

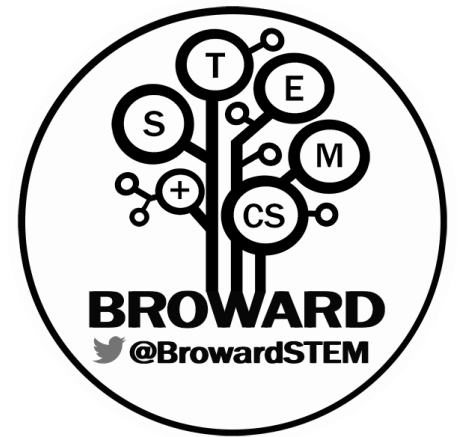
STEM+Computer Science

For every student in every school

Spatial Learning Pathway

Spatial reasoning is the ability to think and manipulate objects in 3-dimensions, often starting with a 2-dimensional representation of the object. Whether it is redesigning your their own workspace, visiting interstellar worlds, or simulating a biological system, these skills empower students to navigate, manipulate, create, and build with, around, and in physical and virtual space.

Students, through intentional research-based instruction and practice with spatial reasoning, gain self-efficacy in STEM. Research has demonstrated that these skills have broad reach in equitably retaining students in STEM coursework, leading to success and increased diversity in STEM careers.

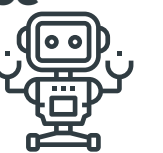


Hands-on problem-solving



Computer Science

Robotics



Engineering

Environmental Stewardship



**Broward County Public Schools
Applied Learning Department**

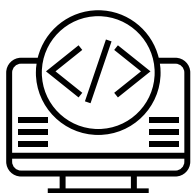
Susan Cantrick, Director
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browardschools.com/stem

Current

3 year

5 year



Cohort 1 (15 HS teachers) - trained in Magic Leap 1 hardware; >15 MS/HS teachers - trained 3D (Unity or Unreal) design/programming

Select 3 high schools for on-site Magic Leap 1 device carts for spatial computing in 2022-23 school year

Spatial thinking and reasoning is not explicitly taught in BCPS classrooms

Verizon Immersive Learning Labs: grant-funded installation in Glades and New Renaissance Middle Schools



Every Middle and High School will provide immersive content lessons using AR/VR/XR technology and experiences to support learning

> 50% of K-12 schools will have at least one teacher intentionally teaching spatial reasoning skills

Resources will be available to all schools for on-demand use by teachers and students, including spatial reasoning instruction, spatial reasoning practice, and XR artifact creation as a tool for project dissemination

All pK-12 students will be offered explicit instruction in spatial reasoning

All pK-12 students will have the opportunity to learn through immersive content lessons using AR/VR/XR technology to support learning

All high schools will offer at least one course focused in spatial computing



The School Board of Broward County, Florida Lori Alhadeff • Torey Alston • Brenda Fam, Esq. • Daniel P. Foganholi • Debra Hixon • Dr. Jeff Holness
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