

# John D. O'Bryant School of Mathematics and Science

## Incoming Grade 9 Course Selection Day: May 21, 2022

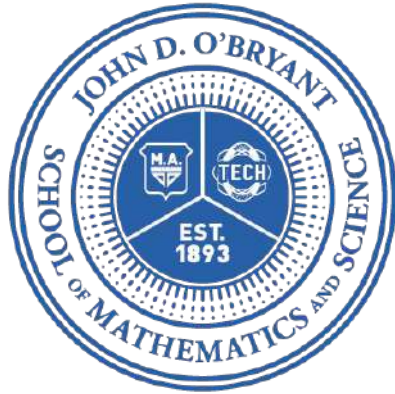


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## Welcome Address

Dr. Freeman-Wisdom  
Head of School



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# Agenda



- Complete Course Selection Process
- Take a Mathematics assessment to possibly “Test Up”
- Take a World Language assessment to possibly “Test Up”

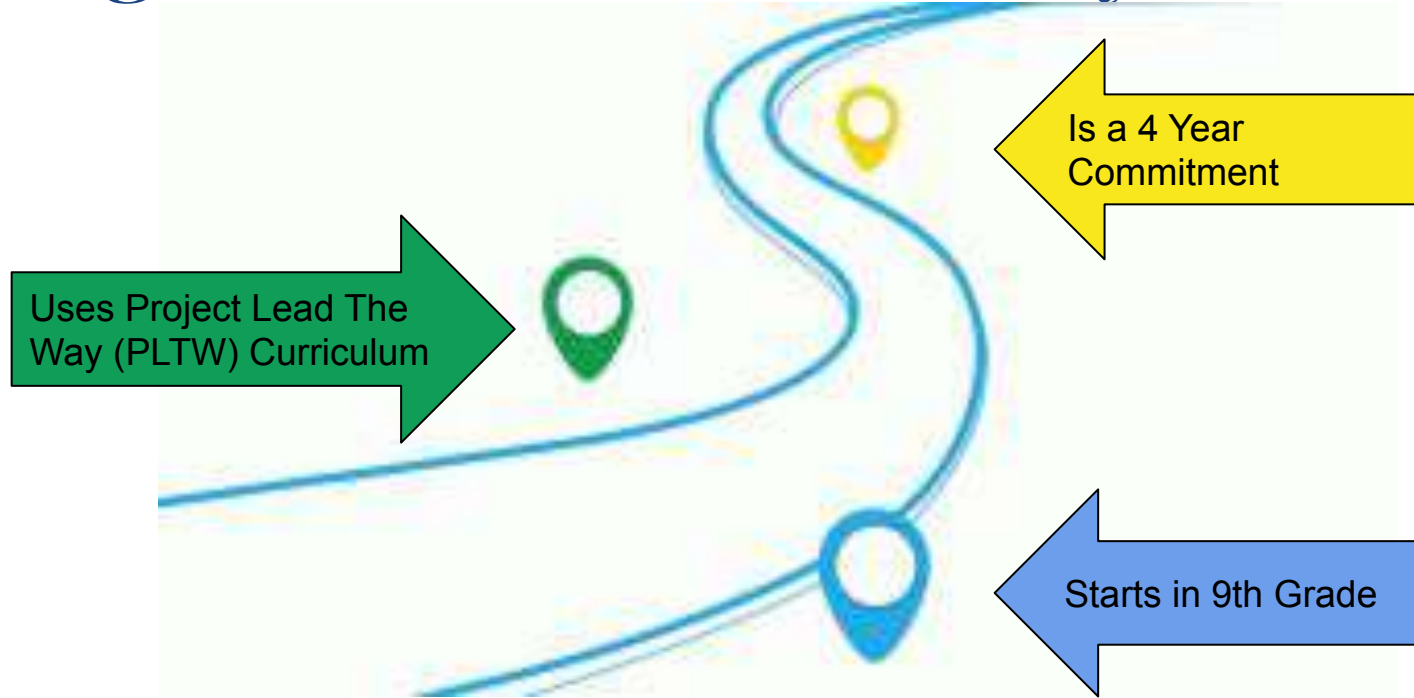


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# Distinguished STEM Pathways...



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# Specialized Pathway Programs

- Biomedical Science Pathway
- Engineering Pathway
- Computer Science Pathway



*Pathways are optional and students are selected by an application and lottery process.*



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# Sequence of Classes in the Biomedical Science Pathway

## 9th Grade

### **Biomedical Science Principles:**

By engaging in activities like dissecting a sheep heart, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person.

## 10th Grade

### **Human Body Systems:**

Through projects such as determining the identity of a skeleton using both forensic anthropology and DNA analysis, students examine the interactions of human body systems and apply what they know to solve real-world medical cases.

## 11th Grade

### **Medical Interventions:**

Students delve into activities like designing a prosthetic arm as they follow the life of a fictitious family and investigate how to prevent, diagnose, and treat disease.

## 12th Grade

### **Biomedical Innovations:**

Students build on the knowledge and skills gained from previous courses to design their own innovative solutions for the most pressing health challenges of the 21st century.



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# Sequence of Classes in the Computer Science Pathway

## 9th Grade

### Computer Science Essentials:

Students will experience the major topics, big ideas, and computational thinking practices used by computing professionals to solve problems and create value for others.

## 10th Grade

### AP Computer Science Principles:

Using Python®/Javascript as a primary tool, students explore and become inspired by career paths that utilize computing, discover tools that foster creativity and collaboration, and use what they've learned to tackle challenges like app development and simulation.

<https://medium.com/csforsall-stories/ap-cs-a-or-csp-both-four-ap-cs-veterans-share-their-perspectives-cdc3cfb1341f>

## 11th Grade

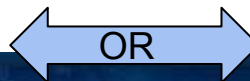
### Cybersecurity:

Whether seeking a career in the growing field of cybersecurity or learning to defend their own personal data or a company's data, students in Cybersecurity establish an ethical code of conduct while learning to defend data in today's complex cyberworld.

## 12th Grade

### AP Computer Science A:

Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases, as well as creating a game for their friends or an app to serve a real need in their community.



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# Sequence of Classes in the Engineering Pathway

## 9th Grade

### **Introduction to Engineering Design:**

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects like designing a new toy or improving an existing product.

## 10th Grade

### **Principles of Engineering:**

Students explore a broad range of engineering topics including mechanisms, strength of structure and materials, and automation, and then they apply what they know to take on challenges like designing a self-powered car.

## 11th Grade

### **Civil Engineering & Architecture:**

Students learn important aspects of building and site design and development, and then they apply what they know to design a commercial building.

## 12th Grade

### **Engineering Design & Development:**

Students identify a real-world challenge and then research, design, and test a solution, ultimately presenting their unique solutions to a panel of engineers.



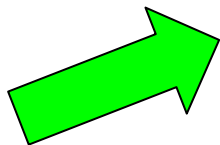
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If you are interested in applying for one of the **STEM Pathways**, complete the [STEM Pathway application](https://bit.ly/PathwayApplication2022).

<https://bit.ly/PathwayApplication2022>



June 6th



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# World Language Options

Students have 3 languages to choose from:

1. Chinese
2. French
3. Spanish

Students that have proficiency in their first choice will have the opportunity to “test up” and start at level 2 of their preferred language. Please select your first and second choice.



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# Electives Options

**First Choice:**

Physical Education or NJROTC



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# Electives Options

## Second Choice: Select a course in the Arts

HS Band	For students with no experience in playing an instrument
HS Concert Band	For students who have prior experience with playing an instrument
Guitar	No experience needed!
Piano	No experience needed
Vocal Technique 1	For students with no singing experience
Vocal Technique 2	For students who have prior experience singing in a choir



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# Course Selection Process

Log into your Chromebook

Find the [Google Form](#)

Wait for further instructions

[tinyurl.com/OB-Course-Selection-2026](https://tinyurl.com/OB-Course-Selection-2026)



## QR Code



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<b>Grade 9 Schedule Option #1</b>	<b>Grade 9 Schedule Option #2</b>
<b>English Language Arts 9</b>	<b>English Language Arts 9</b>
<b>Biology</b>	<b>Biology</b>
<b>World History 1</b>	<b>World History 1</b>
<b>Physical Education and Music</b>	<b>Physical Education and Music</b>
<b>Mathematics (Algebra 1, Geometry)</b>	<b>Mathematics (Algebra 1, Geometry)</b>
<b>World Language (Spanish, French, or Chinese)</b>	<b>STEM Pathway (Biomedical, Computer Science, or Engineering)</b>



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# Course Selection Process

## Four Major Sections:

- 1) Collect Student and Family Information
- 2) Determine if you'd like to apply to the STEM Pathway
- 3) Select World Language Courses
- 4) Select additional elective courses



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# Course Selection Process

## Section #1: Collect Student and Family Information

Try the best you can to fill out all information accurately. If you do not know your BPS ID number, just type in “not sure.”



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# Course Selection Process

## Section #2: STEM Pathway

Please now indicate if you are interested in one of the STEM pathways. You will receive an application that will be sent to you after today's session.



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# Course Selection Process

## Section #3: World Language

Please now select your first and second option, and please indicate if you have reading, writing, speaking, or listening skills in your selected language. If so, you will take a language assessment.



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# Course Selection Process

## Section #4: Electives Options

Please fill out which electives you'd like to take.



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# Thank you!

Students will now proceed to the  
basement cafeteria to take the  
O'Bryant Mathematics Assessment



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