MIDDLE SCHOOL REDESIGN

At a Glance

Researchers have found that middle school students undergo developmental changes that require unique educational structures and support. As a result, experts have suggested a number of specific strategies for organizing middle schools in order to best meet students' needs. This Information Capsule summarizes middle school redesign initiatives that are underway across the United States. A summary of research-based best practices in middle school redesign is also provided.

Middle school students require unique educational structures and support. As students transition from elementary to middle school, they are undergoing physical, intellectual, social, and emotional changes. Researchers have therefore suggested that middle schools need to be specially designed to meet young adolescents' distinct learning needs (Gilewski & Nunn, 2016; Hanover Research, 2015; Villavicencio & Grayman, 2012). There are efforts underway across the U.S. to redesign middle schools in order to create better learning experiences for students. Middle school redesign initiatives in U.S. school districts are summarized below.

NEW YORK CITY DEPARTMENT OF EDUCATION (NEW YORK, NY)

New York City's Middle School Quality Initiative (MSQI) was developed to empower all middle school students to read, write, speak, and think independently at grade level. The program utilizes an adaptable framework that allows for flexibility and innovation at each school. The initiative was launched by New York City's Department of Education in collaboration with the New York City Council Middle School Taskforce in Fall 2011.

The instructional core of the MSQI framework addresses literacy, with specific emphasis on the following three components:

- Literacy teaching across all disciplines – MSQI schools focus on explicit teaching of reading comprehension strategies. Literacy instruction is embedded across all subjects.

- Strategic reading instruction – Schools set aside time during the school day to offer strategic reading tutoring to each student. These strategic reading periods are scheduled into the school day, so students can be flexibly grouped based on their individual reading needs.

- Tiered assessment – MSQI teachers use a range of tiered, strategically administered assessments to gain a comprehensive picture of each student's unique reading process, literacy-related growth, and areas requiring further attention.

Teachers are provided with support to continuously improve their literacy instructional practices

through professional development workshops, in-school coaching, regularly scheduled time for teacher collaboration, school inter-visitations, and MSQI roundtables. The MSQI maintains a website that provides materials, tools, and other supports for all components of the initiative. MSQI strongly supports teacher collaboration in teams that analyze student data to identify best literacy practices and implement new strategies.

Schools are provided with tailored support from MSQI through:
- A site-based literacy coach (15 days per school);
- Literacy leadership institutes;
- Practitioner workshops and school-to-school visits;
- Free access to a universal reading comprehension screener and online data processing tools;
- Opportunities to participate in supplemental literacy programs; and
- Funding to support program activities.

Schools partner with families to support students' literacy growth through the following activities:
- Sharing student literacy data with parents and assisting them in interpreting the information;
- Helping parents understand which skills are critical to literacy success and how they can best support their children;
- Providing families with strategies, activities, and resources that can be used at home to enrich their children's learning; and
- Creating an open and welcoming environment where families feel valued.

MSQI has partnerships with community agencies and organizations that are designed to facilitate student access to a wide range of learning opportunities and developmental supports.

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BROWARD COUNTY PUBLIC SCHOOLS (FORT LAUDERDALE, FL)

Broward County Public Schools (BCPS) began planning for the Reimagining Middle Grades initiative in November 2016, with implementation scheduled to begin in Fall 2018. The district used stakeholder input to inform design and implementation of the initiative, including a middle school student survey, high school student survey, middle school teacher survey, and teacher "think tank" sessions.

District officials stated, "IF we redesign the middle grades experience so that ALL students engage in project- and problem-based interdisciplinary learning, are supported in a warm environment where their unique educational needs are met, and have an opportunity to express themselves in all academic content areas, THEN on-grade level performance will increase in both

English-Language Arts (ELA) and Mathematics and they will transition successfully to high school."

Strategic initiatives for the Reimagining Middle Grades project include:

- Project- and problem-based interdisciplinary learning – Students solve real-world problems; instruction is tailored to the specific interests and learning preferences of each student; and instruction is standards-based.
- Curriculum focus – Literacy support is extended to include applied learning in all content areas.
- Student engagement – Active participation is encouraged; students are offered more elective courses; and schools implement flexible scheduling.
- Transitions – Schools ensure that students have smooth transitions between elementary and middle school and between middle and high school.
- Social and emotional learning – Instruction promotes student social and emotional skill development.
- Interventions – Multi-Tier System of Supports (MTSS), Response to Intervention (RtI), and Social Emotional Learning supports are integrated into students' learning plans.
- Learning resources and technology – There is equity of access to technology, ensuring that all students have an equal opportunity to succeed; devices are issued to students; and WiFi is reliable and secure.
- Teacher support – Ongoing support includes professional development sessions, school site visits, professional learning communities, and on-demand web training.
- Data use – Data and analytics are used to guide decision-making by all stakeholders.
- Family engagement – Family workshops and learning opportunities are offered to bridge the gap between families and the school.
- Stakeholder involvement – An integrated marketing and communication plan that includes stakeholder outreach and feedback is established (for example, BCPS mailings, BCPS website and app, PTA meetings and communications, District Advisories, newspaper, and social media).

Implementation models will be differentiated to ensure respect for school context and preferences. Based on schools' and students' needs, middle schools will have the option of adopting a non-traditional schedule to allow for more time to work on explicit social emotional learning lessons or project-based learning experiences.

Potential sources of funding for the initiative include:

- Realignment of existing funds;
- Repurposing of existing funds;
- Change in allocations to school site versus central office;
- Community Foundation of Broward;
- Grants; and
- Vendor contributions.

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Broward County Public Schools. (2017). *Reimagining Middle Grades.* Retrieved from http://bcpsagenda.browardschools.com/agenda/01412/Item%201A%20(43662)/SUPP_DOCS/Exhibits/Doc1.pdf.

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SAN FRANCISCO UNIFIED SCHOOL DISTRICT (SAN FRANCISCO, CA)

In 2016, a team of San Francisco Unified School District (SFUSD) middle school principals created a working group to study best practices in middle schools across the country. The working group created a middle school redesign plan with the goal of integrating programs and practices in all SFUSD middle schools so that students have access to 21st century teaching and learning and are provided with equitable, personalized support. The SFUSD Middle Grades Redesign Initiative will be introduced over a three-year period, with full implementation scheduled for the 2020-2021 school year.

Principles guiding the development and implementation of the Middle Grades Redesign Initiative are:
- Support for individual student passions and growth;
- Cross-disciplinary learning;
- Deeper learning throughout the curriculum;
- Socio-emotional embeddedness;
- Authentic performance-based assessment; and
- Teacher collaboration time.

Elements of the Middle Grades Redesign Initiative include:
- New universal learning experiences for all middle school students – All middle schools will offer core academic courses and a greater choice of electives and exploratory courses (including World Languages, Health, Visual and Performing Arts, and Computer Science). In addition:
  - o All students will have personalized learning and development pathways.
  - o All students will have acceleration opportunities that are based on their needs and interests.
  - o Instruction that is relevant to students' real-life experiences will be integrated into all levels of the curriculum.
  - o Cultural competence and multilingualism will be emphasized.
  - o All schools will be equipped with technologies that support blended learning.

- Trimester schedule – All middle school courses will be offered on a trimester schedule.

- Eight-period modified block schedule – Students will take eight courses each trimester (instead of six courses), with longer blocks of classes on certain days of the week.

- Professional learning time – In addition to each school's own scheduled professional learning time, the district's middle school redesign plan will include a weekly two-hour early release to allow teachers to engage in grade-level planning with their teaching teams.

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Parents for Public Schools at San Francisco. (2018). *Middle Grades Redesign: Recap of SFUSD Presentation.* Retrieved from https://www.ppssf.org/news/2018/4/26/middle-grades-redesgin-recap-of-sfusd-presentation?rq=middl e%20school.

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FRESNO UNIFIED SCHOOL DISTRICT (FRESNO, CA)

Fresno Unified School District (FUSD) redesigned 11 of its middle schools during the 2013-2014 school year to better serve its students and to embed teacher professional development time in the school day. Middle school master schedules were redesigned to provide students with college- and career-ready electives, such as foreign languages and visual and performing arts, to increase opportunities for teacher collaboration.

The school schedule was organized into two types of weeks: regular weeks and iPD weeks.
- Regular weeks – Students take six courses (ELA, mathematics, science, social studies, physical education, and an elective). Teachers share a daily departmental preparation period and have the freedom to co-teach within single periods. They are also permitted to group and regroup students according to students' learning needs and the teacher's instructional strategies.

- iPD weeks – Every two or three weeks, schools run an iPD week schedule. During iPD weeks, students take a seventh common-core focused course taught by an expert team of teachers called the Plus Team. When the Plus Team is teaching students, core academic teachers are freed to participate in professional development. Teaching positions on the Plus Team are filled almost exclusively with experienced educators who had previously worked in the district. On regular, non-iPD weeks, the Plus team provides coaching and partner teaching and works with students who need extra help.

Since implementation of the middle school redesign initiative, district staff have reported increases in student attendance, core course grades, and enrollment in elective courses. In addition, the amount of teacher professional development time almost doubled from one year to the next (from 99 hours during the 2012-2013 school year, prior to the middle school redesign program, to 195 hours during the 2013-2014, the first year of implementation of the redesign program).

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Fresno Unified School District. (2014). *In the News: Fresno Unified Middle School Redesign Shows Positive Impact.* Retrieved from https://www.fresnounified.org/news/Lists/in-the-news/DispForm.aspx?ID=23.

Fresno Unified School District. (2014). *Middle School Redesign Update.* Retrieved from https://www.fresnounified.org/sites/board/BoardDocuments/20140924-Board-Presentation-for-B 10.pdf#search="middle%20school%20redesign."

THE BURNETT MIDDLE SCHOOL (SAN JOSE, CA)

The Burnett Middle School (TBMS) is an International Baccalaureate/Middle Year Program (IB/MYP) school in San Jose, CA. In 2012, the San Jose Unified School District, of which TBMS is a part, announced a redesign competition to encourage new school models within the district. Schools were invited to apply for funding to redesign their learning environments and instructional approaches. San Jose Unified School District selected TBMS' proposal as one of its redesign projects in Spring 2012.

TBMS' redesign plan focused on the following three areas of change:
- Blended learning in mathematics, English language arts, and science – These core courses feature blended learning 50% of the time.

- Cross-curricular project-based learning – Students interact with key curriculum objectives to solve real-world problems using the 21st century skills of critical thinking, problem-solving, communication, and collaboration. Projects vary in length from several days to a full semester. All students are engaged in inquiry, peer collaboration, the creation of a solution, and communication of that solution.

- Schoolwide criterion-based grading – Students and parents receive a more thorough analysis of achievement and progress than has been delivered through the traditional A-F grading model. For example, in Humanities, students will be assessed in the four criterion categories of Knowing and Understanding, Investigating, Thinking Critically, and Communicating. Students are also graded on a World Citizenship assessment to further address their mastery of 21st century skills.

Since this was the first time many teachers would be applying these strategies, they were provided with extensive support, including:
- Three days of redesign training prior to the start of school;
- IB/MYP and project-based learning training;
- Time for on-site collaboration;
- One-to-one coaching; and
- Access to the "Redesign Reflection Tool," a tool created by the redesign team that uses data to identify areas in which teachers need additional support.

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NORWALK PUBLIC SCHOOLS (NORWALK, CT)

Norwalk Public Schools (NPS) redesigned its four middle schools during the 2016-2017 and 2017-2018 school years. Prior to implementation of the redesign initiative, a Middle Grades Redesign Committee was formed and met monthly to provide advice and advocacy on how to best improve the quality of middle grades education in NPS. The committee consisted of middle school teachers, parent representatives, central office administrators, a consultant from the National Center for Secondary School Reform, and representatives from the Board of Education and

Norwalk ACTS (a partnership of civic leaders, educators, and organizations).

The redesign of NPS' middle schools had four goals:
- Raise the level of achievement of all the district's middle school students;
- Improve the transitions from elementary school to middle school and from middle school to high school;
- Better address middle school students' social and emotional needs; and
- Create the most efficient, cost-effective middle grades program that is sustainable within the resources the City of Norwalk can provide.

The school district based its middle school redesign on the research of Dr. Bill Daggett, founder of the International Center for Leadership in Education. Dr. Daggett posited that adolescents' educational needs can be addressed through three domains: rigor, relevance, and relationships. Examples of strategies in each of the three domains that were incorporated into NPS' middle school redesign include:
- Rigor (promoted through challenging curriculum and instruction) –
  o Block scheduling, including 90-minute English language arts and mathematics blocks;
  o Increased interventions at all grade levels, including Reading 180, Math 180, System 44, and Teach-to-One;
  o Exploratory and encore course offerings to promote enrichment, exploration, and application of the core curriculum (exploratory and encore classes ensure that students experience additional hands-on and engaging curriculum experiences; examples of courses offered at NPS include health; physical education; music; art; second language; family and consumer science; career and technical education; information, communication, and technology; and humanities); and
  o Alignment of the curriculum to a thematic focus that is consistent with that of the feeder pattern high school.

- Relevance (to promote student engagement) –
  o Small learning communities, with interdisciplinary teams of teachers;
  o Two-teacher teams for sixth graders to ease the transition from a self-contained classroom in grade 5 to a departmentalized setting in grades 7 and 8;
  o Vertical house structure or "schools within a school" that allow students to work with the same teachers across multiple years; and
  o Middle school themes, such as Global Studies, STEM, Arts, and Humanities.

- Relationships (to increase students' trust in their learning community) –
  o 1:20 teacher-to-student ratio;
  o Push-in special education practitioners;
  o Designated English language learner support; and
  o Designated counselor.

Middle schools identified one or more elements from each of the three domains to incorporate into their redesign plans. The process was guided and supported by the district's central office staff in a collaborative manner.

Teachers are provided with ongoing site-based training, on-site coaching, and workshops to

support their implementation of middle school redesign strategies. They are also provided with common planning time for their interdisciplinary team and/or with teachers of the same grade levels and subject areas.

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STAMFORD PUBLIC SCHOOLS (STAMFORD, CT)

The redesign of Stamford Public Schools' five middle schools is being phased in over three school years:

- Phase 1: Middle School Study (Winter 2016 through Spring 2017) – The New England League of Middle Schools conducted a study of the district's middle schools that included school and classroom observations; focus groups with parents, teachers, students, and administrators; a review of key documents; and analysis of student data.

- Phase 2: Middle School Redesign Planning (Spring 2017 through Spring 2018) – The school district developed a plan to redesign its middle schools.

- Phase 3: Middle School Redesign Implementation (Fall 2018) – The middle school redesign initiative is being implemented during the 2018-2019 school year.

Stamford Public Schools' Middle School Redesign has four guiding principles:
- A flexible master schedule that provides personalized levels of support and programming to meet each student's individual needs and interests;
- Increased student voice and choice that lead to higher levels of student self-worth, engagement, purpose, and motivation;
- An advisory program where students feel connected to an adult and the school fosters a sense of belonging and a climate of acceptance and trust; and
- Small communities of learners with interdisciplinary teaching teams, which provides students with increased academic support and promotes positive student-teacher relationships.

The Middle School Redesign initiative focuses on the following strategies:
- Revisions to the master schedule –
    - A Flex scheduling model builds regular time into the school day for student support and enrichment that does not interfere with regular classes.
    - Flex scheduling allows for personalization, targeted intervention, and opportunities for student voice and choice.
    - Flex scheduling offers staff the opportunity to connect more deeply with students by teaching topics that are of personal interest.
    - The Flex model allows students to have more enrichment experiences (for example, Lego robotics, debate, chess, power walking, and social-emotional counseling).

- Curriculum revision –
    - A technology course (for example, coding, Design Thinking) is added to the curriculum requirements.
    - Increased opportunities for blended learning and personalization are provided to students.
    - International Society for Technology in Education (ISTE) standards are integrated into the curriculum.
    - Math intervention is strengthened (through the Math 180 intervention program).

- Ongoing teacher training and support for implementation of the redesign strategies.

References:
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NEW BEDFORD PUBLIC SCHOOLS (NEW BEDFORD, MA)

Principals and teachers from New Bedford Public Schools' three middle schools finalized educational redesign plans in April 2017. Although each school's plan was different, all three design teams included strategies to increase student achievement and improve the classroom environment.
- Keith Middle School's plan included flexible scheduling that allows students to take courses that meet their individual needs; increased use of technology in the classroom, including blended learning; and establishment of a safe environment with adult role models. The school also focuses on educating the whole child – academically, physically, socially, and emotionally – and stresses the importance of parent involvement in the school community.

- At Normandin Middle School, the redesign emphasized the forging of stronger connections with the community through the promotion of parent participation and involvement in their children's education. The school's redesign plan also included the development of strategies to prepare students for advanced coursework and the addition of reading classes to help struggling students.

- Roosevelt Middle School proposed designing new courses in technology, music, theatre, and engineering to provide more opportunities for active learning. The school features personalized learning experiences and has expanded after-school activities to help students feel like they are part of a community. In addition to academics, the school focuses on students' social-emotional and physiological needs.

References:

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COLONIAL SCHOOL DISTRICT (NEW CASTLE, DE)

The Colonial School District redesigned its three middle schools for the 2017-2018 school year in an effort to prepare students for the challenges of high school and beyond. The goal of the initiative was to increase student engagement by providing a hands-on, relevant, and inquiry-based approach to learning. The planning process for middle school redesign included educators, parents, students, and community stakeholders.

The redesign plan was comprised of the following components:
- Unique themes at each middle school – Schools created elective courses in particular themes and added facilities and/or resources to tie the new electives to other courses. The themes were designed to provide real-world, hands-on lessons, give students practical career skills, and offer students a chance to explore their personal interests.
  - Gunning Bedford Middle School features Graphic Design; Digital Media; Information Technology; Visual and Performing Arts; and Gaming and Coding.
  - Calvin R. McCullough Middle School is the new STEAM school focusing on Science, Technology, Engineering, Arts, and Mathematics.
  - George Read Middle School's themes are Agriculture; Culinary Arts; Marketing; Accounting; and Science.

- A focus on the expectations of the Common Core State Standards and technology innovation – Each of the three schools remains a comprehensive middle school and continues to teach all of the core subjects, such as English language arts, mathematics, science, and social studies. Students receive the same core education no matter which program they choose. District administrators emphasize that they are not asking students to pick their career future in middle school; students can easily switch specialties while they are in middle school or high school.

References:

Colonial School District. (2016). *Middle School Redesign.* Retrieved from http://www.colonialschooldistrict.org/academics/middle-school-redesign/.

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Fall Education Guide. (2017). *Colonial School District's Strategic Vision.* Retrieved from https://www.delawareonline.com/story/sponsor-story/fall-education-guide/2017/10/12/colonial-school-districts-strategic-vision/755457001/.

KYRENE SCHOOL DISTRICT (TEMPE, AZ)

Principals, teachers, students, families, and community members worked together to develop a redesign plan for Kyrene School District's six middle schools. The goal of the Middle School Redesign project is to increase student achievement, provide learning opportunities and support for all students, and encourage families to choose Kyrene schools.

The three main components of Kyrene's Middle School Redesign project are:
- Focus on academic excellence – Schools offer more advanced and innovative courses that incorporate real-world, integrated, and project-based learning. Examples include STEAMD (science, technology, engineering, arts, mathematics, and design) courses, humanities integration, and foreign languages. Students have increased access to technology resources that support their learning. Summer interventions and before- and after-school programs are available to strengthen students' performance in core courses.

- Focus on responsive instruction and support – Students are provided with Multi-Tiered Systems of Support (MTSS) – support that is responsive to the academic, behavioral, and social and emotional needs of all students.

- Focus on student agency – Agency gives students a voice and choice in how they learn. The Middle School Redesign initiative allows students to learn through activities that are meaningful and relevant to them. Student agency is also increased through service learning, mentors, social justice, digital citizenship, and extracurricular activities.

To support implementation of the project's main components, all middle schools engage in the following activities:
- Opportunities for advanced learners are provided. A full sequence of advanced course offerings is available at all middle school sites.

- A variety of exploratory courses are offered, including art, physical education, world languages, chorus, band, orchestra, and culinary arts.

- Students' areas of social and emotional strength are identified, as well as areas requiring additional development and support.

- Students are offered the opportunity to participate in extracurricular activities, such as National Junior Honor Society, yearbook, and athletics.

- Staff ensure smooth transitions to and from middle school. Middle school staff plan visits for fifth grade students and host parent nights that provide information on the transition

from elementary to middle school. Middle school staff also work with high school staff to coordinate high school visits, assist with high school course selection, and arrange additional support systems, if needed.

- Teachers are provided with professional development on the delivery of quality core instruction, implementation of behavioral and social-emotional interventions, and integration of programs that address student agency.

- Teachers are given time to plan for instruction and assessments, develop common expectations, and analyze student work.

- Parents are encouraged to become active participants in their children's education. Families are supported by school staff and referrals to external resources are provided as needed.

Reference: Kyrene School District. (2017). *Middle School Redesign.* Retrieved from https://www.kyrene.org/Page/39840.

ROCKWOOD SCHOOL DISTRICT (EUREKA, MO)

The Middle School Program Design Committee at the Rockwood School District included experts in a variety of areas, such as curriculum, finance, transportation, guidance, and counseling, as well as principal representation from each of the district's six middle schools. Committee members agreed that in order to better support the district's middle school students, the redesign initiative should address the following areas:

- Middle school start time – Beginning in the 2018-2019 school year, the start time for the district's middle schools was moved forward 17 minutes (from 7:30 a.m. in prior years to 7:47 a.m. in 2018-2019). The Middle School Program Design Committee had initially recommended a start time of 8:00 a.m. or later in order to allow students to get enough sleep.

- Middle school schedule – Middle schools have flexible schedules, team-based teaching, and extended learning times. Students progress as they demonstrate mastery of academic content, regardless of time, place, or pace of learning.

- Student academic needs – Middle schools provide students with an increased amount of mathematics instruction that includes frequent opportunities for practice. In addition, reading intervention programs are redesigned to meet the needs of all middle school students and provide organized support for students who are reading below grade level.

- Student social and emotional needs – Students receive direct instruction in all aspects of social and emotional learning, including self-awareness, self-management, social awareness, relationship building, and responsible decision-making. A licensed professional therapist will be added to middle school counseling teams and the counselor-to-student ratio will be lowered.

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TYLER INDEPENDENT SCHOOL DISTRICT (TYLER, TX)

In February 2018, the Tyler Independent School District (TISD) approved a middle school redesign plan to create more individualized learning opportunities for students. The Middle School Redesign was launched in August 2018 as part of the district's larger Pathfinder learning experience.

The Pathfinder learning experience allows middle and high school students and their parents to choose schools and programs that best reflect the student's preferred method of learning. Three different learning models are available in TISD, with each model providing individualized learning opportunities that best suit students' educational goals and needs.

- Comprehensive model – The traditional learning structure in which students attend school in their neighborhood zones. The school provides a strong academic curriculum along with enriching extracurricular opportunities.

- Innovation model – Innovation schools have unique and autonomous areas of focus, such as leadership, citizenship, and language immersion. Students receive personalized learning experiences in a non-traditional learning environment. Innovation schools have zoned attendance, but intra-district transfers are available, by application, until the school reaches capacity.

- Choice model – A true magnet program setting. Choice schools offer expanded education options with a specific focus, such as fine arts or STEM. They offer online learning platforms as well as experiential learning with flexible scheduling and pacing. Acceptance to choice schools is solely application-based.

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AURORA PUBLIC SCHOOLS (AURORA, CO)

In the Spring of 2017, Aurora Public Schools (APS) contracted with School by Design (SxD) to redesign the district's middle schools without increasing spending. SxD worked with all six middle schools in the district, a preparatory academy serving students in grades 6-12, and some of the district's high schools. Each principal was able to choose the changes he or she wanted to make at the school. SxD provided APS with software and technical assistance and analyzed data from all of the district's middle schools in order to help school staff identify how existing resources could be used to:

- Increase student learning options;
- Create time for student advisory periods;
- Support teaching teams; and
- Increase teacher planning time.

As of the end of August 2018, APS was reported to have spent over $146,000 on SxD's services, but district officials say the savings have outweighed the cost. For example, when schedules were reconfigured so that professional development was conducted during the school day, the district saved money by not having to pay teachers overtime or pay for substitutes to cover classes.

Aurora Hills Middle School took the early initiative to redesign its middle school. Aurora Hills has received two consecutive years of low ratings from the state and many observers believed that district officials would have intervened during the 2018-2019 school year if Aurora Hills had not created a redesign plan of its own. Other middle school teams continue to work with SxD to finalize their implementation plans.

Components of Aurora Hills Middle School's redesign include:

- Every week, students have a full day for special courses like music, health, technology, or STEM. This is called a Plus Day.

- While students in each grade level have their Plus Day, their teachers spend the full day engaged in training and joint planning time.

- As part of the new schedule, teaching teams have a block period where students are in "flex time." Two teachers combine and split their students into groups and together provide extra guidance to both those who are falling behind and those who are in need of more challenging material.

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BEST PRACTICES IN MIDDLE SCHOOL REDESIGN

The Association for Middle Level Education (2010) concluded that there are four essential

attributes of successful middle schools:
1. Developmentally responsive – "Using the distinctive nature of young adolescents as the foundation upon which all decisions about school organization, policies, curriculum, instruction, and assessment are made."
2. Challenging – "Ensuring that every student learns and every member of the learning community is held to high expectations."
3. Empowering – "Providing all students with the knowledge and skills they need to take responsibility for their lives, to address life's challenges, to function successfully at all levels of society, and to be creators of knowledge."
4. Equitable – "Advocating for and ensuring every student's right to learn and providing appropriately challenging and relevant learning opportunities for every student."

Researchers caution that middle school redesigns should ensure that the learning environment is developmentally appropriate for this specific age group of students (Hanover Research, 2015; Armstrong, 2006). Wormeli (2016) stated, "There is an expertise to teaching middle level students that is different than that needed to teach elementary or high school students." He added, "The era of treating middle schoolers as older elementary children or early high school students is long over."

Studies indicate that middle school policies and practices can have a significant impact on student outcomes. A summary of research-based best practices in middle school redesign is provided below.

- **Comprehensive planning.** Before districts begin a middle school redesign initiative, researchers recommend forming a Redesign Committee to carefully plan and manage the change process. Representatives from all stakeholder groups, including district administrators, principals, teachers, students, parents, and community members, should be included on the committee (Cross & Martinez, 2016; Wormeli, 2016; Bottoms & Timberlake, 2012; Villavicencio & Grayman, 2012; Williams et al., 2010).

- **Shared school mission.** Successful middle schools have a clear mission, with strong support from all stakeholders, to provide students with the knowledge and skills they will need to succeed in high school and beyond (Wormeli, 2016; Bottoms & Timberlake, 2012; Williams et al., 2010). Cross and Martinez (2016) stated, "We can no longer expect schools to improve student learning by relying on quick fixes, especially those that often emanate from Federal or State sanctions. Schools must become organizations whose foundation, vision, mission and operation are based on a highly functioning culture where every staff member, no matter their role, is committed to the achievement of all students regardless of the personal challenges those students face."

- **Challenging curriculum.** Researchers agree that the middle school curriculum should be closely aligned with challenging state academic standards – including high school readiness standards – and the state-adopted curriculum. They maintain that a strong emphasis should be placed on the core subject areas of English language arts, mathematics, social studies, and science. In addition, it is recommended that 21st century themes, such as global education, civic literacy, and technology, be integrated into all areas of instruction (Wormeli, 2016; Hanover Research, 2015; Bottoms & Timberlake,

2012; McEwin & Greene, 2011; Association for Middle Level Education, 2010; Williams et al., 2010).

- **Relevant curriculum.** In exemplary middle schools, teachers link lessons to students' personal associations, feelings, memories, or interests (Hanover Research, 2016; Bottoms & Timberlake, 2012; Armstrong, 2006). Armstrong (2006) stated that students should be "engaged directly in real-life pursuits rather than artificially contrived lesson plans that have little or no relevance to their lives."

- **Focus on literacy.** Studies have found that high-performing middle schools are more likely to establish structured programs that promote literacy across the curriculum. In these schools, reading, writing, speaking, and listening are taught and practiced wherever they apply, rather than taught in isolation (Hanover Research, 2016; Williams et al., 2010). The Southern Regional Education Board (SREB) compared middle schools in its *Making Middle Grades Work* national network. The study included 10 middle schools that had made significant improvements in reading, mathematics, and science achievement ("most-improved schools") over a two-year period and 10 demographically similar middle schools that had failed to make progress ("least-improved schools"). The researchers found that the most-improved schools gave reading and writing assignments in all subject areas and used literacy strategies in their classrooms, such as requiring students to read books and other materials, give oral presentations, and write short papers. Teachers at the most-improved schools also provided extra help for struggling readers (Bottoms & Timberlake, 2012).

- **Active learning.** High-performing middle schools place students at the center of the learning process. Studies have found that active learning motivates students more than lecture or textbook learning (Hanover Research, 2016; Wormeli, 2016; Bottoms & Timberlake, 2012). McEwin and Greene's (2011) surveys of a national random sample of 827 public middle schools and 101 highly successful middle schools (HSMS) found that HSMS were less likely to use whole-class direct instruction on a regular basis (71%) than randomly selected schools (81%), with HSMS more regularly using cooperative learning, inquiry teaching, independent study, and online learning. (HSMS were middle schools that had received recognition as *Schools to Watch* in a program sponsored by the National Forum to Accelerate Middle Grades Reform and/or recognition as *Breakthrough Middle Schools* in a program sponsored by the National Association of Secondary School Principals.)

- **Differentiated instruction.** Successful middle schools individualize learning time and instruction based on student needs. Experts agree that effective teaching strategies for middle school students are tailored to the skills, abilities, prior knowledge, and individual learning styles of young adolescents (Hanover Research, 2016; Wormeli, 2016; Villavicencio & Grayman, 2012).

- **Technology.** Researchers have concluded that integrating technology into instruction is an effective method of engaging middle school students in learning (Hanover Research, 2015; Association for Middle Level Education, 2010). The Southern Regional Education Board's (SREB) comparison of most-improved and least-improved schools found that

more principals at the most-improved schools reported that their teachers used technology in instruction regularly than principals at the least-improved schools (75% versus 50%). In addition, more principals at the most-improved schools said their teachers had a high ability to integrate technology into instruction than principals at the least-improved schools (50% versus 25%) (Bottoms & Timberlake, 2012).

- **Elective courses.** Researchers emphasize the importance of exploratory learning, especially for middle school students. A number of exemplary middle schools have been found to use elective courses to build upon and deepen the core curriculum. Electives help students identify and pursue interests outside of the core academic subjects and allow them to begin to develop a sense of their career interests. The most commonly offered electives include music, drama, arts, and dance (Hanover Research, 2016; McEwin & Greene, 2011; Williams et al., 2010; Armstrong, 2006).

- **Varied student assessments.** Researchers have found that varied and ongoing student assessments can advance learning. Continuous, authentic, and appropriate assessments, including both formative and summative assessments, provide information about students' academic progress and help educators determine if additional supports or interventions are needed. Types of assessments administered by middle school teachers include benchmark assessments to determine whether students are meeting academic standards; diagnostic assessments to identify students' strengths and weaknesses; and classroom-based assessments to measure students' progress throughout a course and to guide instruction (Wormeli, 2016; Williams et al., 2010). The National Forum to Accelerate Middle-Grades Reform (cited in McEwin & Greene, 2011) stated, "When students are grouped and regrouped for instruction, the assignment should be temporary and based on diagnosed needs, interests, and talents of students, not on a single achievement test."

- **Use of student data.** Studies have found that successful middle schools use student data to support instructional decision-making (Hanover Research, 2016). Williams and colleagues' (2010) survey of 3,752 teachers at 303 California middle schools found that teachers at higher-performing schools differed from teachers at lower-performing schools in the frequency of their data use (regularly throughout the year versus a few times a year) and in the ways in which they used student data (for example, they were more likely to use student data to improve their instructional practices and to diagnose students' learning needs). Villavicencio and Grayman's (2012) comparison of successful New York City middle schools and persistently low-performing New York City middle schools found that teachers' use of student data played an important role in schools' success. The researchers found that teachers in successful New York City middle schools were more likely to report:
  - o Administering frequent assessments (both standardized and teacher-created) to identify students' strengths and weaknesses;
  - o Using assessment results to revisit lessons with students who have not mastered certain concepts or skills within a given content area;
  - o Using student data to homogeneously group students in order to differentiate instruction and materials; and
  - o Sharing data with students (to help students better understand academic expectations, set goals, and become more engaged in their learning).

- **Interdisciplinary teaching teams.** Researchers recommend the use of interdisciplinary teaching teams in which middle school teachers work across departments with a set group of students (Hanover Research, 2016; Wormeli, 2016; Armstrong, 2006). Wallace's (2007) study of Wisconsin middle schools found a correlation between team size and student social bonding, with smaller team size creating greater opportunities for student social bonding. Overall, he noted that while the design of teaching teams varies across schools, the four-teacher team with one teacher specialist from each of the four core subject areas is the most common arrangement. Wallace (2007) also reported that the two-teacher team is frequently used in grade 6 in order to transition students from a single-teacher, self-contained classroom in the elementary school to the four-teacher team frequently used in grades 7 and 8. McEwin and Greene (2011) found that the interdisciplinary team teaching model was more frequently used in highly successful middle schools (HSMS) than in a random sample of middle schools (90% of HSMS vs. 72% of randomly selected middle schools).

- **School transition programs.** Transitions from elementary school to middle school require students to make many adjustments. For example, students who have always attended one self-contained elementary classroom each day must now move from classroom to classroom throughout the course of the middle school day. To help students successfully transition from elementary to middle school, researchers recommend that middle school educators collaborate with counselors, students, and their families to develop transition programs in cooperation with elementary schools. Researchers have concluded that key features of successful transition programs include:
  - Touring the new middle school;
  - Establishing a shadow program in which fifth graders shadow a sixth grader for the day;
  - Assigning peer helpers, mentors, or ambassadors to help students who are struggling with the transition to middle school;
  - Requiring new students to come to school one day before returning students to familiarize themselves with middle school practices and meet teachers;
  - Identifying students' needs once they reach middle school and then providing them with ongoing support;
  - Hosting assemblies and meetings for students and parents that explain the similarities and differences between elementary and middle schools; and
  - Hosting meetings that provide parents an opportunity to discuss any concerns they may have regarding their children's transition to middle school (Gilewski & Nunn, 2016; Hanover Research, 2016).

- **Early identification of at-risk students.** Studies have found that higher performing middle schools emphasize early identification of at-risk students. They have intervention programs in place that provide at-risk students with additional instruction and support to help them meet grade-level standards and enter high school prepared for the ninth grade. The following practices have been found to distinguish highly effective middle schools:
  - The records of entering students are reviewed thoroughly for possible warning signs of academic deficiencies and the need for extra support.

- A range of mandatory and voluntary intervention programs are provided to students who are performing below grade level or who are at risk of failure in the current year.
- Teachers and parents meet regularly to develop and monitor student intervention plans (Hanover Research, 2016; Bottoms & Timberlake, 2012; Williams et al., 2010).

- **Teacher training.** Researchers recommend that middle school teachers be provided with comprehensive and ongoing professional development that focuses on subject area knowledge, middle grades instruction and assessment, effective middle level programs and practices, and understanding of young adolescent developmental issues (Wormeli, 2016; Villavicencio & Grayman, 2012; McEwin & Greene, 2011). The Southern Regional Education Board's (SREB) comparison of most-improved and least-improved schools found that most-improved schools substantially increased the amount of professional development they provided to teachers. The least-improved schools, on the other hand, experienced no change or even a decrease in the amount of professional development provided to their teachers (Bottoms & Timberlake, 2012).

- **Teacher collaboration.** Teachers in effective middle schools engage in ongoing collaboration with other teachers, using every available opportunity to work with their colleagues to improve their students' learning experience (Cross & Martinez, 2016; Wormeli, 2016; Villavicencio & Grayman, 2012). Williams and colleagues' (2010) survey of over 3,700 teachers in 303 California middle schools found that teachers in higher performing schools were more likely to report collaborating frequently to discuss curriculum pacing and scope and sequence, and to develop common benchmarks and assessments. Villavicencio and Grayman (2012) found that teachers in successful New York City middle schools were more likely to receive support from their peers, such as feedback from classroom observations and mentorship from more experienced teachers in the school.

- **Common teacher planning periods.** Researchers agree that common planning time is essential for all teachers, especially those on interdisciplinary teams, to plan curriculum and instruction and to work together to increase student achievement (Hanover Research, 2016; Wormeli, 2016; Bottoms & Timberlake, 2012; Williams et al., 2010). McEwin and Greene (2011) recommended that teachers serving on interdisciplinary teams be provided at least one daily common planning period. McEwin and Greene's (2011) surveys of highly successful middle schools (HSMS) and a national random sample of public middle schools found that HSMS more frequently provided common planning time for core teachers – 40% of HSMS provided 10 common planning periods per week, compared to 28% of middle schools in the random sample; 94% of HSMS and 77% of randomly selected middle schools provided five or more common planning periods per week.

- **Social and emotional learning.** Students experience rapid physiological and psychological change during their middle school years. Experts therefore recommend that middle schools offer programs and services that support students' social and emotional health. Studies have found that teaching social and emotional skills enhances students' connection to school, promotes positive behavior, and often leads to increases in

academic achievement (Hanover Research, 2016; Villavicencio & Grayman, 2012; Association for Middle Level Education, 2010; Armstrong, 2006). The Collaborative for Academic, Social, and Emotional Learning (CASEL, 2017) identified five social and emotional core competencies in which students should receive training: self-awareness; self-management; social awareness; relationship skills; and responsible decision-making.

- **Adult advocates.** Experts agree that every middle school student should have a close, personal relationship with at least one adult in the school. Researchers have found that students are more likely to succeed when their academic and personal development is supported by an adult advocate. They therefore strongly recommend that each student be provided with a homeroom teacher or advisor-teacher to serve as their mentor, counselor, advisor, or guide during their middle school years (Hanover Research, 2016; Wormeli, 2016; Bottoms & Timberlake, 2012; Association for Middle Level Education, 2010; Armstrong, 2006).

- **Guidance and counseling services.** Researchers emphasize the importance of providing middle school students with guidance and counseling services to help them realize their full academic potential, acquire positive social skills, and set appropriate career goals. In addition to addressing students' needs inside and outside of school, counselors can help teachers conduct advisory programs that provide regular interaction between students and teachers. Advisory programs offer a higher level of personalized support for students in need of extra assistance (Wormeli, 2016; Hanover Research, 2015; Villavicencio & Grayman, 2012; McEwin & Greene, 2011; Moore-Thomas, 2009). The Association for Middle Level Education recommended that advisory periods meet at least twice per week to be most effective (McEwin & Greene, 2011).

- **Positive school climate.** Studies indicate that young adolescents need a positive and safe school climate in order to flourish academically, physically, and emotionally (Cross & Martinez, 2016; Hanover Research, 2016; Wormeli, 2016; Villavicencio & Grayman, 2012; Armstrong, 2006). The Association for Middle Level Education (2010) stated that successful middle schools have an environment that is "inviting, safe, inclusive, and supportive of all." Williams and colleagues' (2010) survey of teachers at 303 California middle schools found that higher performing middle schools were more likely to report that the principal ensured a clean, safe, and disciplined school environment.

- **High expectations for all students.** Researchers have reported that teachers in higher-performing middle schools have high expectations for all of their students (Cross & Martinez, 2016; Hanover Research, 2016; Bottoms & Timberlake, 2012; Villavicencio & Grayman, 2012; Williams et al., 2010).

- **Flexible scheduling.** Researchers recommend that schools be given the flexibility to adjust their schedules in ways that promote teaching and learning. Studies suggest that block schedules, in which students attend fewer, longer class periods during the school day, are especially effective at the middle school level. Block schedules provide longer instructional times, eliminate fragmented instruction, and allow for more creative and flexible use of time by teachers. In addition, block scheduling allows teachers to use time-intensive instructional strategies such as collaborative group work and debates (Hanover

Research, 2016; Bottoms & Timberlake, 2012; McEwin & Greene, 2011). McEwin and Greene's (2011) surveys of highly successful middle schools (HSMS) and a national random sample of public middle schools found that 30% of HSMS utilized flexible block schedules, compared to only 14% of the randomly selected middle schools.

- **Small learning communities.** Research supports the creation of small learning communities at the middle school level. Experts suggest that students be assigned to a community in the sixth grade and stay in that community until they leave for high school (Hanover Research, 2016; Villavicencio & Grayman, 2012). Armstrong (2006) recommended structuring larger schools into smaller communities of 200-300 students, with two or three teachers responsible for no more than 100 students.

- **Later start time.** Research suggests that later middle school start times decrease tardiness and increase attentiveness (Hanover Research, 2016). The American Academy of Pediatrics (AAP, 2014) recommended that school districts delay school start times for adolescents to 8:30 a.m. or later in order to improve students' health, safety, and academic outcomes. The Centers for Disease Control and Prevention has supported the AAP's recommendation (Centers for Disease Control and Prevention, 2018; Wheaton et al., 2015).

- **Strong school leadership.** Studies have found that effective middle school principals build learning communities that prioritize the education and healthy development of every student. They focus on improving instruction, setting high standards for all students and staff, and leading by example. The most effective middle school principals gain the support of teachers and staff for school improvement efforts and work with them as partners to identify challenges and implement corrective strategies (Wormeli, 2016; Bottoms & Timberlake, 2012; Villavicencio & Grayman, 2012; McEwin & Greene, 2011; Williams et al., 2010).

- **District support.** Williams and colleagues (2010) analyzed the standardized test scores of close to 204,000 students in 303 California middle schools. They found that support from district administrators, as reported by principals and teachers, was strongly associated with greater student gains on California's standardized English language arts and mathematics tests. The Southern Regional Education Board's (SREB) comparison of most-improved and least-improved schools found that the most-improved schools reported that they had stronger and more collaborative district support for the school's mission, for teacher professional development, and for adjustments to master schedules that provided teachers with common planning time than the least-improved schools. In addition, principals at the most-improved schools reported that they had greater autonomy to make decisions for their schools than principals at the least-improved schools (Bottoms & Timberlake, 2012).

- **Student involvement.** Studies have found that when students have more input into school-level decisions, they report higher levels of engagement, motivation, and self-esteem. Examples of ways students can be involved in their education include:
    o Students are given opportunities to make choices about their learning.
    o Students are included in school improvement planning.

- o Students are involved in maintaining discipline through teen court.
- o Students help to organize school assemblies and special events.
- o Students give meaningful feedback about courses, activities, and the school's culture and climate (Hanover Research, 2016; Armstrong, 2006).

- **Family involvement.** Researchers have found that successful middle schools actively involve families in the education of their children. They understand that schools and families must work together to provide the best possible educational experience for young adolescents and they take the initiative in involving and educating families (Bottoms & Timberlake, 2012; Villavicencio & Grayman, 2012; Association for Middle Level Education, 2010). Williams and colleagues' (2010) survey of California middle school teachers found that in high-performing middle schools, teachers reported that there was a consistent schoolwide focus on communication with parents and guardians.

- **Community involvement.** Effective middle schools strongly encourage community involvement. Experts have concluded that middle school redesign initiatives should include the formation of partnerships with local businesses, civic organizations, and social service agencies. Schools can enlist volunteers to visit classrooms and speak about their careers or tutor students, offer sponsorships and donations, and provide physical and mental health services (Wormeli, 2016; Association for Middle Level Education, 2010).

SUMMARY

This Information Capsule summarized middle school redesign initiatives that are underway in school districts across the U.S., including the New York City Department of Education, Broward County Public Schools, San Francisco Unified School District, and Fresno Unified School District. Middle school redesign projects in smaller school districts in Arizona, Colorado, Connecticut, Delaware, Massachusetts, Missouri, and Texas were also summarized.

Studies have indicated that middle school policies and practices can have a significant impact on student outcomes. A summary of research-based best practices in middle school design was provided in this report, including a challenging curriculum, interdisciplinary teaching teams, social and emotional learning, adult advocates, flexible scheduling, teacher training and support, and family and community involvement.

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