

Addressing Five “High-Yield” College Preparation Competencies in the Alexandria City Public Schools

Long-Range Goals and Essential Questions:

1. Ensure that all ACPS students develop five key college preparation competencies: (a) reading comprehension; (b) writing to promote post-secondary success; (c) data analysis and interpretation; (d) discourse within the disciplines; and (e) speaking and listening.
2. Use these five college preparation competencies as a framework and catalyst for equipping all ACPS students for success in both post-secondary education and the world of work.
3. Develop and implement a comprehensive progress monitoring system to track K-12 student achievement related to these five competencies (aligned with curriculum map transfer tasks).

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| <p>Reading Comprehension</p> <ol style="list-style-type: none"> 1. How can we ensure that all students read with comprehension? 2. How can we help all students to become effective analytical and critical readers? 3. What does the research tell us about helping students to make sense of complex text, including informational and persuasive text? 4. How can we promote 21st century literacy competencies for every student? 5. How can we successfully address identified reading comprehension performance gaps among our students? | <p>Writing to Promote Post-Secondary Success</p> <ol style="list-style-type: none"> 1. How can we ensure that all students can express themselves successfully through writing? 2. To what extent can an emphasis upon writing in every content area enhance student achievement and understanding? 3. How can all teachers integrate the writing process within their unit and lesson delivery (i.e., pre-writing, drafting, revising, editing, and publishing)? 4. How can we successfully address identified writing issues and performance gaps among all our students? |
| <p>Data Analysis and Interpretation</p> <ol style="list-style-type: none"> 1. To what extent are we promoting all our students’ capacity for research? 2. How can we help all students to become effective consumers of information? 3. What does the research tell us about helping students to analyze and interpret statistical data and evidence? 4. What does the research tell us about helping students to analyze and interpret linguistic data and evidence? | <p>Discourse Within the Disciplines</p> <ol style="list-style-type: none"> 1. How can we promote engaged discourse? 2. To what extent are we helping all students to “think within our disciplines”? 3. How can students learn to “think like a biologist, an economist, a writer, etc.”? 4. How can we help all students to investigate their world using the perspectives, methods, and technology associated with specific academic disciplines and content areas? |
| <p>Speaking and Listening</p> <ol style="list-style-type: none"> 1. What does the research tell us about promoting speaking and listening competencies in all classrooms and content areas? 2. How can we promote all students’ capacity for expressing themselves through formal and informal speech? 3. How can we help all our students to become effective active listeners? | |

Standards for Success: Understanding University Success
The Association of American Universities and the Pew Charitable Trusts
(Published by the University of Oregon Center for Educational Policy Research,
Eugene, Oregon, 2003)

*“This document is designed to answer one question: **What must students know and be able to do in order to succeed in entry-level university courses?...Traditional measures of high school achievement do not necessarily address this question very well...because they reflect each individual high school’s notions of what constitutes college readiness...***

*“Knowledge and Skills for University Success, developed by Standards for Success, is the result of a two-year study in which more than 400 faculty and staff members from twenty research universities, all members of the Association of American Universities (AAU), participated in extensive meetings and reviews designed to identify what students must do to succeed in entry-level courses in their institutions. National academic content standards documents were analyzed and used for comparison. Multiple peer reviews were employed to hone the standards and ensure their validity, while consultants with expertise in standards development contributed suggestions for improvement. **The resulting statements represent the most comprehensive and thoroughly grounded set of standards for college success yet developed...**” (P. 8, Introduction)*

Five College and University Preparation Competencies
(Derived from These Standards for Success)

Reading Comprehension: Successful students:

- A. Employ reading skills and strategies to understand literature.
- B. Use reading skills and strategies to understand informational texts.
- C. Are able to understand the defining characteristics of texts and to recognize a variety of literary forms and genres.
- D. Are familiar with a range of world literature.
- E. Are able to discuss with understanding the relationships between literature and its historical and social contexts.
- F. Are able to read and interpret visual images, including charts and graphs.

Writing to Promote Post-Secondary Success: Successful students:

- A. Apply basic grammar conventions in an effort to write clearly.
- B. Know conventions of punctuation and capitalization.
- C. Know conventions of spelling.
- D. Use writing conventions to write clearly and coherently.
- E. Use writing to communicate ideas, concepts, emotions and descriptions to the reader.
- F. Both use and prioritize a variety of strategies to revise and edit written work to achieve maximum improvement in the time available.

Data Analysis and Interpretation:

- A. Understand and use research methodologies.
- B. Know how to find a variety of sources and use them properly.
- C. Demonstrate connective intelligence (i.e., discuss with understanding how personal experiences and values affect reading comprehension and interpretation; demonstrate an ability to make connections between the component parts of a text and the larger theoretical structures—e.g., presuppositions, audience, purpose, writer’s credibility or ethos, types of evidence or material being used and style).
- D. Demonstrate the ability to think independently.
- E. Are able to generalize and to go from specific to the abstract and back again.
- F. Recognize the broad range of applications of mathematical reasoning.
- G. Apply concepts of statistics and data analysis in the social sciences and natural sciences.

Discourse Within the Disciplines:

English: Successful students:

- Connect reading to writing and thinking skills.
- Understand that reading is an active process (involving asking questions and noticing patterns along the way).
- Think critically about what they have read.
- Take a position about material and defend that position during discussions.
- Paraphrase and summarize text effectively and accurately.
- Use language to support ideas—not just describe events.
- Understand how to support an argument well enough that a strong position emerges while at the same time understanding the consequences of taking a particular position.
- Use the writing process to revise and rethink.
- Take careful notes—and use them to reassess and adjust their learning.
- Evaluate sources and use valid and reliable evidence to support claims and assertions.
- Engage in ongoing analysis, critique, and connections (e.g., categorizing information thematically; going beyond facts to make connections and analyze patterns; evaluate the quality of text with clearly defined criteria; think comparatively and make connections across texts and points of view).

Mathematics: Successful students:

- Approach mathematical problems as they would an investigation (e.g., asking questions, reflecting and revisiting their solutions—understanding that it is important how one reaches a solution and why a solution works).
- Think conceptually about mathematics—not just procedurally.
- Use logical reasoning and common sense to work on and find mathematical solutions.

- Use experimental thinking, inquisitiveness, and a willingness to investigate the steps used to reach a solution.
- Take risks and accept failure as part of the learning process.
- Use formulas and algorithms of computation successfully.
- Understand the process of modifying, adapting, and combining mathematical tools to find new ways to reach a solution.
- Determine the reasonableness of proposed solutions to mathematical problems, including awareness of both the benefits and limitations of technology.
- Understand that mathematics is the language of the sciences—and fluency in this language is an essential requirement for success in both natural and applied sciences.
- Demonstrate the ability to write with clarity and coherence, especially when explaining solutions to mathematical problems.
- Translate real situations into mathematical representation and, conversely, extract meaning from mathematical expression.
- Demonstrate understanding of computation, algebraic concepts, trigonometry, geometry, mathematical reasoning, and statistics.

Natural Sciences: Successful students:

- Understand how scientific processes operate and how those processes relate to one another.
- Integrate scientific methods and contextual understanding, critical thinking, and hands-on skills.
- Demonstrate understanding of fundamental concepts and principles in physics, chemistry, and biology—including the significance of time, the range of light waves, the nature of force, velocity, and acceleration, and principles of evolution.
- Can translate and transform fairly simple word problems into mathematical equations and vice-versa.
- Demonstrate scientific common sense: an overall understanding of how scientific concepts, definitions, and applications fit together.
- Are capable of experimental thinking—understanding that experimentation and inquiry are fundamental to understanding science and scientific thinking.
- Understand the relationship between scientific understanding and context (e.g., historical milieu, availability of technology, historical traditions, contemporary events, development of scientific inquiry).
- Engage in logical and sequentially organized approaches to scientific problem solving, including designing testable scientific questions, refining questions, and designing and implementing scientific experiments to find solutions.
- Display an ability to think critically and creatively—including questioning existing results and generating and weighing new options and questions as a result of initial inquiry.
- Read and write with clarity, cohesiveness, and meaning in response to a range of scientific text, including articles and research studies.

Social Sciences: Successful students:

- Display competence in a variety of “meta-competencies” in the social sciences: (a) a general sense of chronological sequence and causation across time; (b) accuracy and conceptual understanding of how historical sequencing and events influence one another; (c) sensitivity and understanding about the diversity and relativity of historical perspectives and interpretations; (d) a capacity for interdisciplinary connections (e.g., the interconnections among economics, culture, geography, and politics).
- Show competence in reading, research, and analysis in the major areas of the social sciences, including: (a) critiquing hypotheses in texts and evaluating evidence; (b) differentiating theory from opinion in text; (c) demonstrating information literacy—including assessing the quality and reliability of information; (d) generalizing while recognizing one’s own biases and identifying fallacies in reasoning (both one’s own and expressed by others); and (e) understanding and using key social science research methodologies, including quantitative and qualitative traditions of data analysis.
- Demonstrate understanding of the big ideas, themes, and conceptual patterns of social sciences such as history, economics, geography, political science, and sociology.
- In geography, well-prepared students know how to read, interpret, and locate places on a global map. They are familiar with worldwide immigration and migration patterns.
- In economics, successful students come prepared with foundational mathematical skills and an understanding of such concepts as demand, supply, scarcity, opportunity and tradeoffs.
- In political science, successful students come prepared with an understanding of how the U.S. government works (including checks and balances), comparative political systems, and economic systems.
- In history, students understand key events and documents that have shaped the course of U.S. and world history, including significant periods in western and non-western history.
- In sociology, students understand and can discuss the implications of changes in U.S. demographics leading to increasing diversity. They understand major issues related to social, political, economic, and cultural movements in U.S. history—and around the world.

Second Languages: Successful students:

- Have the ability to recognize cues in language and extrapolate from them.
- Communicate effectively with speakers of another language in authentic cultural contexts—including oral, written, and non-linguistic forms of communication.
- Understand the cultures from which a language arises and in which it resides, using the language to communicate accurately and understanding the practices and perspectives of those cultures.
- Use their first language and culture as a model for comparison with the language and culture being learned, including viewing facts and ideas from multiple perspectives.

- Use the second language to express themselves in full sentences with comprehensible pronunciation.
- Display critical thinking—including metacognitive and meta-linguistic knowledge—to study and internalize the second language, including the following: (a) metacognitive reflection and self-assessment; (b) use of mnemonic devices; (c) inferential reasoning; (d) critical reading; (e) process writing; (f) research; (g) understanding of literal v. implied linguistic meanings; and (h) sensitivity to the range of human communication modalities and practices (e.g., vocal intonation, bodily expressions, gestures, concepts of time, proximities).
- Demonstrate a tolerance for linguistic and cultural ambiguity, including the idea that meaning is culturally constructed—with few absolute rules of behavior (i.e., context determines both meaning and appropriate behavior).

The Arts: Successful students:

- Understand that the pursuit of individual artistic excellence is a lifelong quest that begins by developing a profound understanding and appreciation of contributions made by the most innovative creators in a field.
- Display self-awareness and the ability to think independently, logically, and maturely.
- View themselves as instruments of communication and expression, demonstrating mastery of basic oral and physical expression through sound, movement, and visual representations.
- Understand how the arts can be seen as instruments of social and political expression.
- Formulate and present answers to difficult questions through their personal artistic visions and performances.
- Can justify their aesthetic decisions when creating or performing a piece of work—and know how to make decisions regarding the proper venue for performing or exhibiting any creative product.
- Commit to persevering during the process of improving, revising, and perfecting their aesthetic work.
- Demonstrate artistic habits of mind, including: (a) practice in a sustained, focused fashion without external supervision; (b) how to manage time successfully; (c) how to discipline themselves to remain focused for extended periods of time while mastering technical aspects of their areas of artistic endeavor (i.e., maintaining a “flow state”).
- Display intellectual curiosity and a willingness to experiment with media (showing willingness to struggle with a concept, an object, a space, or a sound).
- Demonstrate the ability to think critically, making independent judgments while accepting criticism about their own artwork or performance as well as critiquing the work of others.

Physical Education, Health, and Nutrition: Successful students:

- Develop a life-long commitment to physical activity and exercise.
- Understand the relationship between physical activity and life-long health and well being.

- Demonstrate a sustained understanding of the relationship between nutrition and physical and emotional health and well being.
- Display a capacity for self-awareness and self-restraint involving lifestyle choices, including adjusting physical activity and diet as they age and mature.
- Show a capacity for collaboration and team participation, appropriately adjusting personal responses and independent movement to achieve long- and short-range team goals.
- Understand the impact of substance intake upon the human body and make appropriate choices to ensure their physical, emotional, and social health.

Speaking and Listening:

- A. Use language to exchange information and interact with others in a range of interpersonal settings and situations
- B. Effectively communicate personal meaning, ideas, and interpretations in a variety of formal and informal speaking situations and contexts (e.g., small group, seminars, debates, presentations).
- C. Demonstrate a clear understanding and awareness of audience, context, and genre when presenting a speech or related form of oral communication.
- D. Use linguistic and non-verbal communication strategies (e.g., tone of voice, proxemics, gestures, visual displays) to enhance oral presentations and communication.
- E. Adjust speaking performances to accommodate varying audiences (including their background knowledge, prior experience with content, cultural traditions, etc.).
- F. Effectively defend an opinion, argument or point of view in a range of oral communication settings, activities, and tasks.
- G. Display the capacity for active listening when interacting with others, including the ability to restrain impulsivity, display self-regulation and self-adjustment, and summarize and paraphrase accurately the ideas and arguments of others.
- H. Construct meaning from authentic spoken sources, including: (a) ascertaining meaning from context when confronting unfamiliar words and phrases; (b) distinguishing between main ideas and supporting details; and (c) analyzing and critiquing another's use of language and literary devices during various forms of oral communication.
- I. Use technology as a tool for enhancing the effectiveness of one's speaking and listening processes.

Strategic Planning Cycles for Addressing the Five College Competencies

Cycle One: Initial Focus Group (i.e., Representatives from All Major Content and Program Areas) Professional Development to Discuss the Following Questions:

- Why should we focus on these five competencies?
- What does the research tell us about the importance of these competencies in preparing all students for post-secondary success?
- How can we engage all staff in initial discussion and exploration of these five competencies?
- What are the most viable “roll-out” strategies? (e.g., How can we maximize staff buy-in?)
- How can we establish initial baseline data regarding current student performance in these five areas? What does disaggregation of current achievement data reveal?

Cycle Two: Cross-Functional Study Group Investigations:

- Based upon Cycle One focus group discussions, study groups will be formed to explore in-depth one or more of the five college-preparation competencies.
- Study groups can be organized in a variety of ways, including cross-functional teams, departmental study groups, cross-grade-level groupings, and study groups focusing upon specific student sub-populations (e.g., ELL, Special Education).
- These groups will be responsible for synthesizing key research conclusions, exploring exemplary programs related to a specific competency, and making initial recommendations about potential “universal” strategies as well as content-, program-, and grade-level-specific strategies we may wish to implement.

Cycle Three: Inquiry Team Methodology:

- As study groups formulate recommendations, potential inquiry team focus areas will emerge and be formalized.
- Based upon Cycle One and Two findings, these inquiry teams will concentrate upon specific organizational and student achievement gaps and issues associated with one or more of the five college competencies.
- Inquiry teams will be responsible for identifying specific achievement targets and recommended strategies for improving students’ reading comprehension, writing, data analysis and interpretation, speaking/listening, and discourse-within-the-discipline skills.

Cycle Four: Action Research:

- Once inquiry teams have identified specific student achievement targets for each of the five competencies, action research teams will be formed.
- Each action research team will: (1) identify a specific action research question and/or hypothesis related to a specific achievement gap issue (e.g., How can integrating the writing process into science instruction enhance student performance in that content area?); (2) collect and analyze baseline student achievement data in that area; (3) develop and implement an action research “action plan” related to the competency; (4) monitor student achievement and the “value-added” impact of selected interventions as they are implemented; (5) report conclusions and findings to the entire faculty; and (6) make recommendations for expanding staff use of strategies proven effective in improving students’ mastery of key competencies.