

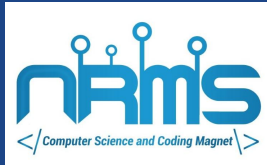
Success Through Excellence

Magnet Open House

November 15, 2022

Northridge Middle School

Computer Science & Coding Magnet Program



North Carolina Association for the

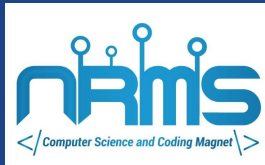
GIFTED & TALENTED



Expectation of Excellence

Open House Agenda

- ★ Why Choose Northridge Middle School
- ★ Our Magnet Program
- ★ Encore Electives
- ★ Academic Excellence
- ★ Advanced Studies
- ★ Athletics Program
- ★ Answering Your Questions



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Expectation of Excellence

Why Choose Northridge

Strong UNCC
and NC A&T
partnerships

What makes
Northridge
unique?

One of 3
Computer
Science & Coding
middle schools in
the district!

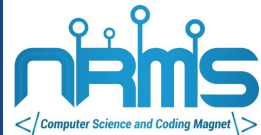
Strong
partnerships
with our
families and
community

Diversity in
our students
& staff

Advancement
& Enrichment
through our
AVID & AIG
programs

Expectation
of
Excellence!

Equitable
access to
rigorous
academic



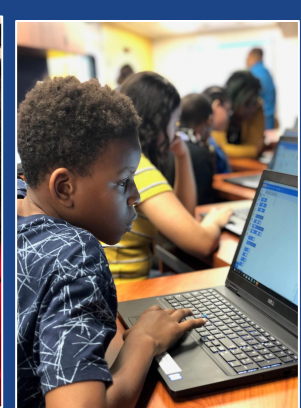
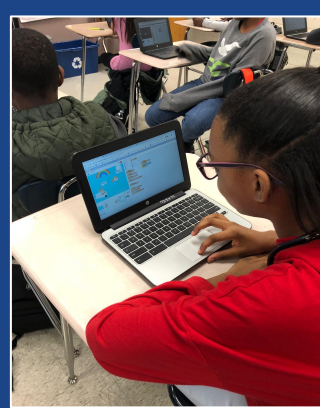
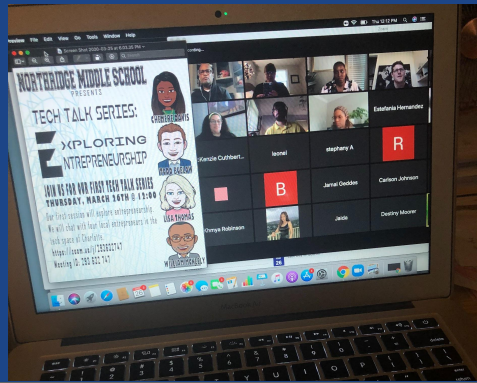
Expectation of Excellence

Computer Science and Coding

MAGNET PROGRAM

Computational thinking skills, computer science and coding are incorporated throughout our core curriculums.

Our Magnet Consultant, Dr. Sharon Jones works with our teachers and scholars to learn about the world of computer science with fun experiences like Tech Talks.



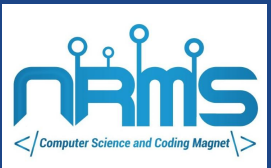
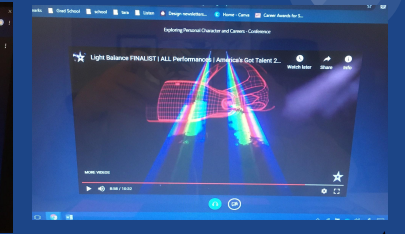
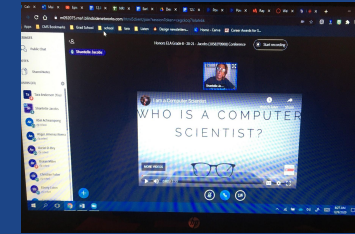
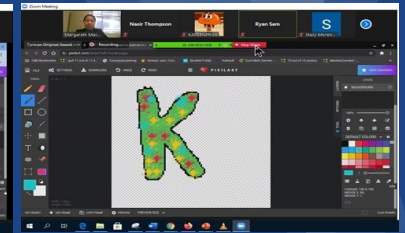
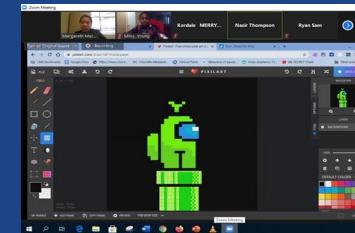
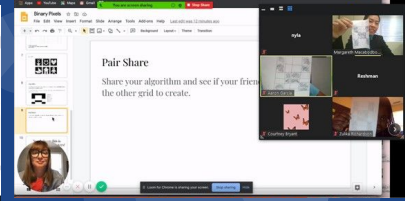
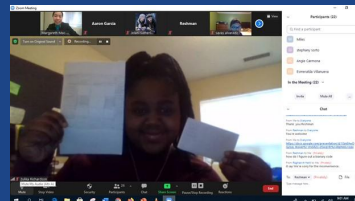
Our Magnet Program

Our partnership with UNCC College of Computing and Informatics provides our scholars with unique opportunities to engage with the students and professors.

Our teachers and scholars are learning the coding language, Python with the help of our partners at UNCC.

A few of the exciting events happening this year:

- Early Release STEAM Days
- Winter & spring STEAM Expos
- Summer Magnet Innovation Academy
- Innovation & Coding Challenges



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Mad Computer Scientist

Our wacky principal and magnet coordinator have transformed into the Mad Computer Scientist & Ms. Frizzle to create a series of STEAM challenges to entertain and engage scholars in science fun! Be sure to subscribe to our YouTube channel!

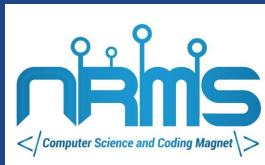
Episode 1: Mad Computer Scientist



Episode 2: Making a Story with Slime



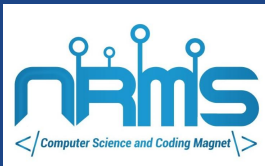
Episode 3: Elephant Toothpaste



Encore Electives



Our Encore department offers a wide array of experiences and opportunities for our students to explore their interests and develop their passion.



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Mr. Ewell & Mr. Stitt

C

O

Computer Science
Discoveries 1,2 & 3

D

E

App Creators

Design & Modeling



PROJECT LEAD THE WAY

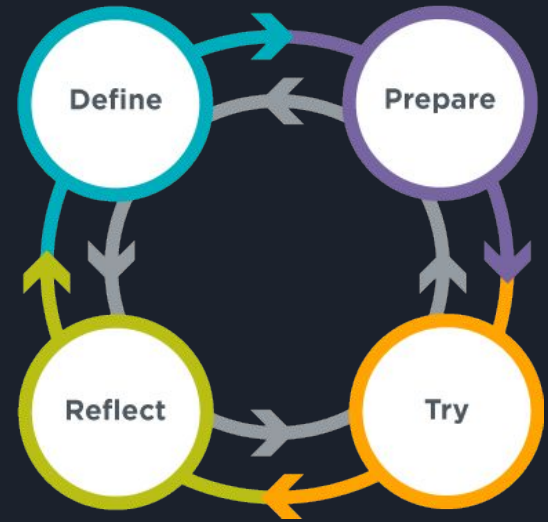
PLTW

Automation &
Robotics

Code.org - Computer Science Discoveries

Unit 1: Problem Solving and Computing

- Exploring Problem Solving
- What is a computer?
- Input, Processing, Output, Storage



Code.org - Computer Science Discoveries

Unit 2: Web Development

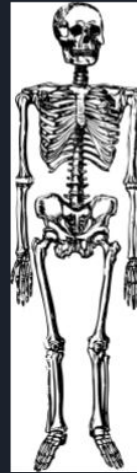
- Creating Web Pages
- Coding in HTML and CSS

WORDS
&
IMAGES



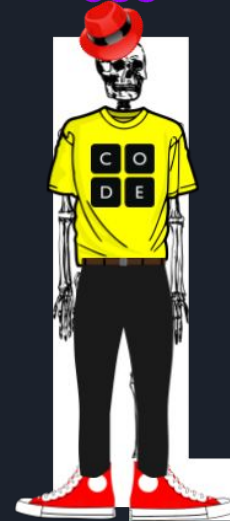
THE CONTENT

HTML



THE STRUCTURE

CSS

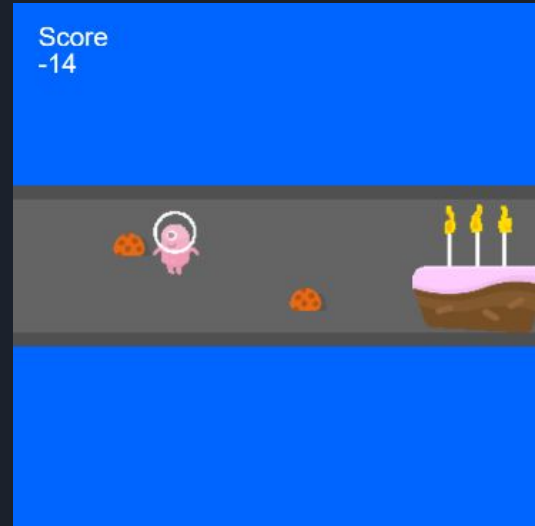


THE STYLE

Code.org - Computer Science Discoveries

Unit 3: Interactive Animations and Games

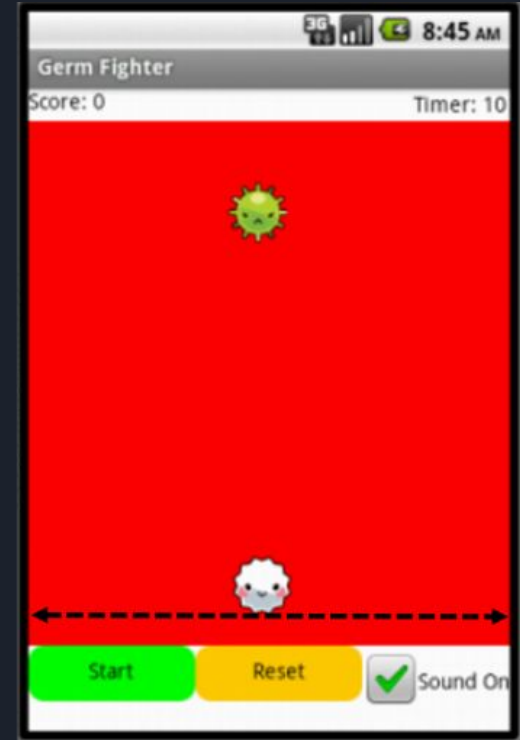
- Images and Animation
- Building Games (i.e., Alien Jumper, Cake Defender)



PLTW - App Creators

Lesson 1: Let's Create an App!

- Pair programming
- App development
- App graphical design
- Event-driven programming
- Debugging
- Variable and Conditional Logic
- Students create engaging biomedical science apps and fun interactive games that apply these concepts and use basic user interface features, media, and animation



PLTW - App Creators

Lesson 2: Taking It to the Next Level

- Create algorithms using loops
- Create procedures to abstract the details of a task and reduce redundancy
- Learn to organize and store persistent data collected from user input and device sensors.

```
initialize global QuestionList to make a list
  Does it take 7 years to digest a piece of gum?
  Approximately how long is the small intestine?
  How many bones are in the human body?
  Where is the smallest bone in your body located?
  Which part of the human eye is often referred to as the 'eye color'?

initialize global AnswerList to make a list
  No
  20 - 23 feet
  206
  in your ear
  the Iris

initialize global currentQuestionIndex to 1

when Screen1 Initialize
do
  set QuestionLabel . Text to select list item list
    get global QuestionList
    index 1

when AnswerButton Click
do
  if AnswerText . Text = select list item list
    get global AnswerList
    index get global currentQuestionIndex
  then
    set RightWrongLabel . Text to Correct
  else
    set RightWrongLabel . Text to Incorrect

when NextButton Click
do
  set RightWrongLabel . Text to
  set AnswerText . Text to
  if get global currentQuestionIndex = length of list
    get global QuestionList
  then
    set global currentQuestionIndex to 0
  set global currentQuestionIndex to
    get global currentQuestionIndex + 1
  set QuestionLabel . Text to select list item list
    get global QuestionList
    index get global currentQuestionIndex
```


PLTW - App Creators

Lesson 3: The App Challenge

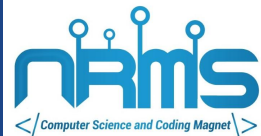
- Design and create a mobile app solution for a personal or community problem
- Decompose the problem into smaller modules
- Design and create an appropriate user interface
- Program the app to produce the desired behavior



Computer Science & Coding Pathways

Pathway 2: CTE Computer Science (Project Lead the Way)		<i>It is highly recommended that the following courses are taken in sequence. These are required courses for Computer Science magnet scholars.</i>
Grade	Required Courses	Notes
6	Computer Science Discoveries 1 (S)	Units 1-3 of a 6 unit course commitment. Scholars who enroll in Computer Science Discoveries 1 for 6 th grade will take Computer Science Discoveries 2 in 7 th grade.
7	Computer Science Discoveries 2 (S)	Units 4-6 of a 6 unit course. Prerequisite: Computer Science Discoveries 1
8	App Creator (S)	Scholars who have previously taken App Creator should not take it again.

Computational thinking and the coding language, Python are infused throughout the curriculum.



Expectation of Excellence

Academic Excellence

Rigorous
content and
higher level
thinking

Setting high
expectations
for all
scholars

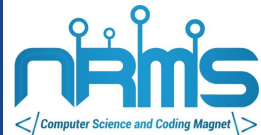
AVID
strategies
incorporated
throughout
the curriculum

High School
Course offerings
in Math I; Math
II; Spanish I;
French I

Enrichment
activities
offered
through all
contents

Computational
thinking woven
into the
lessons

Academic
pathways in
Computer
Sciences; CTE;
Foreign
Languages; &
Mathematics



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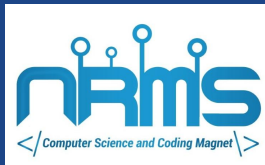
Advanced Studies Pathways

Talent Development Course Pathways NRMS 2021/2022

All identified AIG scholars must follow one of these academic pathways.

Pathway 1:		
AIG & AM cohort		
All TD scholars will be cohorted on the same team. All content teachers will provide differentiated instruction and enrichment.		
Grade	Math	English Language Arts
6	Pre-Algebra Honors	Advanced Honors
7	Math I	Advanced Honors
8	Math II	Advanced Honors

Pathway 2:		
AR cohort		
All TD scholars will be cohorted on the same team. All content teachers will provide differentiated instruction and enrichment.		
Grade	Math	English Language Arts
6	6th Grade Honors	Advanced Honors
7	7th Grade Honors	Advanced Honors
8	Math I	Advanced Honors



Advanced Studies

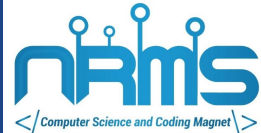
All scholars are utilizing the AVID strategies incorporated throughout the curriculum.

Critical thinking, creative problem-solving and inquiry-based

Pre and post-assessments to determine students' strengths and weaknesses

AIG scholars receive services based on their Differentiated Education Plan.

Learning experiences and assessments that are conceptually advanced, challenging and complex.



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Enrichment Activities & Clubs

**WAYS YOU
CAN GET
INVOLVED!**

**Competitive
Robotics
club**

**Student
Council**

**Campus
Beautification**

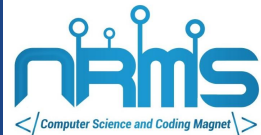
**Science
Club**

**Magnet
Monday**

**National
Junior
Honor
Society**

**Art
Club**

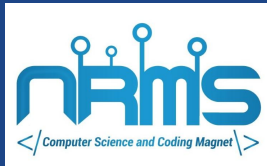
**Lego
Robotics
Club**



Expectation of Excellence

Partnering with our PTSA

- **PTA creates** the village that helps to raise our kids and strengthen our community.
- **PTA links** families to important school and community information.
- **PTA tracks local, state and national policies** every day so we can advocate for what's best for our students, families and schools.
- **PTA raises money** to support the **specific** needs of our school.



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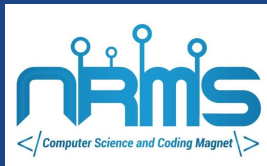


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Enrollment & Lottery

Utilize the CMS School Choice website to stay up to date on all things Magnet!

<https://cmschoice.org/enrollment-lottery/>



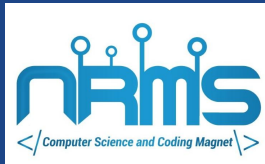
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Tara Anderson, Magnet Coordinator
taram.anderson@cms.k12.nc.us
980-343-5015



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