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For ACTION \_\_\_\_\_

For Board Brief  X

**FROM:** Lois F. Berlin, Ed.D., Interim Superintendent of Schools

**THROUGH:** Terri H. Mozingo, Ed.D., Chief Academic Officer  
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**TO:** The Honorable Ramee Gentry, Chair, and Members of the Alexandria City School Board

**TOPIC:** School Board Brief: Update on the West End Elementary School

## **BACKGROUND**

In anticipation of the projected opening of the West End Elementary School in August 2018, a planning committee has been formed consisting of Rachael Dischner, the school's new principal, and representatives of the Departments of Curriculum and Instruction, Technology Services, and Operations. This planning committee is now responsible for ensuring the quality of program design, development, and implementation in alignment with recommendations from a series of ongoing parent and community outreach sessions as well as feedback from relevant stakeholder groups within the central office (e.g., Human Resources, Operations, Budget, Student Services).

The West End Elementary School will offer a comprehensive curriculum and academic program aligned with all Virginia Standards of Quality. Based upon national research, Virginia Department of Education career pathways, and educational best practices, the thematic focus of the West End Elementary School will be "STEM," i.e., an integrated curriculum emphasizing students' competency in the areas of literacy, science, technology, engineering, and mathematics. As a result of this theme, Alexandria City Public Schools will offer next year two STEM elementary programs (i.e., West End and Cora Kelly) that will ensure student preparation for a range of STEM-related options at the secondary level and beyond.

## **SUMMARY**

The following board brief provides details of the design principles and projected status of the West End Elementary School's development, including:

1. A brief summary of STEM-related educational research and a rationale for the selection of STEM as a key theme for the West End Elementary School
2. A synthesis of program design principles for the West End Elementary School, including highlights of its STEM focus and related implications for the school's staff, students, and parents

3. A brief timeline of program development related to the West End Elementary School, including previous planning initiatives and projected deadline(s) for deliverables related to the school's opening

### **STEM-RELATED EDUCATIONAL RESEARCH IMPLICATIONS**

An extensive body of educational literature and research confirm the value of a STEM education. The following is a brief synthesis of STEM research conclusions that provide a rationale for the selection of the West End Elementary STEM focus:

- The State of Virginia and the Virginia Department of Education consistently affirm the value of a STEM education. VDOE has identified the following goals for an effective STEM education:
  - Create problem solvers, innovators, critical thinkers, and risk takers with entrepreneurial spirit;
  - Integrate the content, processes, and skills of science, technology, engineering, and mathematics;
  - Promote equity and access to STEM experiences;
  - Expose students to STEM career fields and opportunities; and
  - Encourage community partnerships and involvement.
- According to the federal Department of Education publication *STEM 2026*, all members of the community **feel invested and empowered to engage** in STEM teaching and learning. STEM is not perceived as being thrust upon them or outside their purview but as culturally appealing and **relevant**. The language and concepts of STEM are accessible to all, and there is a shared understanding of **where STEM fits into all people's lives**, regardless of race or ethnicity, disability, language spoken, gender, neighborhood, or geographic location. The components of the vision and the propagation of innovative practices effectively connect STEM to the broader portfolios of people's interests and their everyday lives. The result is **intergenerational learning** that empowers learners of all ages to draw on the skills and capacities they have gained as they actively contribute to bettering their own and others' lives.
- A range of national and international research studies conclude the following about STEM education:
  - There are extremely powerful correlations between technology integration and its impact on math and science achievement (Ysseldyke and Bolt, 2007; Dunleavy and Heinecke, 2007; Burghardt, et al., 2010)
  - The impact of learning and achievement depends on the approach to integration and the kinds of supports embedded in the experience and provided through instruction (NAEP Report, 2014)
  - Studies demonstrate achievement gains when project-based, interdisciplinary curriculum was utilized (Fortes, et al., 2005; Thomas, 2000; Wenglingsky, 2002)
  - Significant gains in student performance when STEM instructional principles are integrated (Hansen and Gonzalez, 2014)

### **PROGRAM DESIGN PRINCIPLES**

Based upon the research-based implications of STEM literature and feedback from various stakeholder groups, the following identifies key program design principles that will underlie the education at the West End Elementary School:

1. **A Portrait of the West End Student:** There is consensus about the power and value of making the new school a true 21<sup>st</sup> century learning organization. West End students will become: (a) empowered learners; (b) global collaborators; (c) digital citizens; (d) creative communicators; (e) computational thinkers; (f) innovative designers; (g) knowledge constructors; and (h) experiential inquirers.
2. **The West End Teacher:** The staff hired for this site will have the following characteristics: (a) life-long learners; (b) instructional leaders; (c) digital citizens (i.e., with clear expertise and interest in the use of technology to enhance student learning); (d) collaborators; (e) creative curriculum designers; (f) facilitators of the learning process; (g) analysts of student progress; and (h) proficient in promoting a classroom and school culture that is inviting, engaging, and rigorous.
3. **A Commitment to Implementing the ACPS K-5 Core Curriculum:** The new West End Elementary School will offer a full range of content in alignment with the ACPS core curriculum, including reading, writing, mathematics, science, social studies, fine arts, health and physical education, and library media services.
4. **Clearly Articulated STEM Design Components:** Key design elements will include: (a) curriculum integration; (b) learner-centered instruction; (c) authentic, real-world scenarios and problems; (c) a conceptual focus upon patterns, themes, and big ideas; integration of career development and preparation at all age levels; (d) technology and blended learning; (e) mathematics as a language for analyzing and interpreting natural patterns and cycles; (f) sustained focus on feedback and adjustment using a range of assessment resources; and (g) performance-based assessment and culminating projects.
5. **Addressing the Needs of a Linguistically and Culturally Diverse Student Population:** The richness of the community and student population to be served by the West End Elementary School requires a true emphasis upon differentiation and personalization. A comprehensive range of services will be available, including major focus upon research-based Early Childhood Education as well as appropriate programs and resources for English Learners and Students with IEPs. The school will also provide a comprehensive TAG curriculum as well as Student Services that will include counselors, social workers, and psychologists.
6. **Blended and Project-Based Learning:** The West End Elementary School will emphasize a blended approach to the use of technology, actively integrating it into all aspects of curriculum implementation, teaching, learning, and assessment. In addition, students at all grade levels will engage in culminating performance assessment tasks and projects. This approach will encourage independent inquiry, choice related to subject and approach, and multiple options for products and performances.

#### **TIMELINE FOR PROGRAM DEVELOPMENT AND IMPLEMENTATION**

1. **August 1-September 30, 2016:** Review period to determine feasibility of site and school proposal
2. **October 1, 2016-January 1, 2017:** Extended review period (including multiple community focus groups)
3. **April 2017:** Finalization of property acquisition

4. **April-May 2017:** Updates to William Ramsay and John Adams PTA groups as well as additional community update sessions
5. **July 2017:** *Design-Build* firm on-board to develop architectural and building plans
6. **July-September 2017:** Development of schematic and architectural design
7. **September 2017:** DSUP (Hearing at City Council)
8. **October-December 2017:** Finalization of construction drawings
9. **Fall 2017:** Exploration of programmatic options, including STEM
10. **January 2, 2018:** Rachael Dischner hired as school principal
11. **First Quarter of 2018:** Begin construction
12. **Hiring of Staff:**
  - **January 8, 2017:** Posting of Transfer Vacancies
  - **January 15, 2018:** Close of Transfer Application
  - **January 17 – January 31, 2018:** Interview Period
  - **February 2, 2018:** Transfer selections made by Principals/Program Managers due to HR
  - **February 5-7, 2018:** Transfer offers extended to employees selected
  - **February 9, 2018:** Deadline for selected employees to accept/decline offer
  - **February 12– 16, 2018:** Notifications to those not selected during Transfer Fair
13. **June-August 2018:** STEM Curriculum Development (a collaboration involving hired West End Elementary staff members and Departments of Curriculum and Instruction and Instructional Technology) to develop milestone projects and related STEM-focused performance assessment tasks and lessons

#### **CONTACT PERSONS**

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