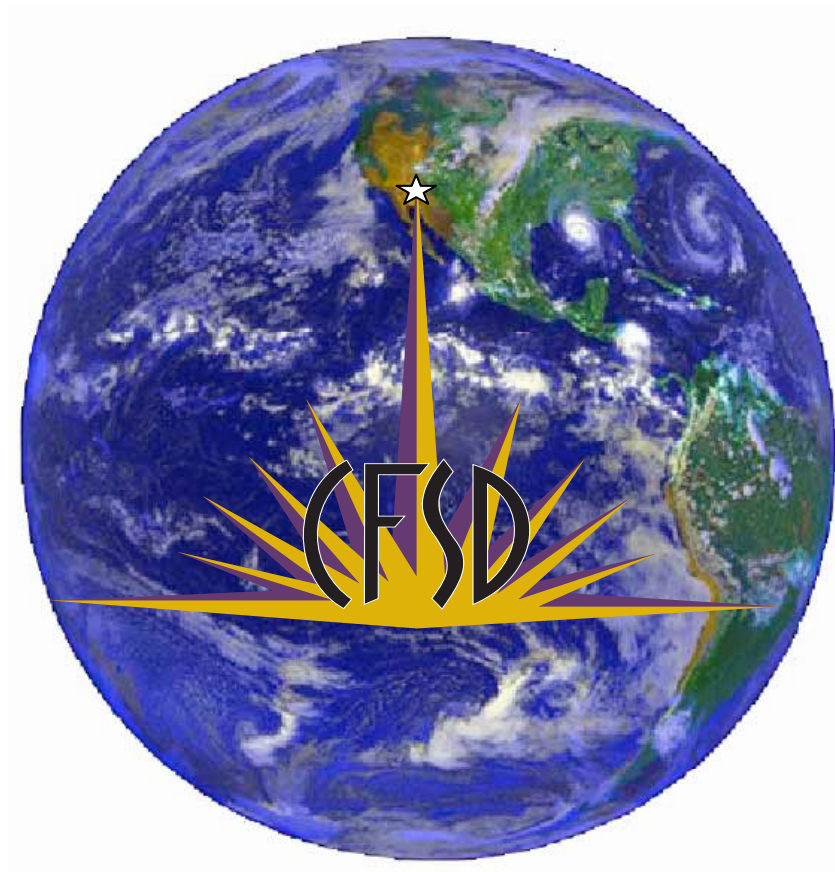


# **Our Commitment to Learning in the 21<sup>st</sup> Century**

**Catalina Foothills School District**



**THINK GLOBALLY**

**ACT LOCALLY**

## Introduction

Quality education that prepares students to meet the challenges and address the changes of the 21<sup>st</sup> century is a top priority in the Catalina Foothills School District (CFSD). To achieve success, our students will need to develop new skills and attain proficiency in different areas than in the past. Leaders in education and business agree that 21<sup>st</sup> century skills and content in areas such as critical thinking, productivity, teamwork, cultural competence, interactive communication, technology, and systems thinking are needed to succeed in school, work, and life.

First of all, core academic subjects such as reading, writing, science, math, languages, social studies, and the arts remain the foundation of a comprehensive education and are more important than ever. However, we must also develop students who have the ability to think critically, apply knowledge at high levels, and use technology and tools to access, evaluate, and communicate information. Both rigorous academic standards and 21<sup>st</sup> century skills are a bridge to authentic, intellectually challenging work by students in a world that holds unprecedented opportunities for education, personal growth, and fulfillment as well as global communication, resource scarcity, conflict, and problem solving.

During the winter and spring of 2006, CFSD gathered a 21<sup>st</sup> century learning advisory committee of business CEO's and entrepreneurs, university officials and professors, students, parents, and teachers to talk about what knowledge and skills our students will need when they leave their K-12 education career. This group of advisors met and the results of its deliberations and a thorough review of the research have been folded into CFSD's 21<sup>st</sup> century learning framework.

The Catalina Foothills School District will focus programs on developing skills and attributes of 21<sup>st</sup> century learners in the following broad areas and categories: (1) Personal and Social Responsibility which includes leadership, productivity, self-direction, and teamwork; (2) Digital-Age Literacy which includes cultural competence, global awareness, interactive communication, and technology & tools; and (3) Learning & Thinking Skills which includes critical & creative thinking, data analysis, scientific inquiry, and systems thinking. Assessment of 21<sup>st</sup> century skills will be integrated with the assessment of core subjects. We intend to measure our students' growth in all of these skills.

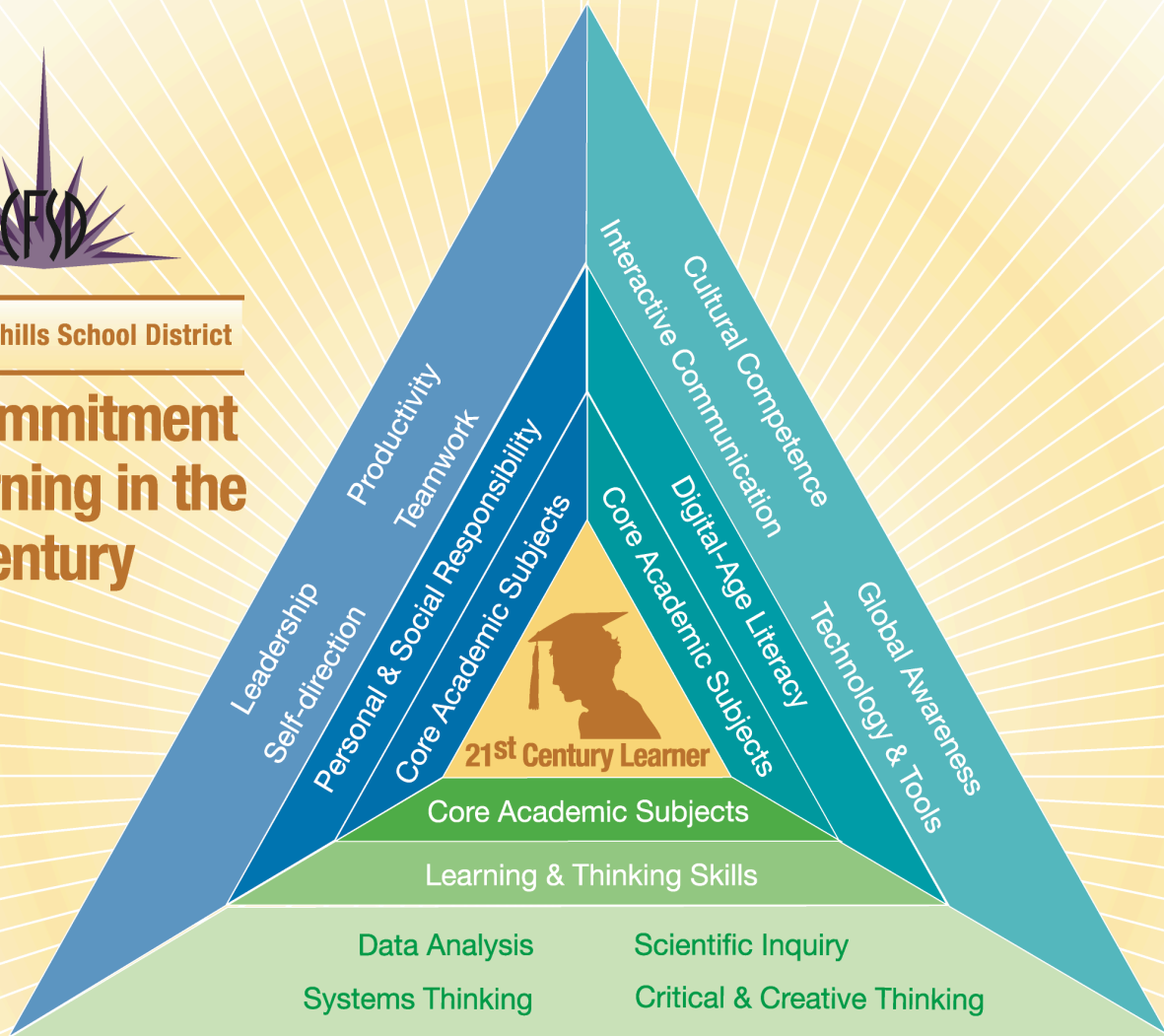
Professional staff recently completed the redesign of a 21<sup>st</sup> century curriculum in the areas of language arts, social studies, math, and science. They are now engaged in the redesign of world languages to merge the essential subject content and the 21<sup>st</sup> century skills shown in CFSD's framework on the next page. The professional work of organizations and individuals such as the Partnership for 21<sup>st</sup> Century Skills, Metiri Group, and Dr. Robert J. Marzano of Marzano & Associates provides a solid research base to guide the development of a rigorous and relevant educational program. Instructional practices, resources/tools, assessments, and professional development are also being examined as part of the redesign process to shape the vision of the 21<sup>st</sup> century classroom.

The advice of a broad range of business and professionally engaged citizens has helped us agree on the knowledge and skills that matter in our 21<sup>st</sup> century world. Now we are committed to changing our programs so that our students can move on from their K-12 education confident that they are well prepared to prosper in post-secondary education, on the job, and in life.



Catalina Foothills School District

## Our Commitment to Learning in the 21<sup>st</sup> Century



## Assessment of 21<sup>st</sup> Century Skills

In order to prepare graduates for the 21<sup>st</sup> century, students must be proficient in rigorous academic standards and 21<sup>st</sup> century content, adept at using 21<sup>st</sup> century skills, and competent in the use of 21<sup>st</sup> century digital tools. Meaningful and engaging learning experiences will be used to measure students' growth in 21<sup>st</sup> century skills and content and will be integrated with the assessment of core subjects. Specific levels of learning will be used to ascertain progress in each of the broad areas (i.e., Personal & Social Responsibility, Digital-Age Literacy, and Learning & Thinking Skills) and categories (e.g., self-direction, interactive communication, systems thinking) of 21<sup>st</sup> century skills.

Each broad area has four categories of knowledge and skill development. Within each category there are three levels of performance. The three performance levels represent a continuum with Level 3 designated as the highest level of skill development. The performance levels are utilized K-12 within the context of grade appropriate material and applications.

It is important to note that these continua are in fact, continua – not rubrics. They depict levels of development, but are not specifically targeted to any one task, assignment, content area, or grade level. The precise form some of these skills take will depend on these contextual factors. The performance levels are described as follows:

**Level 1:** The student is actively engaged with the skill, but the focus is often on short-term, day-to-day implementation that requires models or assistance from the teacher. Few, if any changes, are made in ongoing use.

**Level 2:** The student has established a routine way of working with the skill and is able to use it in different contexts. The student begins to reflect on and assess application of the skill and makes adaptations to vary the use of the skill or enhance results.

**Level 3:** The student evaluates use of the skill and seeks modifications to achieve an even greater or more collective impact. New developments or innovations in the field or area of study are examined and the student explores new goals.

A description of each broad area and category in CFSD's 21<sup>st</sup> century learning framework follows with the three corresponding performance levels.

## **PERSONAL AND SOCIAL RESPONSIBILITY**

Personal and social responsibility is defined and measured by growth and achievement in leadership, productivity, self-direction, and teamwork. Students must be able to set and pursue personal, academic, family, and civic goals. They need the knowledge and skills to make good ethical decisions; play an effective role in society at local, national, and global levels; become informed, thoughtful, and responsible citizens; and to participate in the life of their schools, community, and the wider world through service and volunteer opportunities.

### **Leadership**

Leadership is the capacity of an individual or team to guide, direct, or influence a group or institution in ways that bring about change and achieve stated purposes. Leaders in the 21<sup>st</sup> century must be adaptable, possess wide intellectual curiosity, and be lifelong learners. They must be willing to see value in different perspectives, be comfortable with uncertainty, and look globally for solutions and challenges.

**Level 1:** Students address needs and problems as they occur.

**Level 2:** Students organize and facilitate people and resources to respond to needs or solve problems.

**Level 3:** Students lead change by empowering others and embarking on new ventures or innovations.

### **Productivity**

Productivity involves prioritizing, planning, and managing for efficient and effective results through the use of real-world tools. The level of complexity often present in today's society requires workers--and students--to concentrate on the main goals of a project, carefully manage their work, and to anticipate unforeseen events or possibilities. High productivity is a basic requirement for the typical knowledge-worker of the 21<sup>st</sup> century.

**Level 1:** Students make a plan, prioritize tasks, and adjust effort to achieve a desired result.

**Level 2:** Students use tools effectively and develop expertise to accomplish a task efficiently.

**Level 3:** Students create a relevant, high quality product to meet a specific standard or need.

### **Self-Direction**

Self-direction is the ability to set goals related to learning, plan for the achievement of those goals, independently manage time and effort, and assess the quality of learning and any products that result from the learning experience. Students who are able to learn independently and adapt in a world of rapid change will thrive in the 21<sup>st</sup> century.

**Level 1:** Students set a learning goal and standard of performance that meets or exceeds expectations.

**Level 2:** Students acquire expertise and skills and use feedback to meet a goal and performance standard.

**Level 3:** Students evaluate their work and transfer effective strategies to accomplish learning tasks in a different context.

### **Teamwork**

Teamwork refers to the abilities to cooperate as a member of a highly successful group, to interact smoothly with others, and to work together with one or more people to achieve a goal (e.g., solve problems, create novel products, learn and master content). The demands of 21<sup>st</sup> century working and learning increasingly call for cooperative efforts.

**Level 1:** Students identify and follow group norms to accomplish a shared goal.

**Level 2:** Students engage in collaborative learning and promote effective group interaction.

**Level 3:** Students adapt to and perform a variety of responsibilities and roles within a group.

### **DIGITAL-AGE LITERACY**

Digital Age Literacy is defined and measured by growth and achievement in cultural competence, global awareness, interactive communication, and technology & tools. Given the realities of globalization in a “digital” world, our students need to develop the strategies and skills to communicate effectively, work with diverse groups of people, and use information and communications technologies. These 21<sup>st</sup> century knowledge and skills are necessary to learn and work in an age of accelerating societal change.

### **Cultural Competence**

Students who are culturally competent value diversity, exhibit an informed sensitivity, and actively engage with/in other cultures. In order to work cooperatively with individuals from vastly different backgrounds, students must have opportunities to learn about, appreciate, and understand the beliefs and values that drive them.

**Level 1:** Students understand and respect different cultural norms and groups.

**Level 2:** Students work toward becoming bilingual or multilingual to communicate, interact, and work collaboratively with individuals from other cultural groups.

**Level 3:** Students establish new relationships and seek opportunities to learn from diverse perspectives.

### **Global Awareness**

Global awareness is the recognition and understanding of interrelationships among international organizations, nation-states, public and private economic entities, socio-cultural groups, and individuals across the globe.

**Level 1:** Students recognize interconnections among individuals, communities, and societies on a local, national, and global level.

**Level 2:** Students analyze and evaluate global economic, political, social, and environmental issues and trends.

**Level 3:** Students take a position on a local, national, or global issue and make informed, ethical decisions to effect change.

### **Interactive Communication**

Interactive communication is the generation of meaning through exchanges using a range of contemporary tools, transmissions, and processes. In today's wired, networked society, it is critical that students learn to communicate effectively using a range of media, technology, and environments.

**Level 1:** Students follow the etiquette and conventions of digital tools, media, and networks to communicate a message.

**Level 2:** Students use digital tools to generate meaning for different audiences and purposes.

**Level 3:** Students select and combine digital media to express an idea in a new and creative way.

### **Technology & Tools**

Technological literacy is knowledge about what technology is, how it works, what purposes it can serve, and how it can be used efficiently and effectively to achieve specific goals. Effective use of real-world tools (e.g., hardware, software, networking, and peripheral devices to accomplish 21<sup>st</sup> century work) is using these tools to communicate, collaborate, solve problems, and accomplish tasks, an essential component of job readiness, citizenry, and life skills.

**Level 1:** Students select tools to solve a problem or meet a need because of their value to a specific field of study.

**Level 2:** Students use a variety of technologies to support learning, create a product, and/or communicate solutions.

**Level 3:** Students explore new areas or extend capabilities through the use of specialized tools and changing technologies.

## **LEARNING AND THINKING SKILLS**

Learning and thinking skills are defined and measured by growth and achievement in critical & creative thinking, data analysis, scientific inquiry, and systems thinking. Learners and workers in the 21<sup>st</sup> century must be able to engage in complex thinking and reasoning processes as they complete meaningful, relevant tasks within a range of academic domains and real-world contexts that require problem solving.

### **Critical & Creative Thinking**

Higher order thinking, such as critical and creative thinking, refers to a set of cognitive skills or strategies that increases the probability of a desired outcome. In an information-rich society, the quality of one's thought processes, particularly more complex thought, might be among the most important things that an individual brings to work and society. The skills for analyzing and interpreting knowledge have become increasingly valued.

**Level 1:** Students create and apply criteria to gather information from digital media sources.

**Level 2:** Students formulate ideas or draw conclusions after evaluating the credibility of media sources and the validity of information.

**Level 3:** Students develop a new idea or thesis by combining existing information in a novel way or trying an alternative course of action.

### **Data Analysis**

Data analysis is the ability to evaluate data across a range of media; recognize when data are needed; locate, analyze, and represent data effectively; and accomplish these functions using technology, communication networks, and electronic resources.

**Level 1:** Students quantify information in order to answer questions or solve problems.

**Level 2:** Students process, plot, and interpret data using a variety of tools and technologies.

**Level 3:** Students use data to support decisions or question results.

### **Scientific Inquiry**

Scientific Inquiry is a multifaceted activity that involves making observations; posing scientific questions; examining various sources of information to discover what is already known; planning investigations; using tools to gather, analyze, and interpret evidence; proposing answers, explanations and predictions; connecting experimental evidence with existing scientific knowledge; and communicating and justifying the explanations.

**Level 1:** Students pose questions, seek answers, or challenge how conclusions are drawn.

**Level 2:** Students apply knowledge and understanding of scientific concepts and processes to test or explain ideas.

**Level 3:** Students evaluate the implications of results and pose new questions to advance their own and others' thinking.

### **Systems Thinking**

Systems thinking is a vantage point from which one sees a whole, a web of relationships, rather than focusing only on the detail of any particular piece. Events are seen in the larger context of a pattern that is unfolding over time. Systems thinking provides students with a more effective way of interpreting the complexities of the world in which they live—a world that is increasingly dynamic, global, and complex.

**Level 1:** Students identify and consider the interdependent parts of problems or issues.

**Level 2:** Students analyze causal factors and evaluate the consequences of decisions in the short- and long-term.

**Level 3:** Students design or improve a system by determining the leverage point(s) at which change can have the greatest impact.



## Resources and Acknowledgements

The CFSD Framework for 21<sup>st</sup> Century Learning was developed through a process that included literature reviews, reports on workforce trends from business and industry, research on emerging characteristics and skill sets of the 21<sup>st</sup> century knowledge-worker, research-based instructional practices, and input from educators, students, parents and community professionals and organizations. The list below is a representative sample of the resources used for the initiative.

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