

- The new High Schools That Work Design joins a college-ready academic core with intellectually demanding career pathway courses. The design seeks to strengthen connections between education and careers by blending academic and career technical and education studies.
- The design has as its aim to greatly increase the percentage of individuals who earn credible credentials by age 25 to fill the projected gap of 11 million jobs that will require individuals with postsecondary studies.



- The six design principles drive the new HSTW framework and the aligned middle grades, career and technology centers and Advanced Career (AC) STEM Pathway Academies and the redesigned senior year frameworks.
- The design principles represent a set of foundational assumptions that underlie SREB's School Improvement program.
- The new HSTW framework of nine Key Practices engages students in accelerated learning experiences that give them a sense of purpose, adds value to their academic readiness and prepares them for both college and careers.



- In addition to HSTW, SREB offers four additional school improvement programs including the senior year redesign, Making Middle Grades Work, Technology Centers That Work and Advanced Career STEM Pathway Academies.
- The school improvement programs can be adopted to address specific challenges of schools and districts, and SREB can partner with states and districts in a comprehensive school system reform effort for a cluster of schools.



- SREB provides a set of products, services and support for districts and schools to implement the array school improvement frameworks.
- These include curriculum products such as:
  - AC career curricula 32 courses in eight career fields with two more under development
  - Four Readiness courses two ready for high school courses in literacy and math and two Ready for College courses for seniors. These are for students who do not have the foundational skills to make successful transitions from middle grades to high school and from high school to postsecondary studies.
- Professional development includes:
  - Efforts to provide in-depth training in embedding literacy and math
  - Leadership development
  - Counseling for careers
  - Project-based learning
  - Teaching to Lead



 HSTW's framework of goals and Key Practices is based on the belief that high expectations, challenging and relevant assignments will encourage students to make the effort necessary to meet college- and career-readiness standards.



- SREB's school improvement staff is prepared to work with states, districts and schools to make the shifts in school and classroom practices that will increase the percentage of students nationally leaving high school prepared for college and careers from 40 percent to 80 percent.
- Eighty percent is a very realistic goal if we hope to close the skills gap of 11 million workers needed with postsecondary education by 2025. These youth are in middle grades and high schools today.

Georgetown University projections.



- Only about 40 percent or less of students leave grade eight with the foundational literacy and math skills to succeed in challenging academic classes in high school. In the future, we need to approach 90 percent of students entering grade nine ready for challenging high school studies, and 95 percent or more of these students entering grade nine graduating from high school.
- It is not unrealistic to expect that 80 percent of students will leave high school college- or career-ready or both — 60 percent earning a credible credential or degree by age 25.
- These are bold goals. There are rapid changes in requirements and skills needed to obtain a middle-class job, and the percentage of individuals who need those skills is increasing much faster than we are improving the quality of educational experiences for students.



- Why the new HSTW Design?
- Two-thirds or more of the jobs are going to require some postsecondary education and an accelerated middle grades and high school model is needed for more students to be ready for these opportunities.
- The projected skills gap of 11 million workers by 2025 with postsecondary education and credentials means that this is serious business. The old system is not adequate. We can't just have a few private and charter schools for the best. We must have a public education system that provides good education opportunities for all for students.
- The big losers in the new economy will be men, young adults and particularly young adult males, and those who have a high school education or less, or do not have any kind of marketable skills.
- We need to flip the current model of some 15 to 20 percent of students entering into an associate degree or some postsecondary education to 30 to 40 percent, so they can obtain a credential or degree necessary for the 30 million middle-skill jobs.
- It means prioritizing gainful employment. Increase the priorities given to AAS, certificates, certifications, licenses and apprenticeships with options to pursue a BS degree.

New HSTW Design Seeks to Change These Outcomes National transcript outcomes of 2013 HS graduates						
	Pathway / curriculum completed	% who completed	% who planned bachelor's or higher	% who planned associate or higher		
	College and Career Ready	8%	77%	11%		
	College Ready	31%	78%	12%		
	Career Ready	13%	52%	22%		
	No Cohesive Curriculum	47%	61%	17%		
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- This slide represents a High School Longitudinal Study of 2009 Ninth-Graders, National Representation, 23,000 + students from 944 schools followed from ninth grade through 12<sup>th</sup> grade and postsecondary years. National Center for Education Statistics.
- The national transcript data are quite revealing of the quality of students' educational experiences. Simply put, what these data tell us is that counselors, teachers and parents are not encouraging high school students to enroll in a complete set of college-ready academic courses with either an advanced career or advanced academic focus.
- Only 8 percent of high school students completed a college-ready core and an advanced career concentration, 77 percent plan to pursue a bachelor's degree; 11 percent plan to earn an AS/certificate.
- Of the 31 percent who finished, only a college ready curriculum, 78 and 12 percent plan to pursue postsecondary studies.
- Thirteen percent of the students completed a career ready focus of three coherent courses in a career pathway. However, 47 percent completed no cohesive curriculum, which means they did not complete all parts of a college core, nor a focused sequence of advanced career courses.
- Fifty-two and 61 percent of students in the career-ready curriculum and in the (noncohesive) curriculum plan to pursue a bachelor's degree and 22 and 17 percent plan to pursue an associate/certificate.
- Many students are not leaving high school prepared for either **postsecondary studies or a** career.
- The majority of our students, regardless of preparation level, plan to obtain a bachelor's degree.
- Ten years later, many wind up at the community colleges, resulting in a lost decade for talented young people. We need to flip the current situation.
- A major takeaway:
  - We need an accountability system that recognizes high schools that graduate more students prepared for a double purpose both college and careers.



• A fair question from Calvin.



 Calvin will be a member of the under class unless the quality of educational experiences is relevant, rigorous and connected to real opportunities.



 Calvin needs to work harder and be given assignments that connect his academic studies with his interests and that require a productive struggle.



- What is wrong with this comic strip?
- Calvin fails to see any connection between his current classroom assignments and emerging career opportunities.
- Good assignments are challenging and connected to an essential question that matters to students and to their futures and will result in Calvin succeeding in ways unimagined by his teachers.



 HSTW Key Practices suggest that students need a framework of rich learning experiences that add value to their readiness for college and careers and develop their cognitive and technical skills. This coupled with career and educational counseling can prepare them for both careers and postsecondary studies.



- What are the key features of an INTELLECTUALLY DEMANDING career pathway program of study?
- I would suggest that there are at least five key features that make for an intellectually demanding career pathway program of study.



- Key features of career pathways:
- Students complete four or more career pathway courses (Carnegie units) aligned to labor-market opportunities, college-ready academic standards and postsecondary education and/or training opportunities.
- It is important that pathways not be aligned to yesterday's jobs, and traditional CTE programs be redesigned to meet the demands of today's rising workplace requirements and that many new pathways be developed for the emerging career opportunities for which students know little about.
- Students complete at least three Advanced Career (AC) courses; Advanced Placement (AP) courses in math and science or humanities; or students may complete the International Baccalaureate (IB) diploma program in lieu of four career pathway courses.
- What is unique? It focuses on advanced career majors, advanced areas of focus. It is intellectually demanding and rises to the level of the new state college- and career-readiness standards and to the rising complexity of today's growing labor-market opportunities.
- This means redesigning old programs, adopting new Advanced Career programs, developing advanced academic concentrations that blend with career pathway studies and that 80 percent or more of the students finish such pathways.



- When coupled with college-ready academics, career pathways have the power to move students into good, higher-paying jobs and the middle class.
- Students will experience a college-ready academic core of English language arts, mathematics, science and social studies. This means that most all courses will be taught to college- and career-readiness standards – not just those labeled college and career ready or honors, but all core academic courses.
- This means four years of math including Algebra I, geometry and two additional rigorous math courses, such as statistics and another careerrelated math course, or
- Algebra II and higher math courses for students pursuing STEM career pathway programs leading to advanced credentials and postsecondary degrees in STEM fields.
- For many students to grasp and understand emerging STEM fields will require new pathways being developed in high school that truly blend a STEM pathway program of study with at least four career courses built around authentic real-world projects. It will provide students an opportunity to test out their own aptitudes in a given career field and to learn about these opportunities which today are hidden from them.



All decline in enrollment except health care in high school and community college.



- We know that rigorous assignments add value to students' mathematics and literacy readiness for careers and postsecondary studies.
- It means paying more attention to the assignments that we give in career pathway courses.
- Rigorous assignments will require students to do background research to complete the assignments. The assignments will have enough complexity to require the use of the applied academics.
- Rigorous assignments will require students to apply problem-solving skills, the use of technology and technical skills. Such assignments will require team work to complete. Teams of students would receive feedback and have to revise their work.
- Assignments are authentic and real world when they give students a chance to test what jobs in the 21st century will be like in a given career field.

	Key Features of Career Pathways				
	Key Feature 4:				
<ul> <li>A weighted grade-point average for Advanced Career (AC) pathway courses.</li> </ul>					
	Key Features of Advanced Career				
	Fully Developed Pathway Programs Advanced Career Programs of Study				
	Project-Based Learning Blended Learning Experiences				
	Technology and Software Assessments				
	Counseling for Careers Teacher Selection, Professional Development and Support				
	Dual Credit and Industry Certification Collaboration and Partnerships				
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- It is important that Advanced Career pathway courses be based on a rated grade-point average just as other advanced courses are. The intellectual demand and the blend of skills it takes to complete such assignments make them very complex and challenging.
- The biggest challenge we have is that many do not believe our students can do this level of work. We have had a host of our Advanced Career pathway teachers state that they have had a change of heart; they have been amazed at the level and complexity of work that students can complete.
- The four key features must be a part of a career pathway program of study that prepares students for the middle class.



- Why join a college-ready core with intellectually demanding career pathway courses with these elements?
- We have too many students stuck in the shallow end of the middle grades and high school curricula?
- This results in an over supply of students competing for lower-level jobs and a rising youth unemployment rate for individuals under age 25.
- Why does this exist today? First, too many students are taking their academic core from courses not aligned to state college- and career-readiness standards, which fail to engage students in levels of assignments that prepare them with foundational literacy and math skills needed for postsecondary studies and the workplace in the 21st century.
- Some students are stuck in career and technical education (CTE) pathways that are designed for yesterday's jobs. Further, too few students are enrolled in a structured CTE pathway program of study that lays out a map clearly connecting high schools, postsecondary studies and the emerging careers.
- Too few students enroll in CTE classes that have assignments that require students to draw upon college-preparatory academic skills to complete.
- The big takeaway: Sixty percent of American high school students are still stuck in shallow learning. That reduces greatly their access to middle-class careers, and too many will not be prepared for emerging opportunities between now and 2025. Only about 40 percent of students are taught to college- and career-readiness standards in the core academic discipline areas. Enrolling more students in advanced academic and Advanced Career courses can result in a higher percentage of students leaving high school college or career ready or both.



- Strong literacy (reading, verbal and written communication), numeracy and math skills are essential to success in postsecondary education and in the new workplace. They are essential for middle-class careers.
- Males have been the big losers in this recession and appear to remain the big losers in the growing opportunities unless they develop foundational literacy skills. Teachers can help by embedding literacy-type assignments into both academic and career pathway courses. The Literacy Design Collaborative provides one structured approach for doing this.
- Mathematics to solve multistep math problems, to have a sense of mathematics, and be able to apply math to real-world problems is a foundational skills needed in the modern workplace. Teachers must create assignments in career pathway courses that require students to draw upon their high school mathematics classes to complete. Further, it means embedding real-world problems into math class assignments aimed at deepening students' understanding of math concepts, reasoning skills, and the ability to apply math. The **Mathematics Design Collaborative** approach to math instruction provides a nice boost to math achievement when implemented with fidelity.



- Many students will need extended learning time and support to acquire the foundational skills in literacy and math in the middle grades and high school. This is going to be essential to reverse the declining participation in the workforce by males and to increase male and female readiness to access middle-class careers and incomes.
- This can be accomplished by accelerating the middle grades for at-risk students and providing extended time so that more leave grade eight ready to do challenging high school studies.
- Provide opportunities in high school to connect college-level academic studies with challenging applied career-pathway projects. It provides students a reason for learning the core academics, and it advances their ability to master those skills when they can apply them in a context that makes sense. Through hands-on, real-world projects, students understand and retain skills learned.



- Today, many students are attending four-year colleges but many are never finishing. Many of our students leave high school without the foundational literacy and math skills so essential to obtaining an advanced credential, a four-year degree or even an associate degree.
- If we are to avoid the cost and time of remediation courses, and if we are to have more students obtaining those advanced credentials and degrees by age 25, high schools must make sure students leave high school ready to succeed in a range of postsecondary studies.
- At SREB, we recognize a difference in academic readiness for college, a STEM degree, and for an advanced credential in some cases, but too many of our students leave high school without these foundational skills.
- SREB has attempted to address these over the last decade and a half by developing four courses — a literacy- and a math-ready course, to be offered at grade eight preferably, for students who arrive at the end of grade seven not ready to do challenging high school studies.
- A second set of courses have been designed for the senior year for students who take the ACT, SAT or placement exams and clearly plan to go on to postsecondary studies but are unprepared and will have to spend much of the first year in costly remedial and developmental courses.
- Evidence from SREB's College Ready literacy and math courses suggest that you can close the achievement gap for a high percentage of students who are within three points of meeting the cut score on ACT and within 50 point of meeting the cut score on the SAT.
- This year we are field testing high school and college readiness courses.



- For many of our current career pathway courses, assignments are based on a 1970 economy model. Students are asked to follow a series of steps prepared by the teacher. The modern-day workplace is looking for students who can improvise, create and solve problems.
- The new HSTW sites provide training for current career pathway teachers to reshape their courses around authentic, work-related project-based learning experiences.
- Such assignments will require students to draw upon grade-level college-ready standards in literacy, math and science to complete; technology such as coding and learning new software and to learn to work independently and with a team using academic and technical knowledge and skills to solve real-world problems.
- We have developed a cadre of professional developers to help pathway teachers reshape their assignments to make them more rigorous. This is best modeled in our new Advanced Career curricula.
- You may download our Advanced Career curricula brochures at <u>http://www.sreb.org/8-curricula</u>.
- You may download our Project-Based Learning brochure at <u>http://www.sreb.org/publication/project-based-learning-career-pathway-courses</u>.
- Why would we want to reshape assignments around project-based learning experiences? It truly adds value to students' college and career readiness.



 Students need tough productive assignments that require them to struggle, think, do research, network with others, and become independent, innovative, critical thinkers who will acquire skills that will give them a better chance at a middle-class lifestyle.



- Students need a progressive sequence of work-based experiences

   tours, job shadowing, internships, in late middle grades and early high school. Students need a progressive set of school and community-based experiences that explore the career and educational options reflecting their interests and aptitudes.
- Students learn firsthand about broad career fields and future possibilities that align with their emerging interests, aptitudes and abilities.
- It is essential to close the knowledge gap between careers, students' interests and aptitudes and real-world opportunities.



- Out of 38 careers, almost 2,300 students showed an aptitude for at least one of the 38 careers. Just over 1,000 students showed a high interest fit for at least one of the 38 careers.
- Students are often limited by experiences and what they know about.
- There are more than twice the people with aptitudes for one or more of these high-demand fields, but less than half who have an interest, and they have little exposure to opportunities that allow them to discover their interests.
- It is essential that we address the information, career exploration, advisement gap that exists in the American upper middle grades and high school.



- We have made college the focal point of our counseling system. The focal point must be careers. Postsecondary studies for many youth become the means to their career goal.
- This means we must place much greater emphasis on helping students understand their aptitudes, academic strengths, career opportunities and the educational requirements to reach different career goals.
- It means that students and parents must have access to high-quality academic and career counseling to help students set career goals and plan a career pathway program for high school and for at least one year of postsecondary study if we are going to have more students to earn those advanced credentials and degrees.
- Much greater emphasis is needed by counselors to assist students to choose a pathway program of study that prepares them for a double purpose — college and a career.



- This slide illustrates why we need to close the gap between students' interests and opportunities.
- I thought this cartoon was an appropriate way to close to make the point that we have to help students find a focus — something that they can connect to a purpose in life. This will be a lifelong journey, but we need to start that journey in middle grades and in high school.
- High schools that help students find a focus are always higher performing than schools where too many students are just "hanging out."

Nine Key Practices				
Key Practice 8:				
<b>Students experience a senior year</b> that allows those who have the foundational literacy and math skills needed for college and careers to pursue an early advanced credential program, an early college program or both, and gives those who lack the foundational skills an opportunity to acquire them.				
Why? Essential ticket to the middle class.				
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- Part of the HSTW new model is a special emphasis on redesigning the senior year and 13th year to remove the lines between secondary, and postsecondary education and workplace learning.
- We propose that students who meet college- and career-readiness indicators for literacy and math by the end of grade 11 need an opportunity in their senior year to earn credit toward an associate or a bachelor's degree or an advanced industry credential in high-demand, high-wage field.
- Schools need to redesigned senior year to help those who lack the foundational literacy and math skills an opportunity to acquire them.
- It is important. It provides an essential ticket to the middle class.





- The United States workforce is more educated than ever. In 1973, workers with postsecondary education held 28 percent of the jobs; 40 percent were held by high school graduates and 32 percent were held by individuals with less than a high school education.
- In comparison, by 2007, 32 percent of the jobs were held by workers with a bachelor's degree or higher, 29 percent held by workers with an AA degree or some postsecondary education or training; and 39 percent held by persons with a high school diploma or less, compared to 1973 when 72 percent of jobs were held by persons with a high school diploma or less.
- However, by 2016, 36 percent of jobs are held by persons holding a bachelor's degree or higher, up by 4 percent since 2007; 29 percent held by persons having an AA degree or some postsecondary education and training; and 34 percent held by persons having a high school diploma or less, which represents a drop of 5 percent since 2007. Too many individuals are being prepared for declining low-skill jobs and too few are being prepared for high-skill jobs.









- The path to the middle class for many individuals will be through an intellectually demanding career pathway program that is joined with a college-ready core linked to quality work-site learning experiences and emerging opportunities in the 21st century economy.
- For many individuals, this will be their best chance to achieve a middle-class lifestyle.

