



RED CLAY CONSOLIDATED SCHOOL DISTRICT

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Superintendent

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Office of Curriculum and Instruction

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Edward J. McGrath
Supervisor of Science

Date: March 1, 2017
To: Middle School Parents
Re: Summer Enrichment STEM Program—S³ STEM Summer Scholars



This summer, starting Monday, July 10, 2017, the Red Clay Consolidated School District will be offering the S³ program. S³, which stands for **STEM Summer Scholars**, is a 12 day enrichment program in Science, Technology, Engineering, and Mathematics (STEM) for students who are currently in grades 6, 7, and 8 this school year. Participation is on a volunteer basis. The objectives for this program are as follows:

- Promote Science and Engineering Practices
- Prepare middle school students for rigorous high school science and technology coursework using challenging problem-based investigations.
- Engage students, community members, and Red Clay families in public presentation of students’ accomplishments and future goals using 21st century technology.

This year’s program will consist of three sessions, each lasting four days, Monday through Thursday. **We will not meet on Fridays.** Students may choose to participate in one session, two sessions, or all three sessions. Our theme is **Making the World a Better Place.** Every class will be focused on improving life for all people in one way or another through STEM.

Dates of Program: Starting - July 10th
Ending - July 27th

School Time: 7:30 – Student Arrival
11:15 – Student Dismissal

Program Location: Conrad Schools of Science

Fees: one session: \$20.00
two sessions: \$40.00
three sessions: \$60.00

The following preferences will be utilized to determine admission into the STEM Summer program. The preferences are shown below in order of their priority, with each one being subordinate in priority to the preference which appears above it in the list:

1. Red Clay student, Red Clay resident
2. Red Clay student, non- Red Clay resident
3. Red Clay resident, non- Red Clay student
4. Non- Red Clay resident, non- Red Clay student

PLEASE TURN THIS PAGE OVER

Every attempt will be made to accommodate students' first three choices; however, **every class must be filled with 20 students, so top student choices cannot be guaranteed.**

- Power of Water Challenge: Students will build, test, and present a device to purify contaminated water, then to use the properties of water to improve life on Earth.
- Green Habitat Challenge: Students design and build an energy efficient habitat out of materials of their choosing. This challenge will involve assessing living needs that can be solved using various "clean" energy sources.
- Transportation: Students will design and build a vehicle to operate within prescribed parameters. Students will be given a variety of design challenges (e.g. solar cars, mousetrap vehicles). As students create their vehicles, they will be exploring strategies to use these vehicles to improve the Earth.
- Robot Challenge: Students will program a Lego Mindstorms robot to complete various tasks.
- City Design Challenge: Students will be given the location and rough geographical features of a mythical city. Students will create a model of the city from provided materials and will engage in model civil engineering to conduct trade with neighboring cities and to respond to various stressors to their mythical city.
- Model Rocketry: Students will design a model rocket according to parameters and launch using all safety precautions. Students will also explore ways rocket science is used to improve life on earth.
- Computer Programming Challenge: Students will learn the basics of computer programming and use this skill to develop a final project. Previous computing experience is not necessary, but there will be opportunities for advanced work for students familiar with programming.
- Musical Instrument Challenge: Students will design a build a musical instrument that plays an octave scale. Students will also devise ways to change the pitch and loudness of the instrument.
- Biomedical Team Problem Solving Challenge: Students will work as part of a medical team to solve complex problems of daily living for various mock patients with medical needs.

Included is a registration form for the STEM Summer Enrichment Program. Please complete this form and **return it to your middle school office no later than Friday March 24 at 2:45 pm.** Please send no money at this time. Students will be accepted based on a first-come first-served basis, and the laboratory fee will be collected at that time. A wait list will be created and maintained as needed.

Meals will not be served in this program. Students will report directly to their classrooms from the busses, and dismissed directly to the busses. You will receive bus information by June 18th. Please contact Edward McGrath at (302) 552-3768 if you have any questions concerning the S³ STEM Summer Scholars Enrichment Program.

Respectfully,



Edward J. McGrath
Science Supervisor
Red Clay Consolidated School District

STEM Summer Scholars (S³) Middle School 2017

Making the World a Better Place

Program Selection

In the blanks below, indicate your choice of program by ranking each from 1 (most preferred) to 5 (least preferred). Every attempt will be made to provide students with their top choices; however, **every class must be filled with 20 students, so top student choices cannot be guaranteed.**

- _____ Power of Water Challenge: Students will build, test, and present a device to purify contaminated water, then to use the properties of water to improve life on Earth.
- _____ Green Habitat Challenge: Students design and build an energy efficient habitat out of materials of their choosing. This challenge will involve assessing living needs that can be solved using various “clean” energy sources.
- _____ Transportation: Students will design and build a vehicle to operate within prescribed parameters. Students will be given a variety of design challenges (e.g. solar cars, mousetrap vehicles). As students create their vehicles, they will be exploring strategies to use these vehicles to improve the Earth.
- _____ Robot Challenge: Students will program a Lego Mindstorms robot to complete various tasks.
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- Musical Instrument Challenge: Students will design a build a musical instrument that plays an octave scale. Students will also devise ways to change the pitch and loudness of the instrument.
- _____ Biomedical Team Problem Solving Challenge: Students will work as part of a medical team to solve complex problems of daily living for various mock patients with medical needs.

Please return this form along with the Registration/Transportation Form to the main office of your school no later than Friday March 24 2017 at 2:45 pm.

OFFICE USE ONLY

Date received: _____

Time received: _____

**RED CLAY SCHOOL DISTRICT
Summer 2017**

S³--STEM Summer Scholars Enrichment Program/Grades 6-8:

The STEM Summer Scholars (S³) program will run from July 10-July 27. Each student will participate in one, two, or three programs of four (4) days duration. The theme of the S³ program is **Making the World a Better Place**. Every class will enable students to create ways to make our global home a better place to live.

Please completely fill-in and sign the section below. Please return this form along with the Program Selection Form to the main office of your school no later than Friday March 24, 2017 at 2:45 pm.

Student name: _____ **Date of birth:** _____

School attending this year: _____ **Current grade:** _____

Parent/Guardian name: _____ **phone (preferred):** _____

Address: _____

email: _____

Have you participated in the Red Clay STEM Summer Scholars Program before? _____yes _____no

If yes, in which class(es) did you participate? _____

Transportation

Please check one:

_____ My child will not be using bus transportation provided by the Red Clay Consolidated School District. I will be responsible for my child's arrival to and departure from the STEM Summer Scholars program at Conrad Schools of Science each day.

_____ My child will be using bus transportation provided by the Red Clay Consolidated School District. Please assign arrival and departure buses based on the address(es) listed below:

**Address for pickup/arrival to Conrad
Conrad**

**Address for drop-off/departure from
Conrad**

_____ *(Please check if drop-off location is a day care provider)*

(note: if pick-up or drop-off location is the same as home address, please write "home" in the appropriate blank)

DETAILS ABOUT PROGRAM

- The S³ STEM Summer Scholars program will be held at Conrad Schools of Science, 201 Jackson Avenue, Wilmington, DE 19804
- Students may elect one, two, or three programs of four days duration.

Program 1: July 10-July 13
July 27

Program 2: July 17-July 20

Program 3: July 24-

- Program times: 7:30-11:15. We will not be serving breakfast or lunch. On Thursday of each week, families are invited to visit the classes from 10:00 until program dismissal.
- **Participants will pay a non-refundable laboratory fee for each program. Fee schedule is indicated below. This fee will be collected when students are invited to the program.**
- Bus transportation will be provided according to a special transportation schedule.

PLEASE CHECK WHICH PROGRAMS YOU WISH TO ATTEND: (check all that apply)

_____ Program 1 (July 10-July 13)

_____ Program 2 (July 17-July 20)

_____ Program 3 (July 24-July 27)

Fee schedule: One program:

\$20.00

Two programs:

\$40.00

Three programs:

\$60.00

I agree to allow my child to participate in the S³ STEM Summer Scholars program during the dates indicated above. I understand that students will be placed in the program on a first come/first served basis, and that students must be invited to the program in order to be guaranteed a spot. I agree that if chosen, I will pay the laboratory fee as indicated above. I realize that although every attempt will be made to provide students with their top choices, **every class must be filled with 20 students, so top student choices cannot be guaranteed.**

(Parent/Guardian signature)

(date)