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# Career Pathways are not just for High School

**The Role of Middle School in Setting Students up to Succeed**

Stephanie Gurule-Leyba,  
2017 New Mexico Teacher of the Year

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A photograph of Kobe Bryant on a basketball court, wearing a purple jersey and black pants, in a low defensive stance. In the background, another player in a purple jersey is visible, and a person in a white shirt is in the foreground with their back to the camera. The image has a semi-transparent purple overlay.

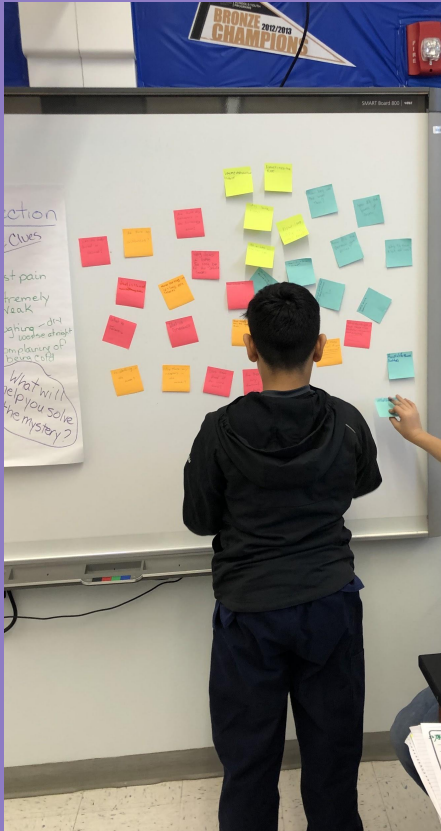
“The most important thing is to try and inspire people so that they can be great in whatever they want to do.”

~Kobe Bryant

**LIVE**

**BREAKING NEWS**

**HUMAN REMAINS FOUND OUTSIDE SCHOOL  
VERNON**



# Student Questions

- How can the sex of the skeletal remains be determined?
- How can we determine if the bones are an adult or a child?
- How can we determine if the bones are from the same person?
- How can the bones tell us how the victim died?
- How can we positively use the bones to identify the person?
- Can DNA help identify?
- Can the bones help make connections to the other case?
- Was there any other evidence near or around the bones (ex: clothes, weapons, blood)?
- Can the age of the person be determined using the bones?
- How were the remains discovered?
- Can a drone be used to examine the scene?



# Ortiz Middle School

- Largest middle school in SFPS
- 600 students
- 6-8th grades
- 94% are underrepresented (majority Hispanic)
- 40% ELL and 30% Support Services
- Title I
- 100% free breakfast and lunch

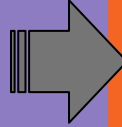


## Note

The state average for underrepresented youth in a middle school is 78%.

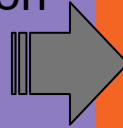
# Did you know...

STEM and Healthcare are two separate career areas. According to the BLS and the NSF, Healthcare is not in the same category as STEM.



Many Healthcare and Biomedical Science professions in a 21st Century workforce require a foundation in STEM skills.

Although there is an underrepresentation of minorities in the STEM-Healthcare workforce, minorities and white middle school students display similar interests in career aspirations in STEM, health, and medicine.



There is a risk that students will dismiss a STEM-Healthcare based career path as a potential option for their future. The lack of access to quality STEM-Healthcare education due to socioeconomic status and race also leads to the underrepresentation of minorities in healthcare.

# Driving the mission

- Female workers represent the majority in 25 of the 30 U.S. health occupations analyzed.
- There is considerable variation in racial and ethnic diversity by occupational groups.
- All minority groups, except Asians are underrepresented in Health Diagnosis and Treating occupations.
- Hispanics, Asians and Native Hawaiian/Pacific Islanders are underrepresented among Counselors and Social Workers.

*~U.S. Department of Health and Human Services, 2017*



## NOTE:

New Mexico's population has been projected to grow by 14.4% between 2015 and 2040, representing an increase of 301,624 people.

# Diversifying Healthcare!

Caring for BIPOC populations requires more than just living in their communities. It includes

- Providing culturally competent care
- Our BIPOC populations having unique healthcare challenges and needs
- BIPOC providers meeting these challenges
- Healthcare systems adapting to the populations that they are serving.

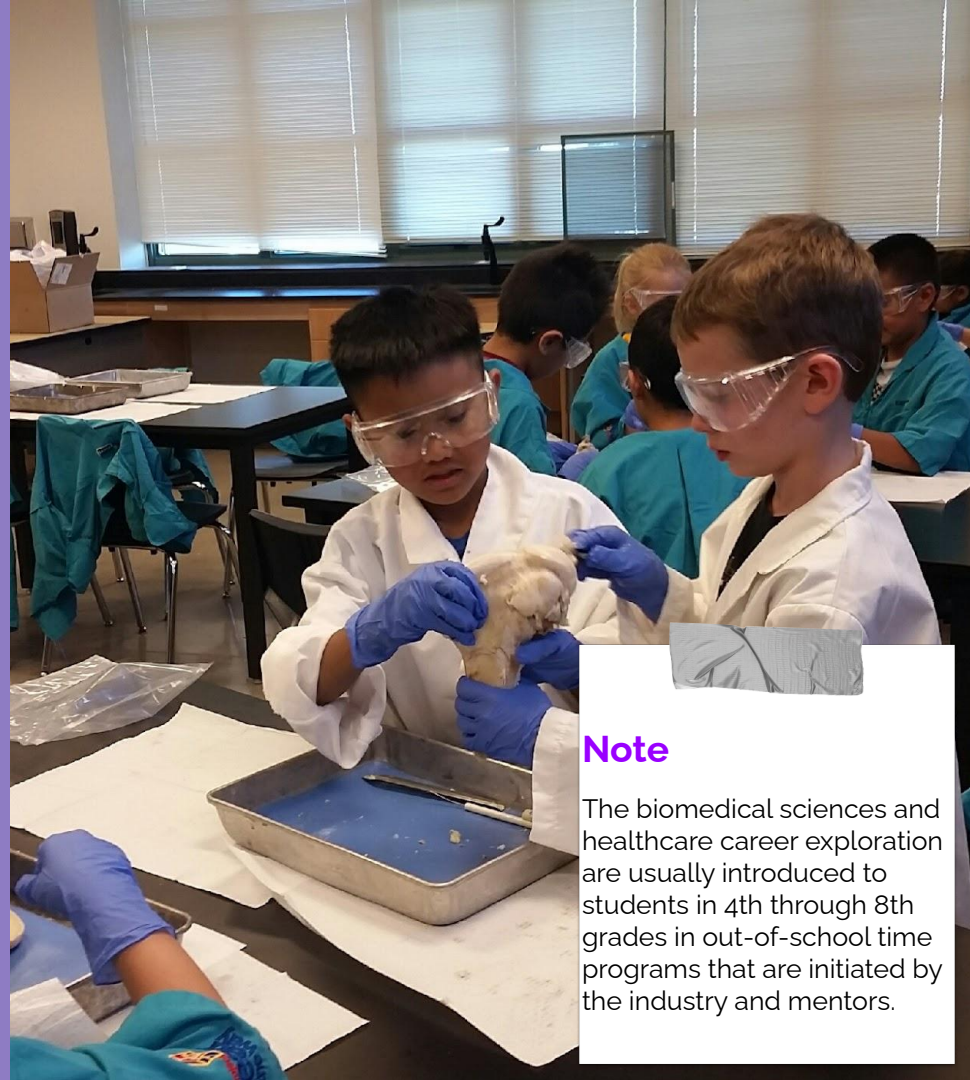


## Note

The states with the largest population of Hispanics/Latinos by percentage following New Mexico are California and Texas.

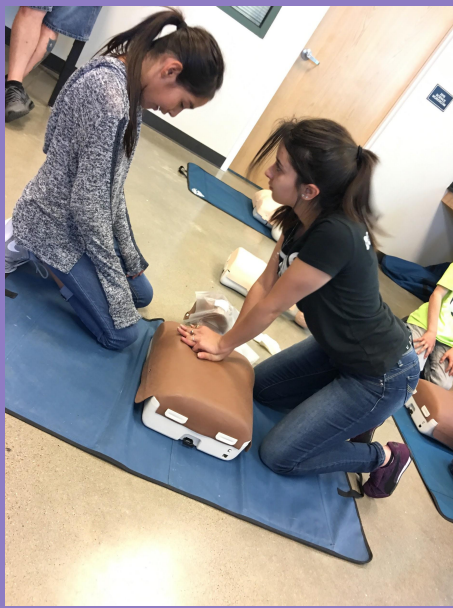


What can we do? We must begin introducing Biomedical and Healthcare Sciences career exploration in **Middle School** especially in underrepresented schools.



### Note

The biomedical sciences and healthcare career exploration are usually introduced to students in 4th through 8th grades in out-of-school time programs that are initiated by the industry and mentors.



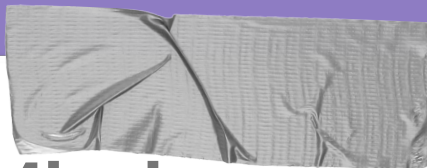
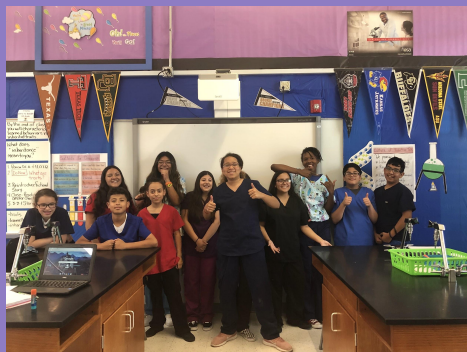
# WHY?

**STUDIES SHOW** that from the last years of elementary school through high school...

- **BIPOC Students develop** critical attitudes and beliefs in their abilities in STEM-BS/HS subjects and they do not see themselves in these career roles.
- **BIPOC Students non-identify** in STEM-BS/HS roles although they display similar interests in career aspirations in health care as their white peers.
- **Starting Biomedical and Healthcare Sciences Career Exploration** in high school is too late.







# My Mission

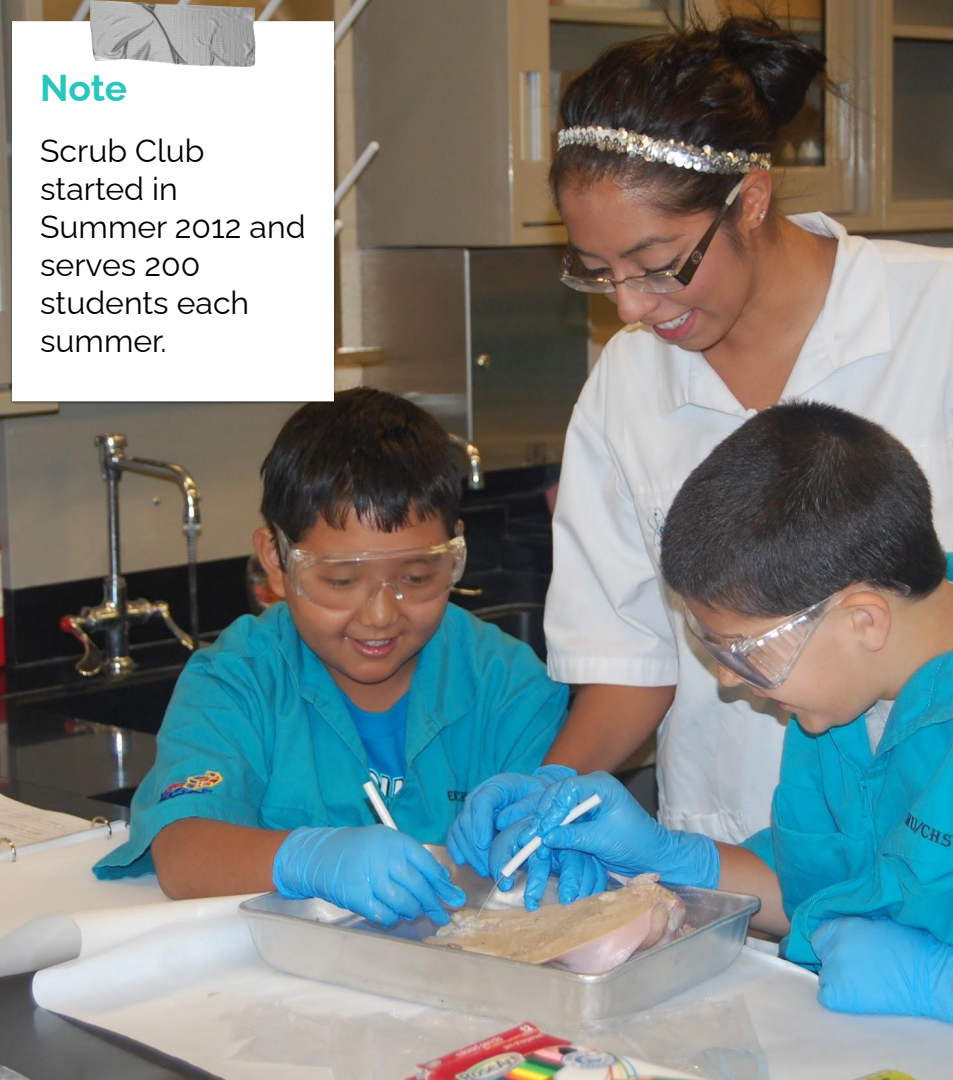
**Career Exploration and Career Pathways** have been instrumental to my professional career and my passion for STEM and the Biomedical and Healthcare Sciences.

- ➔ **Medical Science Academy**  
Capital High School, 9-12th grades  
Santa Fe, NM
- ➔ **Jr. BSCEP**  
Ortiz Middle School, 6-8th grades,  
Santa Fe, NM
- ➔ **Scrub Club**  
Summer STEM-H Enrichment Program for  
4-8th grade students



## Note

Scrub Club started in Summer 2012 and serves 200 students each summer.



## Scrub Club

In 2011 a group of 4th grade students sat down with me about their dreams and aspirations. They wanted to learn more about “what the high school students were doing in my classes.”

Scrub Club was the first introduction of Biomedical and Healthcare Sciences career exploration for 4th through 8th grade students.





## 3 Levels

**Scrub Club** began with three levels of instruction so most students would continue for three summers to finish the program.

### → LEVEL 1: Body Systems

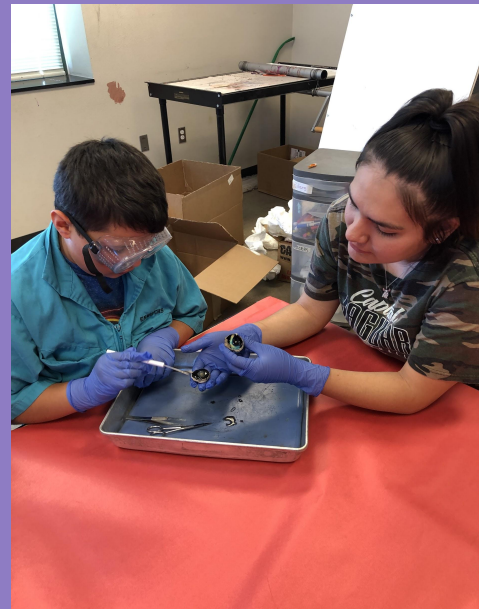
Students learn about the human body using APB pedagogy.

### → LEVEL 2: Crime Scene Investigations

Students delve into the physical, life, and earth science aspects of CSI.

### → LEVEL 3: College & Career Exploration in Healthcare

Students learn industry skills, participate in guest lectures, engage in hands-on activities, and are enrolled in CPR with AED & First Aid.

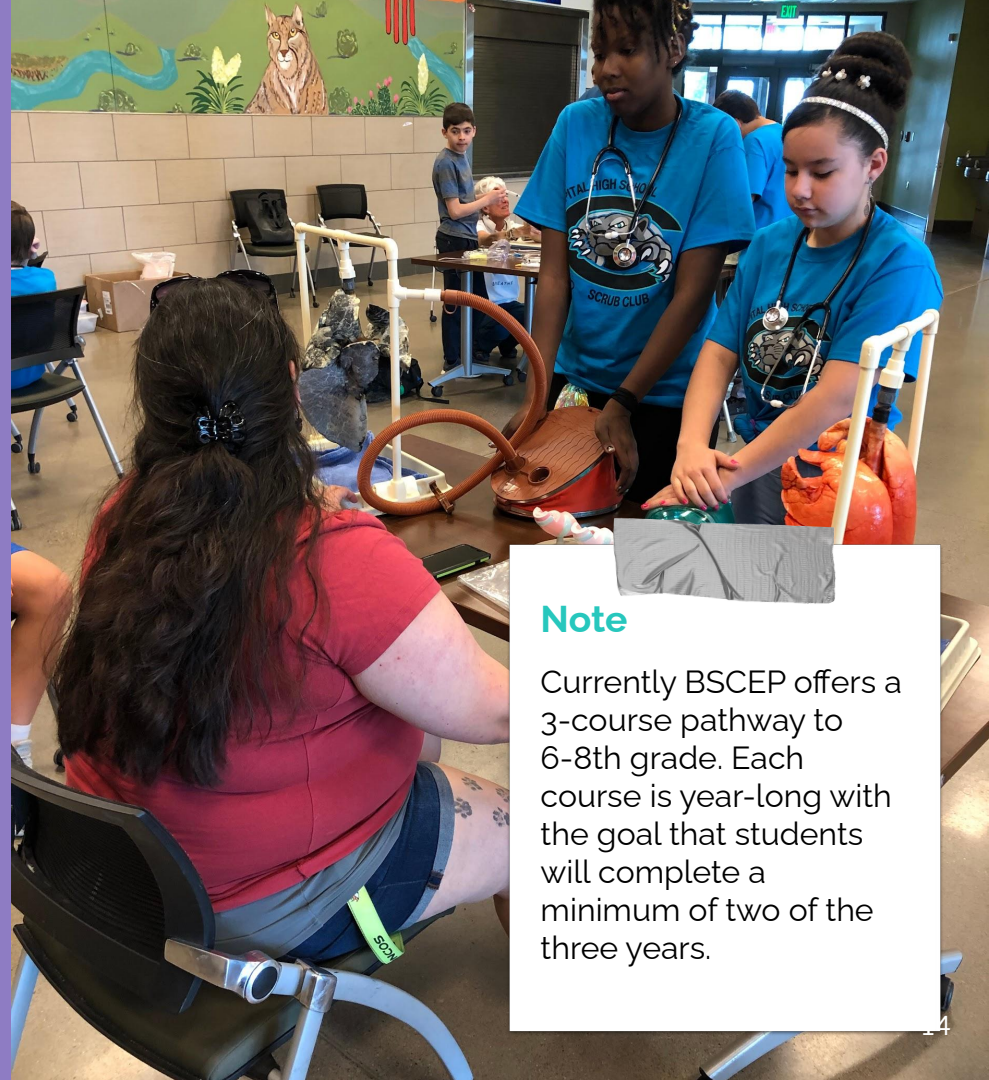


# Jr. BSCEP

BSCEP, Biomedical Sciences Career Exploration Program is a 6th through 8th grade career pathway at Ortiz Middle School (Santa Fe, NM).

Using an APB pedagogy, BSCEP focuses on areas in the Biomedical and Healthcare Sciences. Some areas include:

- Forensic Science
- Neuroscience
- Public Health
- Biomedical Engineering
- Healthcare



## Note

Currently BSCEP offers a 3-course pathway to 6-8th grade. Each course is year-long with the goal that students will complete a minimum of two of the three years.

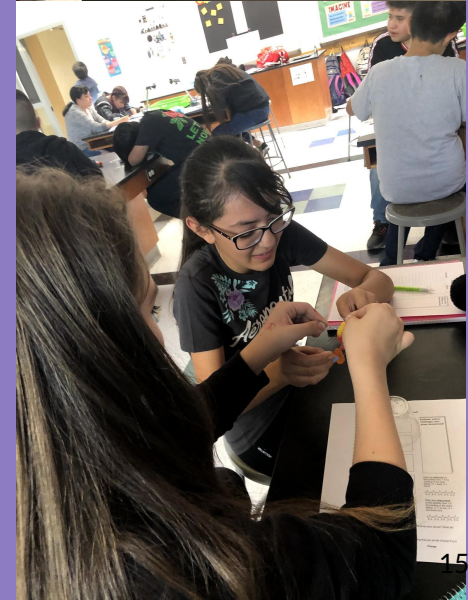




# 3-Year Program

**Jr. BSCEP** provides 6-8th grade students with the opportunity to participate in a biomedical sciences career pathway for 3 years.

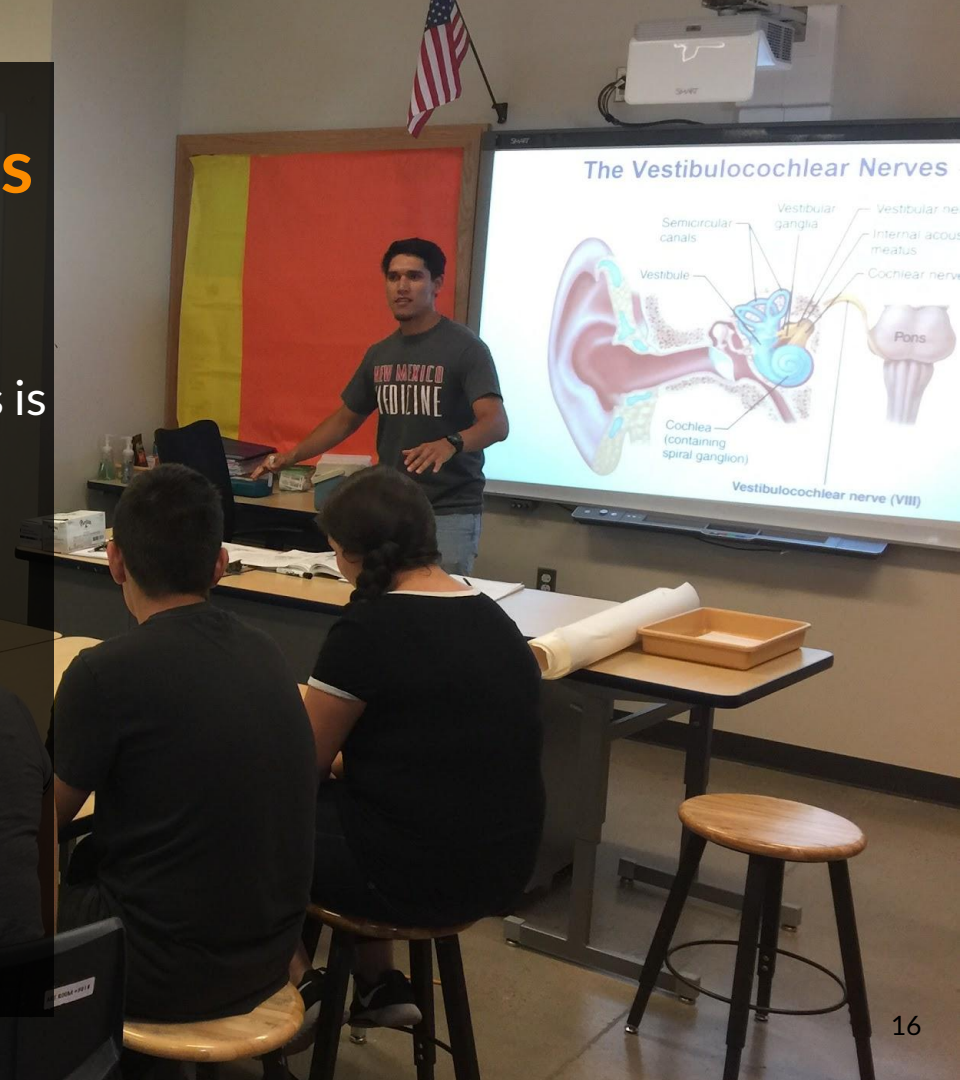
- **Introduction to BSCEP (6th grade):** Deductive Reasoning, Neuroscience, Outbreaks
- **BSCEP 1 (7th grade):** Biomedical engineering, Genetics, Anthropology, and Forensic Artistry,
- **BSCEP 2 (8th grade):** Patient signs and symptoms, the human body, public health



# Guest Speakers & Field Trips

Giving students the opportunity to identify themselves in STEM-Healthcare is critical. Bringing in guest speakers in different areas is a vital piece.

Many of the guest speakers are from underrepresented groups. This helps with self-identity and it does influence the students' attitudes and interests towards healthcare careers.







### Did you know?

A study interviewing 23 underrepresented surgeons expressed that primary and secondary education play a role in career preparation and early opportunities in Healthcare.

**Middle School is the time** to offer career pathways and begin career exploration and career readiness.

Studies show that as early as middle school, students' pathways into science and health exploration are forming and their identity impacting achievement and career aspiration have begun.

# From outsider to star

Of the Scrub Club "Original 55"

- 97% have graduated high school
- 100% are enrolled (or have completed) in college, technical school or certification program
- Over half declared a biomedical-focused degree



# What families are saying...

My son truly loves Scrub Club and is proud now that he is CPR certified. He is more aware of his surroundings. This program has helped not only with his skills, but his confidence.

Scrub Club Parent

My daughter is excited about what she is learning and likes to use new terminology in conversation.

Jr. BSCEP I Parent

My son did things he never dreamt of doing and things I wouldn't know where to start as his parent. Thank you!

Jr. BSCEP I & Scrub Club Parent

# Students' voices are powerful!

Scrub Club helped me decide that I do want to become a pediatrician. I didn't think that I could do it because of where I come from.

Scrub Club Level 3 Student

I did three years of Scrub Club and I am now in BSCEP I. I am so happy that I continued with biomedical.

Jr. BSCEP I Student

Being a part of BSCEP II has taught me that I can have a job in healthcare and I don't have to become a doctor or a nurse. Ms. Leyba says it is the quality of education that counts.

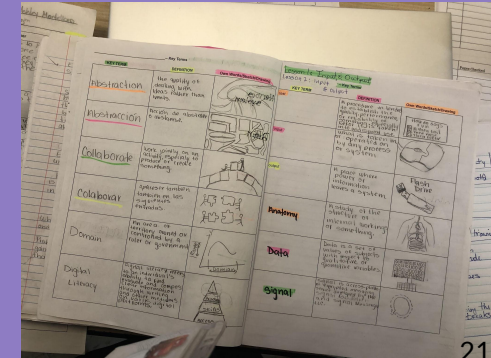
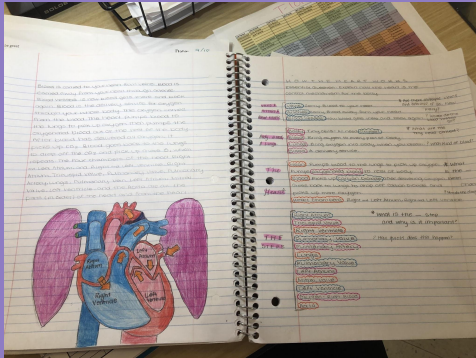
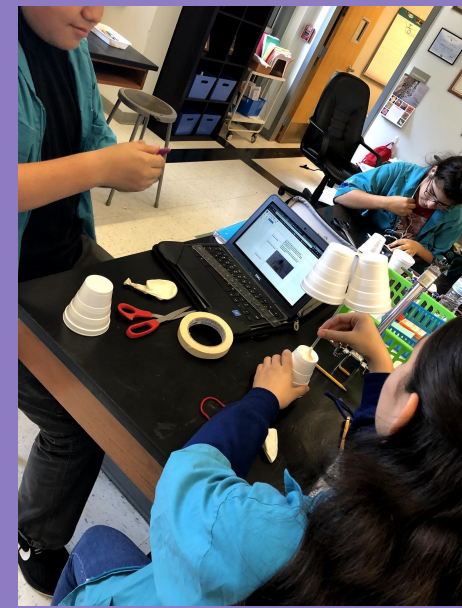
Jr. BSCEP II Student



# To Summarize

Biomedical sciences career pathways should be in place for underrepresented students in middle school because

- **Exposure**  
giving students more time to prepare academically for college
- **Advanced coursework**  
understanding the importance of higher level math and science classes as prerequisites in high school
- **Career identity**  
students learn that they are capable and can see themselves in healthcare careers







# Thank you!

For more information please contact me at



@sguruleleyba



@sguruleleyba2017nmtoy



[sgurule@sfps.k12.nm.us](mailto:sgurule@sfps.k12.nm.us)



[sguruleleyba@gmail.com](mailto:sguruleleyba@gmail.com)

**Stephanie Gurule-Leyba**  
**2017 NM Teacher of the Year**  
**Middle School Teacher**  
**Ph.D. Candidate in Education**

