



THE A-G CURRICULUM: COLLEGE-PREP? *Work-PREP?* LIFE-PREP.

Understanding and Implementing a
Rigorous Core Curriculum for All



What's in this guide?

This guide is for you to learn about the A-G curriculum in California and why all of our high school students need it.

INTRODUCTION

Our economy has evolved. The skills necessary to succeed in the workforce and in college have converged. California's schools must rise to the challenge and provide all students with the skills they'll need in order to have real postsecondary choices. That means they'll need to learn Algebra I and II, geometry, and data analysis and statistics. They'll also need strong reading, writing, comprehension and reasoning. More and more, it means foreign language too. And if students want to go to one of California's four-year public colleges and universities, it means a sequence of courses called the A-G Curriculum.

But A-G isn't just for students bound for four-year colleges anymore. All young people need it, for success in and after high school. It's

the curriculum sequence that prepares students for the English, math, science and language demands of college and work, and also ensures students are exposed to the arts.

This report explains why A-G is so crucial for student success and details some troubling information about just how many students aren't getting the right mix of classes. It also points to some inspiring success stories—entire districts that are making A-G work for all students, every day. Their examples debunk the myths we've heard about A-G being unrealistic for all students and provide some tools educators can use to make sure all students are armed with the skills they need for success in life.

What is "A-G"?

The A-G curriculum is a sequence of 15 required (and 3 more recommended) high school courses. Any student wishing to study at a four-year public college in California must complete these courses. But, as this report shows, it is now clear that A-G is necessary for all students, regardless of the path they take. A-G includes:

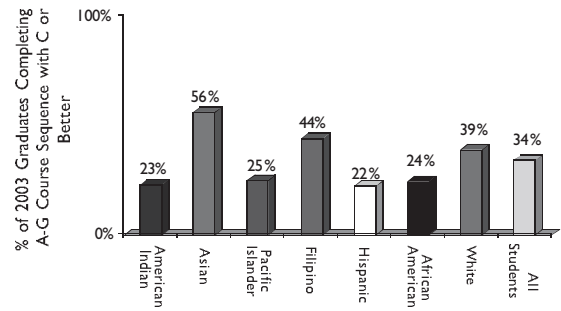
A	History/ Social Science	2 Years (1 year of world history, 1 year of U.S. history or half year of U.S. history and a half year of Civics)
B	English	4 Years
C	Math	3 Years required, 4 years recommended (Algebra, Geometry, Algebra II required)
D	Science	2 Years required, 3 years recommended (2 of the courses must be Biology, Chemistry or Physics)
E	Foreign Language	2 Years (same language), 3 years recommended
F	Visual / Performing Arts	1 Year
G	College Prep Elective	1 Year

To understand more about what is taught in each of these classes, you can read the standards on the California Department of Education website, at: <http://www.cde.ca.gov/standards/>.

Who is Taking A-G?

Even though more than 8 out of 10 California high school students plan to go on to

A-G Completion Rates for Class of 2003



Source: CDE (2003) <http://data1.cde.ca.gov/dataquest/dataquest.asp>

college, only about 4 in 10 complete the curriculum that will most likely help prepare them to succeed if they get there.

These numbers are even worse for some groups of students. While 56% of Asian American high school graduates and 39% of White graduates successfully complete A-G, only 24% of African American graduates and 22% of Latino graduates do the same.

Though worrisome enough, these numbers actually overstate our students' readiness, because they don't include students who don't graduate from high school. When we look at entering 9th graders as a whole, only 12% of Latino and 14% of African American graduates successfully complete the A-G courses and graduate from high school.

A-G: Important In High School and Beyond

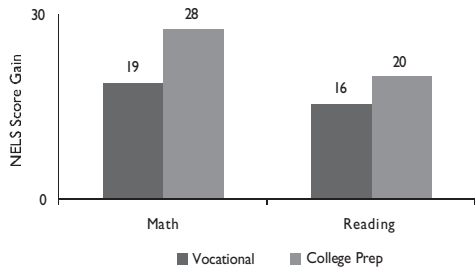
In High School

Today, far too many of California's high-schoolers read and do math at middle school levels. Latino, African American and poor youngsters trail years—more than 4 years—behind their peers. Enrollment in a rigorous core curriculum such as A-G can help change those patterns.

It seems counterintuitive. One would think harder classes are, well, harder to succeed in. But in actuality, the greater challenge leads to greater student success. And widespread participation in a more rigorous curriculum helps create a school-wide culture of success.

- **A high-rigor curriculum helps all students do better in school.** Research shows that students of all skill levels actually do better when they're enrolled in rigorous classes.

Low Quartile Students Gain More From College Prep Courses



*Grade 8-grade 12 tests core gains based on 8th grade achievement.

Source: USDOE, NCES, *Vocational Education in the United States: Toward the Year 2000, in Issue Brief: Students Who Prepare for College and Vocation*

Even those who enter high school with few skills and low test scores show greater growth in challenging classes than they do in the general or low-level classes into which they are usually tracked. And, interestingly, research also has shown that students who failed most in the past, the lowest-performing students, actually fail less when they are in more challenging classes and provided with extra support. Evidence suggests this happens because students are less bored and more engaged in the more rigorous courses.

- **A-G creates a school culture of high expectations:** Schools and districts throughout California that are raising achievement and closing achievement gaps have at least one important thing in common: they have created a school culture that expects their high school graduates to be prepared to go on to college.

Schools and districts that require all students to take a rigorous, college- and life-prep curriculum like A-G send a powerful message: They expect, demand, and foster, high academic and post-secondary achievement in each of their students.

We must send the same message in each and every one of our communities in California.

Today, in too many of our schools, low-income students, students of color and low-performing students are shepherded into low-rigor courses and they get mostly buried with low-level assignments. It's no wonder these students do less well on our tests. The fact is, we're teaching them less. A-G sends a strong message to reverse that cycle.

In the Workforce

Calling A-G a “college-prep” sequence is really a misnomer today. Today, it's about life-prep. A-G is the best preparation for all paths in life, even that leading to the workforce straight out of high school.

“Good jobs—those with meaningful career paths and family-supporting incomes—will go to those with strong academic and technical skills, especially in math, science, and technology, and in the ability to reason, solve problems, and communicate effectively.”

— Carol D'Amico, former Asst. Secretary for Vocational & Adult Education

- Employers want the same skills colleges do. Recent research by the American Diploma Project found that employers increasingly want the same high-level skills that college-bound students need.

Employers:

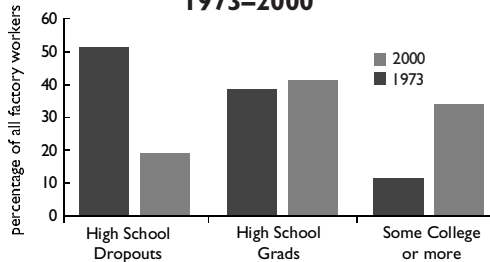
 - Unanimously cite the importance of strong reading and comprehension ability, so employees can understand informational and technical texts.
 - Are also emphatic about the need for a literature background, so employees can better understand other cultures and interact better with diverse customers and co-workers.
 - Demand strong writing and research skills.
 - Stress the need for Algebra I, Geometry and Algebra II (college-prep math), data analysis, probability and statistics, and competent problem solvers.
- This is about blue-collar jobs, too. Even blue collar jobs that in the past didn't require college-level skill sets have tougher entrance requirements today. Some examples:
 - Sheet Metal Workers: Must complete a four or five year apprenticeship requiring geometry, trigonometry and technical reading.
 - Automotive Technicians: Must have a solid grounding in physics to understand

force, hydraulics, friction and electrical circuits.

- Avionics Technicians: Must know physics, chemistry, advanced mathematics, computers, and electronics.
 - Tool and Die Makers: Must complete a four or five year apprenticeship and/or postsecondary training requiring algebra, geometry, trigonometry and statistics.
- Fewer jobs for unskilled workers.

In 1950, 80% of jobs were classified as unskilled. That number is shrinking rapidly. Now, about 85% of jobs are classified as skilled. And our students are clear that they are looking for something better than a job at a fast food chain. Sure, many will take those jobs, but they're now usually just way stations on the road to something better. Today, the fastest-growing professions recruit people with higher-level skills and postsecondary credentials. In California, that means A-G in high school, so the diploma can truly act as a foundation for postsecondary success.

Education Level of Factory Workers Increasing 1973–2000



Source: Carnevale & Desrochers, "The Missing Middle: Aligning Education and the Knowledge Economy," Educational Testing Service, April 2002.

In College: A-G Means Access and Success

College may not be right for everyone—at least not directly out of high school. But it's right for many more students today than it was even a dozen years ago. Indeed, in California, more than 2 out of 3 high school graduates go immediately on to college. That's good, because 8 of the top 10 fastest growing jobs require an Associate's degree or higher.

"An Education beyond high school, once considered a luxury by many Americans as recently as 25 years ago, has become today's necessity. In the age of agriculture, postsecondary education was a pipe dream for most Americans. In the industrial age it

was the birthright of only a few. By the space age, it became common for many. Today, it is common sense for all."

—National Commission on the High School Senior Year

- **Students are barred from our 4-year public colleges without A-G.** When students enter school they believe they have the potential to do anything they choose. They are open to all opportunities, and they usually have big dreams. But as they move through the grades, many youngsters have those hopes dashed. Without A-G many doors are closed.

The California State University (CSU) and University of California (UC) systems both require high-school graduates to have completed A-G for admission.

- **A-G helps in community colleges, too.**

While A-G is not required for entrance into California's community colleges, it is hugely important if students want to be prepared to access college-level classes and earn their degree.

No, college doors aren't closed irrevocably without A-G. Sure students can complete the required courses in community college, and then go on to a four-year. But without the necessary high school courses, they can't get access to the most sought after programs in community colleges and far too many wind up in remedial classes. It's a lot to ask our young people to use their own time and their own dime, or to put their careers on hold for an additional year or more, to take classes we should and could have provided to them in our public high schools.

- High-rigor high school courses help students complete and do better in college. A rigorous high-school curriculum is the single most important factor in college completion, more important than SAT scores, class rank or socioeconomic status. With a college-readiness curriculum, students receive higher GPAs when in college and graduate from college at higher rates. A rigorous high school curriculum also levels the playing field between young people from diverse backgrounds. In fact, first generation college students who

took a rigorous curriculum in high school stayed in college at a higher rate than students whose parents graduated from college.

- High rigor especially benefits low-income students and students of color. All students, especially Latino and African American students show extraordinary increases in college completion when they completed a rigorous, college preparatory curriculum in high school. African American college students, for example, have a 75% chance of graduating if they had a strong high school curriculum, but only a 45% chance without it.

Is A-G the Magic Bullet? No. But It's Tremendously Important.

Just getting students into the right A-G courses isn't a panacea. What teachers expect varies greatly from classroom to classroom, school to school. Many students who take the course sequence still wind up in remedial classes, even in 4-year colleges. But that doesn't mean we should abandon A-G for all. It means our schools need both to get students into these core courses and to make sure the rigor taught in the courses is consistent. California's high standards are central to this, but not if they sit on the shelf. Overall, 70% of California's classroom instruction time in English and math is below standard. In short, we have to ratchet things up everywhere. That doesn't mean we don't push forward on implementing a sequence that has so many benefits for our young people.

A-G Is Working, Every Day

Districts across California are making sure, every day, that more and more students are enrolled in the A-G course sequence, and they're seeing tremendous success.

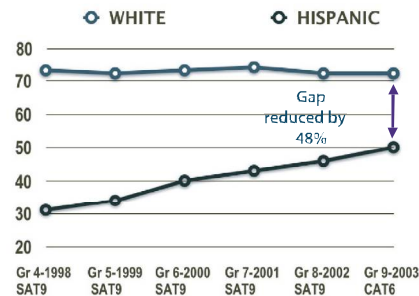
Some, like San Jose Unified, have made the A-G course sequence their graduation requirement. Others, like Fontana Unified, have passed Board resolutions to make the A-G sequence the default course sequence for all students. San Mateo Union High School District is moving toward A-G by gradually adding more rigorous courses to their requirements. Still others have simply made a habit of ensuring that all their students are in the most challenging classes

possible. What all of these districts have in common is that they prove A-G for all is not just a pipe dream of overzealous policymakers and advocates. The students are thriving.

In San Jose, for example, reading and mathematics scores have improved significantly, generally at much higher rates than the rest of the state. For example, between 1998 and 2002, African American 11th graders improved in reading nearly seven times more than African Americans statewide. And the system-wide efforts behind San Jose's A-G Initiative are producing great results for elementary, middle and early high school students too. The achievement gap between Latino and White students has decreased in reading by a whopping 48% since the advent of A-G-for-all. In math the Latino-White gap has closed by 24%.

SJUSD SAT9 & CAT6

Matched Reading Scores at Grades 4-9 for Students who Have Been Tested with STAR Every Year Since 1998



Inspired by evidence of impact in schools, some entire states are implementing a “college prep” course sequence like our A-G sequence, for all students. In Texas, the graduation expectations have been raised dramatically over the last decade. Sixty percent of students now complete the Recommended High School Program and, starting this fall, all students will be placed in these courses unless they opt out. Texas also provides financial aid through its Texas Scholars Program to students who complete the Recommended Curriculum. Indiana is implementing a college prep sequence for all called Core 40, and the Core 40 end of course exams will be used in college admission, placement and financial aid.

These examples are important, because they explode some of the devastating myths we have heard about A-G. These myths say A-G for all

can't work, or, worse yet, that it can't work for only certain groups of students.

Don't Buy Into the Myths About A-G

Myth #1 —Students Will Drop Out

This is by far the most common concern we hear. It goes like this: If we put students in rigorous classes, they will drop out, and that's far worse than not taking the right classes. The data turn this myth on its head. In San Jose Unified, for example, graduation rates have held steady while requirements have toughened. Using the widely respected Urban Institute methodology for calculating graduation rates, it becomes clear that San Jose's graduation rates actually rose from 73% in 1998-99 to 79% in 2002-2003.

Given what we know about why students drop out, that makes sense. Research has shown that students don't drop out because we work them too hard. They drop out because they're bored.

Myth #2 —Rigorous Courses Means Eliminating Vocational Education

A-G and vocational education are not mutually exclusive. To the contrary, they're a great team. The "A-G" sequence requires a student to complete only 15 courses, which leaves plenty of room for students to enroll in a vocational training program or other alternate courses—even in a traditional 6 period day.

Done right, vocational education classes can provide students with valuable skills that they can utilize in their future careers. But alone they aren't enough. Employers are clear that technical skills standing alone, without a strong foundation in academic disciplines like English and math, will not be sufficient for success in the workplace.

Some vocational education courses have already been reworked to include more rigorous subject matter and certified as A-G, courses like Agriculture Business and Economics, Architectural Design, and Fashion Design and History. In short, it isn't about vocational education or rigor. It's about vocational education and rigor. It's about vocational education and college prep.

Myth #3 —All High Schools Offer These Classes and Kids Can Take Them if They Want To.

Many students can't or aren't able to take the A-G sequence. There are several reasons for this phenomenon.

In part, it's the result of low expectations. It's about educators, parents and sometimes students themselves who wrongfully assume that "some" students can't succeed in A-G. Sometimes with the best of intentions, educators have organized schools to sort students by perceived "destination", educating each quite differently.

It's also about information. The State of California has mandated a low-rigor minimum graduation sequence that doesn't adequately prepare students for success in much of anything. Too many students are unaware that the A-G sequence even exists, so some who plan to go on to college discover in their junior or senior year that their options have been limited because they were taking the wrong classes.

This problem is compounded by the fact that California students have less access to guidance counselors than students in any other state (a ratio of 960 K-12 students per counselor), and so have little opportunity to seek advice on what courses they need to succeed.

How Do We Get to A-G for All?

When we say all students should be enrolled in A-G, we really mean all students without severe cognitive disabilities. But that doesn't mean all students have to receive the instruction in the exact same way, or in the exact same time frame. It isn't always easy, but it can be done and it is being done, every day. Here are some strategies to help effectively bring A-G to all students of all skill levels:

- **More time.** After time spent on holidays, special events, testing, professional development days and other important (and some not so important) demands that take time away from the classroom, teachers in too many schools – especially overcrowded schools that must operate on a year-round

calendar—are left with about 20 eight-hour days. That’s less than three weeks per subject per year. Schools that are seeing success make more time for teaching and learning. Some add a 7th period. Some add Saturday school. Others use inter-sessions and summers for instruction. More time is especially necessary for initially low performing students.

- **Build in academic support systems—but don’t get caught in remediation purgatory.** If students are using all of their time outside of the A-G sequence taking electives without any academic foundation, they may not have enough support and learning to succeed in the rigorous classes—especially under performing students. And students who spend years in remediation almost never catch up. But all electives can be structured to include an academic component.

Here’s an example: Pair an academic course (like English), with an elective course (like drama) and package them as one class. In both, the teachers focus on ensuring that students are literate, and are deliberate in making sure the students can read academic text and write well. So the student gets two credits, learns the elective subject matter and the academic skill is reinforced.

Another way of ensuring students who need the extra support get it is by placing students who are struggling in geometry, for example, in a geometry support class scheduled to immediately follow geometry and taught by the same instructor (or better yet, pair of instructors). A third way is to align after school supplemental instruction with the lessons and curriculum taught in core disciplines, and provide supplemental instruction providers with lessons designed to focus on individual student needs.

- **Keep your eye on the rigor.** Make sure the rigor of the A-G course doesn’t end with the title. This should be easy for us here in California. We have a rigorous set of standards that are closely related to the A-G course requirements, and we require end-of-course exams (our California Standards Tests). Anchor the courses to these assessments. Use what you learn from the test results

in the classroom (to fine-tune instruction) and in professional development programs.

- **Involve Middle Schools and Actively Engage Students in the Subject Matter.** Focus instruction on building the academic tools all students will need to succeed in A-G, beginning in middle school. For example, in social studies, give students opportunities to conduct research by exploring historical problems that involve reading primary sources, or investigating an urgent issue in their community with economic or environmental implications, and then present their arguments in writing. That is, teach them to use the tools of the social studies rather than merely dispense information as a series of facts to be memorized. When thus engaged, students develop their reading, writing and research skills alongside the actual content, and they will arrive in high school with a strong foundation for the work of demanding history courses.

What’s the Bottom Line?

As educators, we have an obligation to prepare our young people to make their own choices in life from among the full array of post-secondary options—not to limit their options and take away their choices. A-G isn’t perfect, but it’s the best vehicle we have for ensuring all students are empowered to make these choices after high school. And if our young people are well-equipped to succeed in the marketplace, it’s better for all of us. We’ll spend less on remediation, less on summer school, and less on intervention programs. We’ll earn more, too, because the more our young people know and the more skills they have, the more their potential increases. Simply put, A-G is the best bet for the futures of our young people and our State. It is an economic imperative. It is a moral imperative. The bottom line is, A-G is imperative for all students in all schools in California.

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About the Education Trust West

The Education Trust West is the West Coast presence of the national policy organization, the Education Trust. We work for the high academic achievement of all students at all levels, kindergarten through college. While we know that all schools and colleges could better serve their students, we concentrate on the institutions most often left behind—those serving low-income, Latino, African American or Native American students.

The Education Trust West works alongside policy-makers, parents, education professionals, business and community leaders, in cities and towns throughout California—who are trying to transform their schools and colleges into institutions that genuinely serve all students. We especially work to ensure that all students have the opportunity to enroll in and successfully complete California's college readiness curriculum. In today's and tomorrow's economy, Ready for Work and Ready for College mean the same thing: Ready for Life. Our goal is that high school graduates are empowered and prepared to choose among all postsecondary options.