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**Atlanta Public Schools**

**STEM Education**

**Frequently Asked Questions**

1. **What is STEM Education?**

STEM stands for **Science**, **Technology**, **Engineering** and **Mathematics** (STEM). STEM education can be used for any grade levels (i.e. elementary, middle and high school). STEM education combines math, science, reading and writing, instead of teaching them separately. STEM education is not based on a specific curriculum, but a combination of several instructional practices that have been proven to improve student achievement:

* Combining math and science for better understanding
* Solving problems through hands-on projects
* Working together in teams
* Conducting investigation and research to solve problems
* Creating projects that are focused on “real-world” issues

**STEAM** educationis STEM education that incorporates “the Arts,” for example: drawing, painting, music, dance, and film production.

1. **Why use STEM education programs?**

STEM education is more engaging for students and helps them retain what they learn. STEM is **hands-on**, it is based on **real-world projects and problems**, it combines math and science to help students master difficult concepts, and it helps students perform better on Georgia standardized tests. In order to develop STEM projects, teachers work with representatives from businesses, colleges and universities. As a result, students also develop skills, abilities, and knowledge that will prepare them for college and future careers.

In addition to academic outcomes, a STEM education enables students to eventually earn higher wages in high demand occupations. The US Bureau of Labor Statistics reports that over the past 10 years:

* **Growth in STEM jobs was 3 times faster** than growth in non-STEM jobs
* **STEM workers command higher wages**
* **STEM workers earn 26% *more* than those in non-STEM jobs**
1. **Does STEM help improve literacy skills?**

Yes, STEM education helps improve reading comprehension and writing skills because students are required to read, write and make oral presentation in order to complete their STEM projects.

1. **Is STEM for the average student?**

Yes, a STEM educational program would be an excellent choice for any student. There is no mandatory GPA requirement for STEM. In many cases, students who do not perform well in traditional educational programs do much better in STEM because they find the “real world” problem solving and hands-on projects are more fun and engaging. STEM is equally appropriate for high achieving students because of the focus on research and investigation.

1. **Does APS have STEM Programs?**

Yes, the following APS schools are implementing STEM education:

* B.E.S.T Academy
* Coretta Scott King Young Women’s Leadership Academy
* Jackson ES
* **Douglass Cluster** (i.e. Douglass HS, John Lewis Academy, Boyd ES, Harper-Archer ES, F. L. Stanton ES, Scott ES, Usher-collier ES)
* **South Atlanta Cluster** (i.e. South Atlanta HS, Long MS, Cleveland ES, Dobbs ES, Heritage Academy ES, Humphries ES, Hutchinson ES)
* **Washington Cluster** (i.e. Washington HS, Brown MS, Hollis Academy, Jones ES, Tuskegee Academy ES)
1. **If a school has a STEM program, do all the students have to participate?**

No, a school may decide to have a STEM “program” instead of being a “whole school” model. In that case, only the students in the STEM program would participate.

1. **Is STEM education nationally recognized?**

Yes, in general, STEM programs that are rooted in best practices are recognized as good instructional programs. In Georgia, the Department of Education (GADOE) has a STEM certification process to validate high quality STEM and STEAM education programs and to provide guidance for new programs. There are other organizations, such as Cognia, that also offer STEM certifications,

1. **How can I obtain more information on STEM and/or STEAM?**

Every STEM school in APS has a STEM Program Specialist. This person can provide information on the specific STEM activities. For additional information, contact the district STEM Coordinator, Dr. Brene` Bradley, by phone at 404-802-5892 or by email: bebradley@apsk12.org.