Student Programs 2014-2015

The Ruth Patrick Science Education Center’s K-12 Student Programs offerings for 2014-2015 will be posted online on April 15, 2014.

Teachers will be able to select from 52 different hands-on, inquiry based classroom programs aligned to state standards. We recommend that teachers combine 2 or 3 programs in one visit. A teacher may bring up to 60 students for a “double” group or up to 90 students for a “triple” group. More information about bringing large groups can be found here: http://rpsec.usca.edu/student/planningyourvisit.html.

Teachers may download program descriptions, standards correlations, pre-and post visit activities, reservation request forms, and more at http://rpsec.usca.edu/student/. Reservation requests may also be submitted online. Print brochures and request forms will be mailed only to those teachers who have reserved programs in the last three years. Request forms may be mailed to the RPSEC or faxed to (803) 641-3615.

Teachers may request up to 4 programs for the school year but, pending funding, this number may be reduced—so please prioritize your requests. Last year we received many more requests than we were able to serve. We will schedule teachers’ requests, subject to availability, in the order specified on the reservation request form.

The deadline to submit reservation requests is Friday, June 13, 2014 at 5:00 PM. Due to the volume of anticipated requests, it is highly unlikely that late requests will be filled. Requests received after June 13 will be placed on a waiting list. Thank you for your understanding.

2014-2015 STUDENT PROGRAMS TIMELINE

Friday, June 13, 2014
Deadline to submit Student Programs Requests for 2014-2015

Friday, July 25, 2014
Confirmation Contract Letters will be mailed to teachers’ home addresses

Tuesday, September 2, 2014
Deadline to return signed Confirmation Contract Letters to the RPSEC

Monday, September 8, 2014
RPSEC Student Programs classes begin; waiting list programs scheduled

Friday, September 12, 2014
All unconfirmed 2014-2015 student programs will be cancelled and filled from the wait list
New Programs for 2014-2015

The RPSEC will offer three new student programs for 2014-2015

We All Live Downstream (Grades 5, 7)
Students will create an interactive model of a watershed and explore the connections with our local rivers, lakes, and ponds. Participants will gain a better understanding of the intricacies and dynamic nature of our environment at all levels, from tiny aquatic invertebrates to the larger producers and consumers in water and on land. We will examine our role in this interdependent web and how we can have a positive effect on our world!

Our Body, Our World (Grades 7, 9-12)
Students will explore the connections between the health of the human body and the environment. Through a closer investigation of viruses and other microscopic critters in both physiological and historical perspectives, students will leave with a better appreciation of how amazing our bodies are and how connected we are to our world. Science, social studies and art will all be a part of this interdisciplinary program.

Lunar Design Challenge (Grade 8)
Students will design, build, and test a Lunar Buggy to transport astronauts and cargo on the Moon. They will collect and analyze data, take measurements, and refine their models.

Engineering the ISS (Grades 6, 8, 9-12)
How do you build a million-pound object that will stay in orbit and sustain human life? Learn how more than a dozen nations collaboratively designed and built the International Space Station (ISS) using advanced technology and strategic engineering practices.

HOME SCHOOL MONDAYS 2015

The RPSEC will again offer a series of monthly programs for home school students. The programs will be held on selected Monday afternoons from January through May. Different programs will be offered each year with a 3-year rotation cycle. Reservation request forms will be available online on September 5, 2014, and will also be mailed to families who signed up for Home School Mondays 2014. NOTE: The deadline to return reservation request forms with payment will be Monday, December 1, 2014. Please make checks payable to USCA. Late requests will be placed on a waiting list.

- One Monday per month, each child will attend (2) one-hour, back-to-back science or math programs at the RPSEC.
- Over the course of the spring semester, each child will attend a total of 10 programs.
- The children should arrive at 1:00. The programs will begin at 1:15 and end at 3:30 PM.
- The two programs for the younger students (Grades K-3) will be held at the same time as the two programs for the older students (Grades 4-8).
- Please note that children under the age of 4 are not permitted to attend any student programs (planetarium or classroom programs) at the RPSEC.

CAN YOU HELP?
NEEDED: RECYCLABLES
RPSEC STUDENT PROGRAMS NEEDS THE FOLLOWING ITEMS:
SMALL GLASS JARS (3-4 OZ, WITH OR WITHOUT LIDS)
BLACK PLASTIC FILM CANISTERS WITH LIDS
STEP
(SCIENCE TECHNOLOGY ENRICHMENT PROGRAM)
PROGRAM SITE HIGHLIGHT:
SILVER BLUFF AUDUBON CENTER

The National Audubon Society owns or operates nearly 100 education centers and wildlife sanctuaries across the country, totaling over 150,000 acres. The mission of the National Audubon Society is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth’s biological diversity.

Located near Aiken, South Carolina and Augusta, Georgia, Silver Bluff Audubon Center, situated along the Savannah River is an integral part of this mission. With 3,154 acres of upland pine forest, hardwood bottomlands, fields, lakes and streams, it is typical of much of the Coastal Plain of Georgia and the Carolinas. The wide variety of habitats contained within Silver Bluff offers spectacular wildlife viewing opportunities. For the birdwatcher, Silver Bluff boasts a checklist with over 200 species, including endangered Wood Storks!

Ruth Patrick Science Education Center and Silver Bluff Audubon Center work together to offer a wide variety of programs, tours and experiences for K-12 students and the community. For information regarding K-12 educational programming please contact Shannon Unger, STEP Program Director, at 803-641-2843. For information regarding tours, resource management and all other issues, please contact Paul Koehler, Center & Sanctuary Director, at 803-471-0291. Silver Bluff Audubon Center is open to visitors Monday-Saturday 9am-5pm.

STEP has a Whole List of Exciting New Programs for 2014 – 2015!

Teachers will be able to select from a variety of exciting new hands-on inquiry-based programs that are grade specific and aligned to state standards. Programs include soil studies, wildlife adventures, plant explorations, pond investigations, and much more! A STEP visit includes 3 one-hour activities for each program: indoor activity, outdoor activity and a hike (unless otherwise stated) with a half hour for a picnic lunch. A typical schedule is 9 AM - 1 PM. Shorter visits can be accommodated.

The Science and Technology Enrichment Program (STEP) is a cooperative effort between Savannah River Nuclear Solutions, Silver Bluff Audubon Center, and the Ruth Patrick Science Education Center. Two field trip locations for STEP include the Savannah River Site and the Silver Bluff Audubon Center. Both sites have indoor classrooms, beautiful forests with miles of trails, lovely ponds and a variety of resident wildlife.

Program offerings for 2014-2015 will be posted online on April 15, 2014. For program information and a STEP reservation request form, please visit the STEP website at: http://rpsec.usca.edu/step/. Reservation requests may be submitted online, mailed to the RPSEC or faxed to (803) 641-3615. The deadline to submit reservation requests is Friday, June 13, 2014 at 5:00 PM.
Family Earth and Sky Night

Celebrate National Astronomy Day and Earth Day with an evening of fun and learning at the Ruth Patrick Science Education Center. A variety of free, hands-on activities will be offered from 6:30 to 9:30 p.m., and our planetarium shows, Solar System Adventure Tour and Blown Away: Wild World of Weather, will be presented at 7:00, 8:00, and 9:00 p.m.

When: May 10, 2014
Where: Ruth Patrick Science Education Center at USCA
What: Hands-on activities, planetarium shows, and night sky viewing
Hosted by: The Astronomy Club of Augusta (ACA), the DuPont Planetarium, the Ruth Patrick Science Education Center and the University of South Carolina Aiken.

Hands-on Activities: 6:30 to 9:30
Will include demonstrations with live animals, nature crafts, opportunities to touch and identify minerals and rocks, sizing up the Sun and Moon with playdough, and kinesthetic astronomy

Planetarium Shows: Solar System Adventure Tour will be presented on a first-come, first-served basis with start times of 7:00, 8:00, and Blown Away: Wild World of Weather will be presented at 9:00 and 10:00. Ticket prices are: Students 4K-12th $2.50, Adults $4.50, Senior Citizens $3.50, USCA Students and Staff $1.00.

Outdoor Observing: Once it gets dark, the observatory will open for viewing through the Bechtel Telescope, and amateur astronomers will set up other telescopes on the lawn. Weather permitting, see details in the Moon, Mercury, Mars, Jupiter, Saturn and other celestial objects that are invisible to your unaided eyes. Members of the Astronomy Club of Augusta will orient you to the night sky: naked-eye, binocular, and telescopic. They will help you find many fascinating heavenly bodies with their telescopes or with your own. This is a good opportunity to learn the most important constellations and stars, and how to star hop from one to another.

Weather: Family Earth and Sky Night will be held rain or shine. Plan to bring friends and family no matter what the weather!
Public Shows

**SUMMER GROUP PROGRAMS**

The Ruth Patrick Science Education Center & DuPont Planetarium will offer a variety of programs during the months of June, July and early August.

We will offer several planetarium shows each month as well as hands-on classroom programs. These programs are for interested groups such as Daycare Centers, Camps, Church Groups, Scout Troops etc.

For more information please visit http://rpsec.usca.edu/summer/student or call (803) 641-3313.
**Camp Invention Returns to the Ruth Patrick Science Education Center this Summer**

In partnership with the National Inventors Hall of Fame, the Ruth Patrick Science Education Center is pleased to offer the nationally-acclaimed Camp Invention program to children entering grades one through six. It’s an exciting, weeklong summer adventure in Science, Technology, Engineering and Math (STEM) that’s all about big ideas. Children will work together to seek innovative solutions to real-world problems and sharpen critical 21st century learning skills as they rotate through four modules that reinvent summer fun.

This unforgettable week begins on June 16. We will host the Camp Invention MORPHED!™ program.

In the Super Go™ module, students design a small, motor-powered vehicle that zooms! Girls and boys will collect energy coins along the way for building ramps, bridges and tunnels for the Super Go Road Rally.

Participants will receive personalized challenges from National Inventors Hall of Fame Inductees that will ignite a spirit of creativity, innovation and entrepreneurship during the Design Studio: Morphed™ module.

Throughout the Amplified™ module, children invent bionic gadgets while journeying to acquire superhuman senses. Time will be spent encountering illusions and discovering if they are a supertaster.

Finally, Camp Invention’s flagship module, I Can Invent: Pin-bug™, allows participants to use tools to upcycle electronics and build an epic, insect-themed pinball machine!

Local educators will facilitate program modules and enthusiastic high school and college students will serve as Leadership Interns – ensuring that one staff member is in place for every eight children.

Register on or before March 28, 2014 to receive $25 OFF the base price of $220. Every registration includes a complimentary Camp Invention t-shirt. Availability is limited, so visit www.campinvention.org or call 800.968.4332 to reserve your child’s spot today!

To register a child for the program or to learn more about Camp Invention, visit www.campinvention.org or call 800.968.4332.

**ACPS employees receive $35 OFF. Please email johnh@usca.edu for a special host district registration form.**
New Resident Raptor at the RPSEC

In February the Ruth Patrick Science Education Center acquired a new Eastern Screech Owl. “Hunter” is a small, red male EASO who was hit by a car in Charlotte, NC. He spent several months receiving medical treatment at the Carolina Raptor Center in Huntersville, NC, but as a result of the accident, one of his eyes had to be removed. Because his injury is permanent, Hunter can never be released back into the wild. He has been fitted for custom anklets and is now being glove trained. We look forward to having Hunter join us for our live animal programs soon!

New Owl Cam at the RPSEC

Thanks to the kindness and generosity of several donors, the Ruth Patrick Science Education Center now has an owl cam installed in our outdoor aviary. The camera can be moved from cage to cage, and the public can tune in to watch. This month we are featuring Raleigh, the Barred Owl. Please be aware that our birds are busy teaching classes from 8:30 am – 1:30 pm most weekdays, so the outdoor aviary will be empty. The best time to watch is from 4:00 – 5:00 pm when the birds are fed. Here is the link to the new Owl Cam: http://aviary.usca.edu/.

FREE Teacher Resources and Visiting Scientists Available

The Traveling Science and Mathematics Demonstrations Program has over 300 science and math kits available for use in the classroom. Supplement your curriculum with nationally recognized and state adopted exemplary materials. Kits have been correlated to SC state standards. Many kits contain children’s literature so that you can integrate your science and language arts lessons.

In addition to these resources, you can request a visiting Scientist with Traveling Resources and Neat Demonstrations (STRAND) volunteer for classroom presentations.

USC AIKEN KIDS IN COLLEGE SUMMER CAMPS

Information available soon for 2014 Summer Camps

http://www.usca.edu/kidsincollege/

For more information please visit http://rpsec.usca.edu/travelingscience
2013 Friends of the RPSEC

The Ruth Patrick Science Education Center thanks the following individuals, corporations, and organizations for their generosity and support of our mission by being a Friend of the RPSEC. For information on how you can become a Friend, please call (803)641-3313.

**Infusers ($2500 and up)**
- AT&T
- Mr. and Mrs. Albert Hamilton
- Savannah River Nuclear Solutions
- Wells Fargo

**Innovators ($1000-$2499)**
- The Benwood Fund
- Kimbra & William Cassara
- Dr. Jeff and Mrs. Ellen Priest
- Dr. & Mrs. Gary J. Senn
- SRP Federal Credit Union
- SRS Leadership Association
- WAGT NBC 26
- WFXG-TV Fox 5

**Scientists ($500-$999)**
- American Concrete Institute
  - Carolinas Chapter
- Bechtel National Inc.
- Bechtel Savannah River, Inc.
- Mr. and Mrs. William Cue
- Mick and Linda Ferrell
- Savannah River Section American Nuclear Society
- Robert Clark
- The Institute of Electrical and Electronic Engineers
  - Columbia Section

**Analysts ($250-$499)**
- Ms. Gloria Allen
- American Society of Mechanical Engineers (ASME) CSRA Section
- Association for the Advancement Cost Engineering, CSRA Section
- James R. Cadieux
- Mr. John M. Hutchens
- ISA (Instrumentation, Systems, and Automation) – Savannah Section
- Ms. Elise P. Lehman
- John and Deborah McMurtrie
- National Engineers Week Foundation
- NSBE-Augusta Alumni Chapter
- Project Management Institute
  - Savannah River Chapter
- SC Society Professional Engineers
  - Columbia Chapter

**Researchers ($100-$249)**
- Aiken Electric Cooperative, Inc.
- Birds and Butterflies of Aiken
- Dr. Carol S. Botsch
- Vicki Collins
- Mrs. Beatrice A. Crawford
- Mr. Thomas E. Hair
- Innovative Solutions
- Kiwanis Club of Aiken
- Mr. Roderick and Ms. Linda Mason Lee
- Maxwell Law Firm
- Cory and Darya McMurtrie
- Scott and Dianne Nicholson
- Frank Shallow
- Mrs. Darlene Smalley
- Fran White

**Scholars (up to $99)**
- Mrs. Diane J. Addis
- Mrs. Aimee Barton
- Dr. Robert and Gina Buckley
- Dr. Paul & Mrs. Monica Dainer
- Arlene DiPietro
- Mrs. Margo M. Gore
- Dr. Gwendolyn Johnson
- Dr. Sally McClellan
- Ms. Margaret Terese O'Donnell
- Dr. Kenneth and Mrs. Nancy Perrine
- Ms. Brittany Shaw
ADOPT AN ANIMAL

The Ruth Patrick Science Education Center is looking for sponsors to help support the cost of feeding and caring for the animals used in our K-12 educational programs. An animal may be adopted by an individual, a business, or a group such as an elementary school class or a scout troop. The sponsors’ names will be displayed on donor recognition kiosks at RPSEC, and they will be recognized in the Center’s publications and website as Friends of the RPSEC. Donations are tax deductible; sponsorship opportunities for 2014 are listed below.

For more information, please contact Deborah McMurtrie at DeborahMc@usca.edu or (803) 641-2834.

<table>
<thead>
<tr>
<th>BIRDS</th>
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<tbody>
<tr>
<td>Barred Owl (Strix varia) Non-releasable male, Raleigh</td>
<td>$500</td>
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<tr>
<td>Eastern Screech Owl, brown phase (Megascops asio) Non-releasable female, Lina</td>
<td>$350</td>
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<tr>
<td>Eastern Screech Owl, brown phase (Megascops asio) Non-releasable female, Charlotte</td>
<td>$350</td>
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<tr>
<td>Eastern Screech Owl, red phase (Megascops asio) Non-releasable male, Hunter</td>
<td>$350</td>
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<tr>
<th>REPTILES: CROCODILIANS</th>
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<tbody>
<tr>
<td>American Alligator (Alligator mississippiensis) female, hatched 2012, Al</td>
<td>ADOPTED by John M. Hutchens</td>
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<tr>
<td>American Alligator (Alligator mississippiensis) male, hatched 2009, Tex</td>
<td>ADOPTED by Ms. Barbara Fenstermacher</td>
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<th>REPTILES: SNAKES</th>
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<tr>
<td>Eastern Kingsnake (Lampropeltis getula getula)</td>
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<tr>
<td>Grey Rat Snake (Elaphe obsoleta spiloides)</td>
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<td>Corn Snake (Elaphe guttata)</td>
<td>$100</td>
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<tr>
<td>Corn Snake (Elaphe guttata)</td>
<td>$100</td>
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<tr>
<td>Albino Corn Snake (Elaphe guttata)</td>
<td>ADOPTED by Tristan Davis</td>
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<th>REPTILES: TURTLES</th>
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<tr>
<td>Box Turtle (Terrapene carolina carolina)</td>
<td>ADOPTED by Dr. &amp; Mrs. Kenneth Perrine</td>
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<tr>
<td>Snapping Turtle (Chelydra serpentina)</td>
<td>ADOPTED by Mr. &amp; Mrs. James Ferrell</td>
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<tr>
<td>Painted Turtle (Chrysemys picta picta)</td>
<td>$75</td>
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<tr>
<td>Chicken Turtle (Deirochelys reticularia)</td>
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<tr>
<td>Red-Eared Slider Turtle (Trachemys scripta elegans)</td>
<td>$75</td>
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<tr>
<td>Red-Eared Slider Turtle (Trachemys scripta elegans)</td>
<td>$75</td>
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<tr>
<td>Yellow-Bellied Slider Turtle (Trachemys scripta scripta)</td>
<td>$75</td>
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<tr>
<th>AMPHIBIANS</th>
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<tbody>
<tr>
<td>Barking Tree Frog (Hyla gratiosa)</td>
<td>ADOPTED by Dr. Carol S. Botsch</td>
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<tr>
<td>Green Tree Frog (Hyla cinerea)</td>
<td>$50</td>
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<tr>
<td>Gray Tree Frog (Hyla versicolora)</td>
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<tr>
<td>Southern Toad (Bufo terrestris)</td>
<td>$50</td>
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<tr>
<td>Spotted Salamander (Ambystoma maculatum)</td>
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<tr>
<td>Tiger Salamander (Ambystoma tigrinum)</td>
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<tr>
<td>Tiger Salamander (Ambystoma tigrinum)</td>
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How would you like to adopt a celestial object and be its Galactic Guardian for a year? There are a number of celestial objects that need a caring person, family or group to look out for their best interests over the next year. Additionally, you will have the opportunity to support programming at the Ruth Patrick Science Education Center with your tax-deductible donation. For more information, please call the main office at 803-641-3313 or email RPSEC@usca.edu.

$400 level:
1. Milky Way
2. Sun - Adopted by Barbara Fenstermacher
3. Moon

Planets:
4. Mercury
5. Venus
6. Earth
7. Mars
8. Jupiter
9. Saturn
10. Uranus
11. Neptune
12. Pluto (Dwarf $399.99)

$150 level:
Zodiac Constellations:
13. Virgo
14. Libra
15. Scorpius
16. Ophiuchus
17. Sagittarius
18. Capricornus
19. Aquarius
20. Pisces
21. Aries
22. Taurus
23. Gemini
24. Cancer
25. Leo

$100 level:
Special Constellations:
26. Andromeda the Princess
27. Aquila the Eagle
28. Auriga the Charioteer
29. Bootes the Herdsman
30. Canis Major the Big Dog
31. Canis Minor the Little Dog - Adopted by Brooke Nicholson
32. Cassiopeia the Queen
33. Cepheus the King
34. Crux the Southern Cross
35. Cygnus the Swan, Northern Cross
36. Draco the Dragon
37. Hercules
38. Lyra the Harp
39. Orion the Hunter
40. Pegasus the Flying Horse
41. Perseus the Hero
42. Ursa Major, Big Dipper
43. Ursa Minor, Little Dipper

$75 level:
Galaxies and Nebulae:
44. Cat's Eye Nebula, NGC 6543
45. Cat's Paw, NGC 6914
46. Crab Nebula, M1
47. Dumbbell Nebula, M27
48. Flame Nebula, NGC 2024
49. Helix Nebula, NGC 7293
50. Horsehead Nebula B33, IC434
51. Horseshoe Nebula, M17
52. Lagoon Nebula, M8
53. Orion Nebula, M42
54. Owl Nebula, M97 - Adopted by Deborah McMurtrie
55. Pillars of Creation (M16) - Adopted by Dr. Joette and Mr. L.K. Sonnenberg
56. Ring Nebula, M57
57. Rosette Nebula, NGC 2237
58. Seagull Nebula, IC2177
59. Stellar Spire (M16)
60. Tarantula Nebula, NGC 2070
61. Trifid Nebula, M20
62. Andromeda Galaxy, M31
63. Black Eye Galaxy, M64
64. “Cigar” Galaxy, M82
65. Pinwheel Galaxy, M101
66. Sombrero Galaxy, M104
67. Sunflower Galaxy, M63
68. Tadpole Galaxy, UGC 10214
69. Whirlpool Galaxy, M51

$50 level:
Other Constellations:
70. Centaurus
71. Cetus the Sea Monster
72. Columba the Dove
73. Corona the Crown
74. Corvus the Crow
75. Delphinus the Dolphin - Adopted by Mr. Robert and Mrs. Nancy Harrington
76. Lepus the Hare
77. Monoceros the Unicorn
78. Sagitta the Arrow

Stars and Star Clusters:
79. Albireo, a double star
80. Beehive cluster
81. Alcor & Mizor, double stars
82. Hercules globular cluster
83. Pleiades, the Seven Sisters
84. Polaris, the North Star

Brightest Stars:
85. Aldebaran - Adopted by Dr. Paul & Mrs. Moncia Dainer
86. Altair
87. Antares
88. Arcturus
89. Betelgeuse
90. Capella
91. Castor
92. Deneb
93. Fomalhaut
94. Pollux
95. Procyon
96. Regulus
97. Rigel
98. Sirius
99. Spica
100. Vega
CALL FOR NOMINATIONS

The Ruth Patrick Science Education Center is seeking nominations for the Spirit of Ruth Patrick Award and the Robert E. Alexander Outstanding Administrator of the Year Award. If you know a teacher or school administrator who fits the criteria below, please nominate them for an award. Nominations must be received by May 15, 2014 to be considered for this year’s award. Biographical sheets will be sent to each nominee and the RPSEC Advisory Board will determine the winner. If you have any questions, please call Aimee Barton at 803-641-3313 or contact her by email at AimeeB@usca.edu.

Spirit of Ruth Patrick Award

Since 2006, this prestigious award has been presented annually to a K-12 educator who has demonstrated a keen interest in mathematics and science and has been effective in providing meaningful learning for K-12 students. This award recognizes a teacher in the CSRA who demonstrates a passion for teaching and infusing a love of science, technology, engineering and mathematics. In 1986 the RPSEC was named for Dr. Ruth Patrick, a world renowned scientist who developed a way to test the water quality of the Savannah River while the Savannah River Site was built in the early 1950s.

Previous Winners of the Spirit of Ruth Patrick Award:
2006 Susie Yonce, Edgefield County
2007 Helen Campbell, Aiken County
2008 Ellen Cotton, Aiken County
2009 Beth Eberhard, Aiken County
2010 Debbie Courtney, Edgefield County
2011 Debra Rood, Aiken County
2012 Jennifer Craig-Holley, Aiken County
2013 Gabriel Morgan, Aiken County

Robert E. Alexander Outstanding Administrator of the Year Award

The University of South Carolina Aiken and the Ruth Patrick Science Education Center are accepting nominations for the annual Robert E. Alexander Outstanding Administrator of the Year Award. This prestigious award recognizes administrators in the CSRA for their efforts and support of bringing full awareness to math and science education and using the resources of the RPSEC to help meet science and math standards. Recipients of the award are also individuals who encourage teachers to work with the RPSEC to develop skills needed for science and math instruction.

Previous Robert E. Alexander Outstanding Administrator of the Year Award Winners:
2001-02 Hannah Fowler, Columbia County
2002-03 Dr. Karen Blanset, Aiken County
2003-04 Dr. Deborah Bass, Aiken County
2004-05 Michele Connor, Aiken County
2005-06 Dr. Sharon Keesley, Edgefield County
2006-07 Alexia Clamp, Barnwell County
2007-08 Stacy Mabray, Richmond County
2008-09 Dr. Angela Burkhalter, Aiken County
2009-2010 Teresa G. Reid, Barnwell County
2010-2011 Dr. Elizabeth Everitt, Aiken County
2011-2012 Ron O. Youmans, Allendale County
2012-2013 Alison Churm, Aiken County
**RPSEC Environmental Science Award Presented at the CSRA Regional Science Fair**

The 2014 CSRA Regional Science and Engineering Fair was held on March 22, 2014 at USC Aiken. There were nearly 200 projects from CSRA schools displayed at the fair. Each year, the RPSEC presents an environmental science award in honor of Dr. Ruth Patrick. Dr. Patrick pioneered work in the study of fresh water ecosystems and developed methods for measuring the health of these systems.

This year, the RPSEC Environmental Science Award was presented to Daelyn Doughty and Kolbe Dolin from Alleluia Community School. The title of their project was “Take Cover.” The goal of the project was to determine if soil could be enhanced by growing a crop only to till under. The students believed this would nourish the soil enough to positively impact the growth of a cash crop planted in the enriched soil. Their theory was that they would see a significant improvement in the growth of a cash crop planted after a cover crop versus the growth of the same cash crop in plain soil. The results supported their theory. Within two days of planting the peas (Day 16), there were 2.5 times more plants sprouted in the cover crop soil than the quantity of sprouts in the plain soil. Overall, the cover crop plants ranged from 6.8 to 22.6 percent taller than the peas in normal soil.

Congratulations to Reese King from Aiken Home Education Association for winning Best in Show. Reese will now compete at the International Science and Engineering Fair in Los Angeles in May. The Best in Show award includes an all-expenses-paid trip for Reese and a parent.

**Foundational Core Courses (6 hours)**
- AERM/EDRM 700 – Introduction to Research in Education
- AEET/EDET 709 – Applications of Learning Principles

**Design Courses (15 hours)**
- AEET/EDET 603 – Design and Development Tools I
- AEET/EDET 703 – Design and Development Tools II
- AEET/EDET 722 – Instructional Design and Assessment
- AEET/EDET 755 – Design and Evaluation of Information Access and Delivery
- AEET/EDET 793 – Advanced Instructional Design and Development

**Technology Core Courses (12 hours)**
- AEET/EDET 650 – Internship in Educational Technology
- AEET/EDET 735 – Technological Applications for Diverse Populations
- AEET/EDET 746 – Management of Technology Resources
- AEET/EDET 780 – Seminar in Educational Technology

**Electives (3 hours chosen from the following courses)**
- AEET/EDET 652 – Design and Evaluation of Games and Simulations
- AEET 731 – Instructional and Informational Applications of Technology or EDTE 731 – Integration of Technology and Instruction
- SLIS 706 – Introduction to Information Technologies
- TSTM 790 – Advanced Study in Technology Support/Training Management

**Masters Degree in Educational Technology**

**Earn Your USCA Degree Online**

Do you enjoy using your computer? Do others ask you how to do something on their computers? Do you enjoy showing to others something new on your computer? Have you considered getting a masters degree? Then maybe it is time for you to consider the Masters of Education in Educational Technology (MEd Tech). The MEd Tech program at University of South Carolina Aiken (USCA) and the University of South Carolina (USC) Columbia is accepting applications for enrollment. For more information visit http://edtech.usca.edu/.

The focus of the program is to develop capabilities essential to the effective design, evaluation, and delivery of technology-based instruction and training (e.g., software development, multimedia development, assistive technology modifications, web-based development, and distance learning) in order to (1) prepare educators to assume leadership roles in the integration of educational technology into the school curriculum, and (2) to provide graduate-level instructional opportunities for several populations (e.g., classroom teachers, corporate trainers, educational software developers) that need to acquire both technological competencies and understanding of sound instructional design principles and techniques.

Anyone interested in enrolling in this program should contact Karen Morris at 803-641-3489.
Students from Aiken Area Home Educators received first place recognition at the 2014 South Carolina Regional Future City Competition, sponsored by Savannah River Nuclear Solutions and the Ruth Patrick Science Education Center. The competition, which each year invites 6th, 7th and 8th graders to create a city of tomorrow, was held January 25th on the USCA campus.

This year’s winning team created the futuristic city, Velereno, and included students Ryan Hoyle, Sophie King, and John Potvin, along with Jill Potvin, teacher and faculty sponsor of the Future City Team, and engineer mentor Larry Morris.

In addition to a $1,000 USC Aiken scholarship sponsored by AT&T, students on the winning team received a trip to the Annual Future City National Finals in Washington, D.C., held Feb. 16-19 during Engineers Week. Team members were also awarded $100 each, luggage, a trophy, and medallions.

Sponsored by the nation’s professional engineering community, Future City is the nation’s largest engineering education program, encouraging interest in science, technology, engineering, and mathematics through hands-on applications.

2ND PLACE - PAUL KNOX MIDDLE SCHOOL
3RD PLACE - ST.MARY ON THE HILL SCHOOL

FUTURE CITY SPECIAL AWARD WINNERS

HONORABLE MENTION AWARD - LANGLEY BATH CLEARWATER
HONORABLE MENTION AWARD - ST. MARY ON THE HILL
ROOKIE TEAM AWARD - WESTVIEW MIDDLE
MOST HOLISTIC APPROACH - ST. MARY ON THE HILL
BEST LAND SURVEYING PRACTICES AWARD - PALMETTO MIDDLE
OUTSTANDING PROJECT MANAGEMENT - WA PERRY MIDDLE
BEST ENERGY SYSTEM - PAUL KNOX MIDDLE
BEST PLANNED CITY - SAIL
EXCELLENCE IN FUTURISTIC CONCEPTS - WESTVIEW MIDDLE
STUDENT CHOICE AWARD - FELTON LABORATORY
BEST MODEL AWARD - FELTON LABORATORY
"BEST AUTOMATION / COMPUTER APPLICATIONS AWARD - ST. MARY ON THE HILL
BEST ESSAY - AIKEN AREA HOME EDUCATORS
MOBILE REVOLUTION: A CITY ORGANIZED BY MOBILITY REQ - AIKEN AREA HOME EDUCATORS
BEST DISTRIBUTION OF POWER - ST. MARY ON THE HILL
MOST CREATIVE USE OF MATERIALS - JEFFERSON DAVIS ACADEMY
Teaching and Assessing the Common Core State Standards
2014 SUMMER PROFESSIONAL DEVELOPMENT OPPORTUNITIES
For K-12 Mathematics Teachers, Curriculum Support Specialists, and School Administrators

### JUNE 2014 COMMON CORE STATE STANDARDS INSTITUTES
*(See descriptions and registration details below.)*

<table>
<thead>
<tr>
<th>High School</th>
<th>Grades 9-12</th>
<th>Mon. – Thurs.</th>
<th>VIP Room</th>
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<tr>
<td></td>
<td>Algebra, Probability &amp;</td>
<td>June 9 – 12,</td>
<td>USC Aiken</td>
</tr>
<tr>
<td></td>
<td>Statistics, &amp; Geometry</td>
<td>2014</td>
<td>Convocation Center</td>
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<tr>
<td></td>
<td>with STEM Applications</td>
<td>8:30 a.m. – 3:00 p.m.</td>
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<table>
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<th>Grades K - 2</th>
<th>Mon. – Thurs.</th>
<th>VIP Room</th>
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<td>Elementary CCSS</td>
<td>June 16 - 19,</td>
<td>USC Aiken</td>
</tr>
<tr>
<td></td>
<td>Mathematics with STEM</td>
<td>2014</td>
<td>Convocation Center</td>
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<tr>
<td></td>
<td>Applications</td>
<td>8:30 a.m. – 3:00 p.m.</td>
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</tbody>
</table>

### JULY 2014 COMMON CORE STATE STANDARDS INSTITUTES
*(See description and registration details below.)*

<table>
<thead>
<tr>
<th>Elementary School</th>
<th>Grades 3 - 5</th>
<th>Mon. – Thurs.</th>
<th>RPSEC</th>
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<tr>
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<td>Elementary CCSS</td>
<td>July 14-17,</td>
<td>USC Aiken</td>
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<td>Mathematics with STEM</td>
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<td>Applications</td>
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<table>
<thead>
<tr>
<th>Middle School</th>
<th>Grades 6-8</th>
<th>Mon. – Thurs.</th>
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<td>Middles School CCSS</td>
<td>July 21-24,</td>
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<td></td>
<td>Mathematics with STEM</td>
<td>2014</td>
<td>Convocation Center</td>
</tr>
<tr>
<td></td>
<td>Applications</td>
<td>8:30 a.m. – 3:00 p.m.</td>
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</tbody>
</table>

Over 30 school districts and hundreds of enthusiastic teachers, administrators, curriculum coaches, and coordinators from across South Carolina have participated in the RPSEC Common Core State Standards (CCSS) Mathematics Institutes, a series of K-2, 3-5, 6-8, and 9-12 professional learning sessions offered by the Ruth Patrick Science Education Center (RPSEC) located at USC Aiken. They now have a wealth of knowledge regarding effective implementation of the CCSS-Mathematics, exemplary researched-based instructional resources, and evidenced-based methodologies designed to improve instructional rigor and foster student success. Participants increased their content knowledge and understanding of K-12 mathematics and effective use of formative assessment lessons and strategies. Participant reflections have been extremely positive.

This summer the K – 12 Institutes are designed to engage schools and districts in strategies for full implementation of the Common Core State Standards during the 2014-15 school year while effectively integrating STEM concepts. Please refer to the attached documents for registration information and daily institute focus areas.

Link to 2012 – 14 Participants/Schools/Districts
https://mapsengine.google.com/map/edit?mid=zYp6dv7DnABk.kOUsvotmW7DA
During the summer of 2014, the Ruth Patrick Science Education Center will continue to offer a series of exemplary Common Core State Standards (CCSS) Mathematics Institutes. Each engaging Institute is designed to assist schools and districts in full implementation of the CCSS. Experiences will expand the statewide network of professional learners with a thorough understanding of:

- **Effective instructional strategies for teaching and assessing the Common Core State Standards for Mathematics**
- **Alignment of instruction and classroom assessments**
- **Effective use of the Mathematical Practices in everyday instruction**
- **Instructional rigor**
- **High level instructional tasks**
- **Evidence-centered methodologies**
- **Mathematical modeling**
- **Multiple representations**
- **Effective use of technology**
- **Instructional shifts & priorities**
- **K – 12 learning trajectory**
- **Innovative state and national instructional resources**
- **Pedagogy that aligns CCSSM with STEM curricula**
- **The interconnectedness of STEM disciplines**

**Registration Fee:**
Four-Day Institute - $480.00

**Registration Deadline:**
Two weeks prior to each Institute

**Early Registration Fee and Deadline:**
Four-Day Institute $450.00 - Friday, May 30, 2014

**Incentives:** Stipends and recertification credit as approved by individual school districts.

**Institute Time Frame:**
Monday-Thursday, 8:30 AM-3:00 PM

**Location:** USC Aiken

Lodging information provided upon request.

**Institute Follow-up:**
Quarterly one-day sessions during the 2014-15 School Year
(Fall registration information coming soon.)

For more information, please contact: Gloria Allen, Coordinator, Professional Learning, Ruth Patrick Science Education Center, USC Aiken, 29801
Phone: 803-641-3592; 803 641-3313; Fax: 803 641-3615 or gloriaa@usca.edu.
Registration forms can be found at [http://rpsec.usca.edu/](http://rpsec.usca.edu/)

*Space is limited! Please register early!*
# Teaching and Assessing the Common Core State Standards 2014 SUMMER PROFESSIONAL DEVELOPMENT OPPORTUNITIES

## 9-12 High School CCSS Institute Conceptual Categories-Area of Focus
**Monday–Thursday, June 9-12, 2014**

- Monday, June 9: Number and Quantity; Algebra
- Tuesday, June 10: Statistics and Probability
- Wednesday June 11: Geometry
- Thursday, June 12: Functions

Monday – Thursday: Modeling with a STEM focus using Instructional Technology, TI – Nspire, Dynamic Geometry Software, Data Collection Devices, etc.

## K-2 Elementary CCSS Mathematics Institute Elementary Domains-Area of Focus
**Monday – Thursday, June 16-19, 2014**

- Monday, June 16: Number and Operations in Base Ten
- Tuesday, June 17: Number and Operations – Fractions
- Wednesday, June 18: Operations and Algebraic Thinking
- Thursday, June 19: Geometry; Measurement and Data

Monday – Thursday: Problem Solving with a STEM focus

## 3-5 Elementary CCSS Mathematics Institute Domains-Area of Focus:
**Monday – Thursday, July 14-17, 2014**

- Monday, July 14: Number and Operations in Base Ten
- Tuesday, July 15: Number and Operations – Fractions
- Wednesday, July 16: Operations and Algebraic Thinking
- Thursday, July 17: Geometry; Measurement and Data

Monday – Thursday: Problem Solving with a STEM focus

## 6-8 Middle School CCSS Mathematics Institute Domains - Area of Focus
**Monday – Thursday, July 21- 24, 2014**

- Monday, July 21: Ratios and Proportional Relationships; The Number System
- Tuesday, July 22: Expressions and Equations & Functions
- Wednesday, July 23: Geometry
- Thursday, July 24: Statistics and Probability

Monday – Thursday: Modeling with a STEM focus using Instructional Technology, TI – Nspire, Dynamic Geometry Software, Data Collection Devices, etc.

# Teacher Reflections from the Past Two Summers, Fall, and Winter CCSS Sessions

Thank you for all your help. This has changed how I understand the teaching of math. My kids have had way more success and truly understand.

It’s all about engaging the mind and stimulating learning—it’s HARD to keep up with a hand held device that constantly challenges. You have given a plethora of ideas to keep us going and investigating.

Thank you!

This has given us more tools and practical ways to teach deeper and more rigorously.

It’s given me great ideas to use in the classroom. It’s not as hard as it looks; I can do it!

I came to the middle and high school sessions. These meetings were very informative and I look forward to the next sessions. The resources are awesome!

I can use the same strategies and techniques to work with my teachers. Modeling of effective use of technology (SMART Boards, TI-Nspire graphing calculators, etc.). The sharing of ideas/discussion (with other teachers, administrators, and math professionals) and differing viewpoints were most useful.
University of South Carolina Aiken & Chancellor Sandra J. Jordan cordially invite you to the Ruth Patrick Science Education Center 25th Anniversary Celebration

Thursday, April 24, 2014
Youth Interactive Exhibits 6:00 - 6:30 PM.
Dinner 6:30 - 7:15 PM.
Program 7:15 - 8:00 PM.
Dessert under the Stars 8:00 PM.

$50.00 per person
RSVP by Tuesday, April 15
to Debbie Boggs at 803.641.3630
or events@usca.edu

The Ruth Patrick Science Education Center Newsletter is a publication of the RPSEC for our patrons. The RPSEC, housed at the University of South Carolina Aiken, encompasses the Center of Excellence in Educational Technology (CEET), DuPont Planetarium, RPSEC Student Programs, RPSEC Professional Learning, Traveling Science and Mathematics Demonstrations Program (TSMDP), the Science and Technology Enrichment Program (STEP), and Center of Excellence in Middle-level Interdisciplinary Strategies for Teaching (CE- MIST). If you have any information that would be beneficial to the audience of this newsletter, or if you would like to be added to the mailing list, please contact John Hutchens, Editor, at 803-641-3474 or via email to johnh@usca.edu. Deadline for submission in the next newsletter is July 1, 2014.