This brief is intended to serve as an update regarding the work and progress that has been made toward implementing the eight-period hybrid schedule at our high schools. A research summary and bibliography pertaining to block scheduling are included in this brief. We will also provide an update on the County’s Design Team and activities at each school. Staff consultation and professional development will also be outlined.

County-Wide Design Team

As our community members may be aware, each school has created a design team to make plans for the school’s new academic and master schedule. Meetings among these teams have been ongoing since mid-February. A division-wide design team that includes leaders from each school has convened since the beginning of March. This school division design team has met four times since the beginning of March to make plans for schools’ new academic and master schedules with 8-Periods: a hybrid schedule including semester (4 x 4) and year long, alternating day courses. This team is working in tandem with individual school teams. The table below contains the names of team members. Schools have administrative, instructional, and counseling representation as well as students. Students’ names are not included.

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*Department of Assessment, Research, and Technology

Our county-wide team is meeting according to this schedule:

2. Bi-weekly for the fall of 2010.
3. Tri-weekly in the spring of 2011.

To facilitate communication within the team and with school based teams, Tony Borash has developed an on-line handbook to contain the questions, ideas, decisions, and designs that the group creates. This will help schools avoid solving the same problems in different places while creating consistency where we need it.

Course Format and Student Choice

Since beginning meeting in March, the County Wide Design team has determined course formats for all courses in the new schedule. The following summary of course formats gives guidance to schools on how courses will be offered in their master schedules. One thing we want to point out
is that schools have flexibility to make the schedule work to support their students in the unique and successful culture that each school has developed over time. We are striving to balance central office guidelines with school autonomy.

This summary was developed through recommendations from school staff during a centralized meeting among teacher leaders for each content area, and it was vetted through the County Design Team.

This information is offered to provide clarity for school design teams in mapping out their master schedules. The majority of courses will be provided on a semester (4 x 4) basis. This means that the class will meet every day for one semester for one (1) credit. We will designate course formats in the course file in the student information system for school use. These formats are based on recommendations from teacher representatives from each school.

This summary is meant to provide guidance for scheduling. We understand that in the process of creating the master schedule, some courses designated as semester (4x4) courses may need to be run on an alternating day basis all year for one credit (1) to make students' schedules work.

☐ All **Advanced Placement (AP) Courses** will be offered on a year-long, alternating day basis.
  
  o Exception: MoHS will offer AP Government on the semester basis to facilitate the CAP program.
  
  o Exception: The high schools have asked for the option of double blocking AP Biology II, AP Chemistry II and AP Physics II science courses.

☐ **Dual Enrollment Courses** will be offered on either a year-long, alternating day basis or on a semester (4 x 4) basis, depending on site-based decisions. Dual Enrollment Courses are courses offered by PVCC at the high school for both college and high school credit. Master schedule design teams and administrators should keep in mind the restrictions that could be placed on student schedules based on their designations for these courses. Staffing should also be a consideration.

☐ **Fine and Performing Arts** provided a variety of reasons to deviate from the semester format for their courses. Recommendations were made primarily for Performing Arts courses to run all year to support performance and competition. These courses will be managed as a site-based decision. Master schedule design teams and administrators should keep in mind the restrictions that could be placed on student schedules based on their designations for these courses. Staffing should also be a consideration.

☐ **CTE Courses** will be offered on a semester (4 x 4) basis.

☐ **Non-AP Science Courses** will be offered on a semester (4 x 4) basis.

☐ **Non-AP English Courses** will be offered on a semester (4 x 4) basis.
  
  o Exception: WAHS will offer English 11 on a year-long, alternating day basis as part of American Studies.

☐ **Non-AP Social Studies Courses** will be offered on a semester (4 x 4) basis.
  
  o Exception: WAHS will offer VA US History on a year-long, alternating day basis as part of American Studies.
  
  o Exception: Leadership classes will run all year.
Non-AP Math Classes will be offered on a semester (4 x 4) basis.

At our third meeting, Dr. Joe Garofalo, Associate Dean for Academic Affairs for the Curry School of Education at UVA, met with us to discuss our concerns regarding mathematics instruction as part of the 8-Period Hybrid schedule. Dr. Garofalo has authored numerous articles on mathematical problem solving, including ones describing use of technology. As a result of his recommendations at our meeting and our ongoing communication with him, we made the following exceptions and determinations:

- Exception: Algebra I will be a year-long, double-blocked course that is offered all year for two (2) credits: one (1) verified math credit toward graduation and one (1) math elective credit.
- Exception: Within some of the math course sequences, Honors Math Analysis or Algebra II may be offered as a year-long course.
- Honors Trigonometry will be a prerequisite for Math Analysis for rising 9th-grade.
- In the course pathways we create, we will make provision so that students who enter high school with the goal of taking BC Calculus as seniors can do so without an interruption in their math sequence. It is true that they may do so at the expense of one or more elective courses, but that will be their choice. All three high schools will offer math courses in a sequence that provides an opportunity for entering 9th-graders to choose an uninterrupted math sequence.

Non-AP World Language Courses will be offered on a semester (4x4) basis.

- In the course pathways we create, we will make provision so that students can take World Languages in uninterrupted sequence.

Health and PE Classes will be offered within the same semester on a 9-weeks basis. Formats for these courses will be managed as a site-based decision as they could facilitate students taking other courses on a year-long, alternating day basis if they are also scheduled this way.

Special Education resource and other support classes will be provided on a year-long basis.

One potential strength for offering eight periods for students to take courses each year is the increase in student choice of courses. An advanced studies diploma student will take four (4) credits in each core area (math, science, social studies, English) for 16 credits. On an eight-period schedule, this accounts for 50% of courses a student can take. This allows for more elective opportunities. Schools have developed some new electives and have begun to meet again with students to adjust their course registration to account for eight periods and to offer new choices.

Availability of courses at each school will depend on staff qualifications, staffing, and student demand in terms of course registration tallies. This is the case each year, and while staffing has been reduced for class size increases and teachers teaching six out of eight classes, we also factored in students taking eight out of eight classes in determining the staffing for each school. So, as in the past, staffing follows student patterns of enrollment in courses.

Initial course offerings are the result of several factors. Here are two:

- Graduation Requirements and Standards of Accreditation demand that particular courses be offered.
School staff can create courses within state guidelines to offer career and college preparation and a variety of choices for students.

Courses that “make” in terms of student enrollment and need are included in the schedule after student registration. In terms of electives, a course must have enough students sign up for it to justify staffing for that course. That is why students make choices and provide alternates. This year, as in every other year, students may not get their first choice of electives due to low enrollment in a course. It is very important this year, as in any other year, that schools do not over-promise what they can offer.

School Counselors are reviewing student selections and working with students individually with the goal of confirming student course selections in May.

Professional Development and Consultation

In terms of staff development, we are working on the following items to give teachers and administrators learning and growth opportunities while engaged with this change.

1. We are sponsoring field trips for school staff to other schools that have successfully created 4 x 4 and hybrid schedules. These staff members are learning and establishing contacts with other professionals who are well-versed with these scheduling models.

2. Dr. Mike Rettig has offered consultation - free of charge - with central office staff, the County Design Team, and each School Level Design Team, one time each.

   Dr. Rettig is the founder of School Scheduling Associates, LLC. He spent 15 years as a professor in the College of Education and Director of the Center for School Leadership at James Madison University (JMU), Harrisonburg, VA. He retired from JMU as Professor Emeritus in June 2006 to work full-time with schools across the country. In addition to his work in higher education, he taught in elementary and middle schools for 10 years and served as a school principal in Virginia for six years.

   Dr. Rettig has served as a consultant on school scheduling issues in 41 states with over 750 school districts nationally and internationally. He also has conducted hundreds of workshops and has authored or co-authored numerous articles and books on school scheduling and related topics.

   A past president and current board member of the Virginia Association of Curriculum and Supervision, he has received many awards including the Service Award from the Shenandoah chapter of Phi Delta Kappa (PDK). He was also named a Madison Scholar at James Madison University and was the recipient of the outstanding graduate student award through PDK at the University of Virginia.

3. We have a meeting scheduled with UVA to see about offering a course on curriculum development and adaptation based on teaching for essential skills and understandings. If feasible, this course would be offered for free to teachers while giving them an opportunity to earn credit and work on their own curricula during the summer and fall. The “text” would be the Framework for Quality Learning (FQL), and much of their work and assessment would involve creating and uploading units to School Net for use by teachers throughout the division.

4. We plan to build a pool of “experts” from the contacts made through field trips. We plan to offer some forums in the spring for staff to attend and ask operational and instructional questions of these experts so that they can have “nuts and bolts” answers to their critical questions.
Communications

Beyond implementing the new schedule, the next greatest challenge is communication. In much the same way that the department of instruction has sought input and teamwork on the County Design Team, each school has held meetings with parents, staff, and students to gather ideas and to share plans. Schools have hosted blogs and distributed possible bell schedules, seeking input. In the Western feeder pattern, a listserv has been established by parents. Recently, the department of instruction issued a joint update with the high schools and middle schools using our Connect Ed technology to provide more definitive information about the schedule. We plan to do this again during the first week of May. We realize that there will always be more questions and concerns about this change than can be addressed with one briefing; however, we are attempting to target our primary concerns based on feedback from schools.

Please look for more updates in the future. As decisions are made, we will continue to communicate with all of our stakeholder groups so that we can put our combined efforts into making this new schedule work to the benefit of our students and schools.

Research Summary
from the Department of Assessment, Research, and Technology (DART)

Depending on how you Google the term, “Block Scheduling” generates well over one-million items on the internet. This suggests that opinions abound regarding this schedule, and it is important to note that Albemarle County Schools has been using block scheduling at all of its high schools and middle schools for many years. Accordingly, there are at least three concerns when reviewing research about block scheduling: sifting through all of the articles to determine which are actually research studies; further refining a search to isolate studies on schedules that include 4 x 4 (semester courses); and, finding studies that are recent and include school systems that have learned from earlier attempts to use the 4 x 4 format. For example, twelve years ago, the College Board conducted a research study that showed that the 4 x 4 format had a negative impact on students’ scores on the AP exam. This study was based on students taking AP courses on a semester basis. As a result of this research, many school systems offer AP courses in the format we currently use and plan to continue to use, the alternating day, year-long format.

The preceding is just one example cited to demonstrate that research must be reviewed critically before it is applied. Having said this, the same critical approach should be taken when reading the following summary. It is by no means comprehensive; it is intended to provide basis for further discussions and questions. A bibliography follows.

Positive Aspects of Block Scheduling

Achievement

The research on the impacts of block scheduling on student achievement is mixed, but there are correlational research studies that suggest in schools with block scheduling students have higher GPAs, higher scores on proficiency exams, achieve honor roll and enroll in more advanced courses. Students also reported that block scheduling is better suited to attaining their diploma because they are able to take more classes toward their degree in a shorter period of time.

One of the most thorough studies of the differences between block and traditional schedules found that students who were on a block schedule and substantially behind, according to achievement scores, were more likely to catch up to their peers who were not behind at the start of the course.
Classroom Experience

Research on block schedules has not been limited to academic achievement. Several studies have looked at how block schedules affect students’ experiences in school and found that in block scheduled schools students have enhanced morale, greater satisfaction, and improved student-teacher relationships.

Teachers also recognized improved student-teacher relationships on the block schedule. Likely teachers, having fewer students in a day and more time with those students, were able to build stronger relationships with students than on the traditional schedule. The increased contact time also allowed teachers to better identify and understand students’ strengths and weaknesses and implement effective instructional strategies.

Anecdotally, teachers perceived improved attendance in schools on block schedule, as well as fewer disciplinary incidents. When students attend class more regularly and have fewer behavioral incidents, they are also more likely to be successful in school. Schools on block schedule have noticed a decline in the failure rate of students, as well as dropping out.

Student Perceptions

When students on block and traditional schedules were asked about their impressions of their school, students on block schedules were more likely to indicate their courses were interesting and that the instructional environment was a better fit to how they learn. Specifically, these students mentioned having more concentrated time to learn and more opportunities to work with their peers.

Teacher Perceptions

Research has found that teachers appreciate the additional flexibility afforded by block scheduling. Specifically, teachers liked longer planning periods, greater course offerings, and more time for in-depth study. Many of these benefits are by-products of teaching fewer classes each day and longer periods of time for each class. It was also suggested that students having a course every day made it easier for them to learn material presented in class.

Teachers also noted that block scheduling allows for new, innovative, teaching strategies as they realize that lecture style teaching is incompatible with block scheduling. Teachers are able to do more labs, fieldwork, team teaching, and offer multidisciplinary classes. The curricular changes were not limited to the delivery of instruction. Teachers also noted that their assessment techniques improved as their transition to the block schedule because they had more concentrated learning time.

Structural

Even if the relationship between block scheduling and positive outcomes is not causational, moving to the block schedule gives building-level administrators the opportunity to discuss and refocus teachers’ efforts toward improving instructional practices. Block scheduling also gives teachers the opportunity to redefine their role in the classroom.

Two national educational groups, National Research Council & National Council of Teachers of Mathematics, support block scheduling because less material or concepts covered well results in more meaningful learning. When done properly, teachers on block schedule compact the learning, rather than accelerate it, to help students have a deeper and richer understanding of the material. It shifts the focus from a facts to information processing.
In terms of efficiency, it is also better to be on the block schedule because in the time it takes the traditional schedule to complete six courses, students on a block schedule are able to complete eight courses.

**Challenges for Block Scheduling**

**Achievement**

When teachers do not adequately prepare for the move to block scheduling, they are more likely to cover less of the curriculum, which has substantial impacts for advanced placement courses. The courses also have to be planned carefully such that students are given enough of the content in close enough proximity to the testing date that they are likely to be successful.

**Student Perceptions**

Students noted many benefits for their own learning, but the rarely noted changes in teachers’ practices regarding curriculum and instruction. With instruction being the same, but the learning time increasing, student reported being bored, less attentive, and more tired in block scheduled classes.

**Teacher Perceptions**

Teachers believe they have been given more freedom in their teaching when they have longer stretches of time with students, but there is not evidence that teachers have actually fully implemented these innovative strategies in their blocked classrooms. Although teachers speak to the benefits of offering more labs and student-centered activities, research suggests these strategies are not implemented more regularly in block scheduled classrooms than traditional classrooms.

**Structural**

While block scheduling does lengthen the time students are in an individual class period, it does not actually increase seat time. Two 50 minute blocks from a regular schedule day are replaced by a single 90 minute block, losing 10 minutes of instructional time for each day of instruction. Block scheduling also requires careful planning of the master schedule to ensure students take sequential courses close enough together for prior knowledge to be properly activated.

Block scheduling provides a powerful opportunity for rejuvenated professional development around learning how to teach a longer class. However, when these opportunities do not exist or are not headed, class often become too reliant on independent study and an overemphasis on lecture to adequately cover the course material.

Some of the biggest hurdles for block scheduling are elective courses that benefit from a full year of contact. Courses like music, physical education, and foreign languages can suffer when students are only enrolled for a semester at a time. Similarly, if a student is absent for a single day of a block scheduled course, it is the equivalent to missing two days of regular instruction, and compounds the difficulty for students to catch up on missed work.

**Conclusions**

While it is impossible to say that student achievement will improve when a school moves to a block schedule, it is also impossible to say that it will decrease with the same shift. Research on block scheduling consistently suggests that success of block scheduling is heavily dependent on the professional development offered to help teachers learn to teach on a block schedule.
Similarly, the ultimate success relies on the degree to which teachers can use instructional strategies that will engage their students and promote a high level of learning.

**Research Summarized**


