Spreading & Retaining BLACK GIRL MAGIC IN STEM CLASSROOMS ...and Beyond!

Presented by Princess Francois, Assistant Principal at MESA Charter High School in Brooklyn, NY
Wednesday, April 28, 2021 at 6pm
Introduce Yourself:

- Name
- Where you are from
- What brings you to this session today?
SESSION’S OBJECTIVES

You will be able to:

1. **Analyze the school-based and classroom-based factors** that are contributing to Black girls starting off with the highest interest in STEM but resulting in the lowest retention.

2. **Identify the 7 elements of the equity framework** in the classroom.

3. **Apply strategies** to provide learning experiences in the school setting that empower our Black girls to remain in STEM.

That is how you will go from being black girls who rock to being black women who rock.
ABOUT ME: PRINCESS FRANCOIS

High School Assistant Principal of Math & Science in Brooklyn, NY

2019 Milken Educator Award Recipient

Culturally responsive education is a means for us to thrive, not just survive.
MY PASSION STEMS FROM...

College Years
- Pre-Med Student at Columbia University
- President of Charles Drew Pre-Med Society, specializing in pre-meds of color

STEM Teacher
- Taught Chemistry, Anatomy & Physiology and Project the Lead the Way
- Introduced many outside classroom experiences (Career Day, College Rush Week, Med School Visits)

Assistant Principal
- Oversee Math, Science, and Essentials Departments
- Introduced & sustained Diversity, Equity & Inclusion for students & staff
- Science Department’s Anti-Racism Commitment
In a sample of over one million incoming college freshmen between 1990 and 1999, **55.8% of African American women were majoring in STEM** while 15.5% of European American women were majoring in a STEM field. However, among women graduating with bachelor’s degrees in 2010, 10% of European American women, but **only 8% of African American women**, earned STEM degrees.
Why do we see Black girls having the HIGHEST INTEREST in STEM but the LOWEST RETENTION in the field?
LET’S UNPACK THIS!

TOP REASONS for this issue:

1. Racism coupled with sexism
2. Lack of representation
3. Lack of Access
7 Principles of Equity Pedagogy = ICUCARE

- Include others as experts
- Be Critically conscious
- Understand your students (and families) well
- Use Culturally relevant curricula
- Activate, assess, and build on prior knowledge
- Release control
- Expect more
REASON 1: Racism coupled with sexism

 Principle 2: Be Critically conscious
  - Take the time to understand how negative stereotypes impact your students and actively work to erase the effects of those negative stereotypes on the outcomes of Black girls

 Principle 7: Expect more
  - Hold high expectations for all students, while avoiding deficit views of Black girls
STRATEGY to Combat Reason 1

STRATEGY for Teachers: Think of your Implicit Messaging when addressing mistakes

Scenario 1:
- “If you don’t do this carefully, you will get the wrong answer.”
- “Be sure to explain your thinking so that I can understand how are you approaching this question.”

Scenario 2:
- “Can someone identify the mistake that Sheila made?”
- “Sheila is almost there, can anyone support her way of thinking?”
STRATEGY to Combat Reason 1

STRATEGY for School Leaders: Look at your school’s rates for disciplinary action

- **ASK YOURSELF:**
  - Is there a pattern of who gets the most send outs? Detentions? Suspensions?
  - What are your current policies in place that may be enabling this?
- Track incidents of racism, sexism, and microaggressions to see who are the main victims.
- Focus group with Black female students
**STRATEGY to Combat Reason 1**

**Race/Ethnicity**

<table>
<thead>
<tr>
<th>Preferred</th>
<th>Problematic/Outdated</th>
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<tbody>
<tr>
<td>Black</td>
<td>Negro</td>
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<tr>
<td>Biracial/Multiracial</td>
<td>Mixed</td>
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<td>People of Color</td>
<td>Colored</td>
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<td>Minority</td>
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<td>(if known)</td>
<td>Underprivileged</td>
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<td>People who are</td>
<td>Under-resourced</td>
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<td>underserved</td>
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<td>Students in Need</td>
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**STRATEGY for ALL: Use Anti-Bias Language**

- Capitalize the B in Black
- NEVER, EVER end a statement: “...for a Black girl”
  - “You are so articulate for a Black girl”
  - “You are so smart for a Black girl”
- Think about how you describe students and your school
  - “I teach in an underprivileged school” vs. “I teach students who are underserved”
PULSE CHECK

Use a Reaction Button to let me know how are you feeling right now!

Hey! Just wanted to check-in

Accepting 1-2 Questions to answer!

Drop a comment to share!
REASON 2: Lack of Representation

Principle 3: Understand your students (and families) well
- Learn about students, their families and their communities for the purpose of improving instruction. (*Not making assumptions*)

Principle 4: Use Culturally relevant curricula
- Use instructional materials in ways that help students see themselves as doers, and help them overcome the negative stereotypes and messages regarding who is smart.

Principle 5: Activate, assess, and build on prior knowledge
- Value the prior knowledge that students bring to the classroom, both personal and cultural, and use that knowledge as a resource for creating new knowledge.
STRATEGY to Combat Reason 2

STRATEGIES for TEACHERS: Embedding more Black female figures and relevant topics in your instruction

- Take a student interest survey in the beginning of year
- Focus groups & surveys for feedback
- Highlight Black female STEM figures: hang posters in your classroom, STEM figure of the week, current events, teach/discuss discoveries and theories
- Create a unit to teach a culturally relevant topic
  a. Hair Relaxers: Chemistry
  b. Skin Bleaching: Anatomy & Physiology
STRATEGIES for School Leaders:

Re-evaluating Curriculum & Instruction

- Observe Classrooms and give feedback from a culturally responsive lens
- Audit curriculums, unit plans, & lessons
- Commit to an anti-racism mission schoolwide and through departments
- Invest in Interdisciplinary, project-based curricula (PLTW)
REASON 3: Lack of Access

Principle 1: **Include** others as experts
- Create classroom environments that extend beyond the teacher as the sole authority to develop competence and confidence in students as experts,

Principle 6: **Release** control
- Empower your students to take ownership of their own learning by focusing on sensemaking, and allow them to make choices about things that are important to them in the classroom.
STRATEGIES for TEACHERS: Give Black female students more opportunities & support

- Advocate for Black female students in AP & Honors Classes
- Introduce & assist Black female students in applying for internships & summer programs
- Plan school trips & events giving Black female students real-world exposure to STEM in action
- Lead solidarity groups or STEM Clubs
STRATEGY to Combat Reason 3

STRATEGIES for School Administrators: Focus on exposure experiences outside the classroom

- Annual Events for STEM Exposure & Careers: Career Day; College Rush Week
- Organize school trips: science fair, medical schools visits, dissection classes
- Create Mentorship programs
- Establish partnerships with Organizations elevating Black women
- Recruit & retain Black teachers
PULSE CHECK

Accepting 1-2 Questions to answer!

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CASE STUDY

IN BREAKOUT ROOMS (take notes on Jamboard):

● Which obstacle(s) is this Black female student currently confronting?

● Which principles of the ICUCARE framework is most relevant?

● What strategies would you use to help rectify the situation...
  ○ ...As a teacher?
  ○ ...As a school leader?
CLOSING SUMMARY

DROP IN THE CHAT (choose 1):

1. LEARNING:
   ○ One thing I learned is...

2. GRATITUDE:
   ○ One thing I am grateful for is...

3. TENSION:
   ○ One thing that is still causing me tension is...

4. ACTION:
   ○ One thing I will commit to is...
CONTACT INFORMATION

TAKE QUICK SURVEY in the Chat!

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