



# **Richmond Heights Middle School**

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Counselor

## **Science Zoo Magnet Campus**

**12400 SW 152 Street**

**Miami, FL. 33177**

# **SCOPE AND SEQUENCE FOR RICHMOND HEIGHTS MIDDLE SCHOOL SCIENCE ZOO MAGNET PROGRAM**

## **THE PROGRAM PURPOSE:**

The Science Zoo Magnet Program affords students an opportunity to study a rigorous curriculum which explores, in depth, many branches of science related to the zoo and our technological world.

Students will experience the fun, adventure and excitement of learning in Zoo Miami's 327 developed acre "science classroom", with more than 2000 exotic animals in cage less habitats. They will take learning safaris into unique environment ranging from Asian jungles to African plains. Participating students will work and study with a select group of enthusiastic classmates who have a keen interest in science and its applications to animals and their environment.

## **Unique Program Features**

- State of the art science laboratory and science equipment
- Specialized course offerings
- Seminar, cluster programs, flexible scheduling and utilization of community resources
- Computer- assisted instruction
- Unique field trips and access to areas that are off-limits to the public
- Opportunity for acceleration in science and mathematics for advanced high school classes
- Summer internships at Monkey Jungle
- Two-hour block science research
- Study science on grounds of Zoo Miami, Monkey Jungle, Biscayne Nature Center, The Dolphin Research Center and The Everglades.

## **The Middle School Concept**

**Philosophy:** Child-centered; holistic knowledge is developed; thinking skills are priority goals; safety is essential; student' developmental needs are important.

**Curriculum:** Academic excellence/ social competence-academic core, exploration and development programs.

**Organization:** Interdisciplinary teams; advisement program; flexible block scheduling; team planning and shared decision making; exploratory and developmental experience-elective classes, wheels and exploration credits, mini-courses, clubs, activities, interest groups; intramurals; integrated curriculum; in-service education and professional development.

**Implementation Strategies:** Cooperative learning; interdisciplinary teaching styles; differentiated instruction; student services and career planning systems; home-school partnership and communications.

## **IMPORTANT FACTS FOR RICHMOND HEIGHTS MIDDLE SCHOOL SCIENCE ZOO MAGNET STUDENTS AND PARENTS**

**General Program Requirements:** The Science/Zoo/Math Magnet is an intensive, challenging and innovative program that will include in-depth instruction in many areas of science and technology. Students will concentrate on development of specific skills leading to their involvement in research, experimentation, analysis and application of concepts, science and computer technology. Therefore, in order for a participant to successfully complete this intellectually demanding science program, the following requirements must be met:

- Complete and submit, **on time**, to the instructor, all homework assignments.
- **Complete daily assignments** such as laboratory experiments; class activities and assignments; class notes; research projects, both group and independent; computer station modules; zoo research task, field trips packets, and special projects.
- Complete at least **three major independent science projects** per year. Of the three projects, one must be a science fair project.
- **Satisfactorily pass all major exams and quizzes.**
- Bring appropriate **supplies and materials to class daily.**
- Maintain **appropriate behavior in the classroom**, on field trips, zoo grounds and other off-site facilities
- **Maintain a “C” average in ALL core content subjects and conduct every nine weeks.**

**Curriculum Design:** This curriculum has been designed to:

- attract targeted students residing in the southern areas of Miami-Dade County and engage them in an educational environment which employs the scientific method as a basic instructional approach that will stimulate and encourage learning.
- provide opportunities for students to develop necessary skills for effective critical thinking, problem-solving and decision-making in order to acquire the tools necessary for improved academic achievement.
- expose students to career opportunities in the fields of mathematics, science, and computer technology and encourage them to pursue advanced course work appropriate for their preparation.
- Provide activities designed to emphasize the interrelationship of man and his environment.
- students to acquire skills in computer technology, instrument interfacing, data interpretation and word processing.
- concentrate on the development of specific skills leading to the research experimentation and application of mathematical and scientific concepts.
- provide intensive instruction in study skills and test taking techniques.
- enable students to experience academic success.

### How often will students actually go to the Zoo?

Sixth and seventh grade students are scheduled for their Zoo Research courses on an alternating daily schedule. The chart below is a sample of a typical schedule for the Zoo Research Courses and the state required courses offered at Richmond Heights Middle School.

Eighth grade students will participate in a SPECIAL PROJECTS program alternating between their Honors Physical Science class and one of the following off-site programs: Zoo Miami, Monkey Jungle, and the zoo magnet laboratory at Richmond Heights Middle School.

#### Typical 6<sup>th</sup> Grade Zoology Schedule

Day 1 PERIODS 1,3&5	Zoo Research I Zoo Miami
Day 2 PERIODS 2,4&6	Advanced Comprehensive Science I Richmond Heights

#### Typical 7<sup>th</sup> Grade Zoology Schedule

Day 1 PERIOD 1,3&5	Zoo Research 1 Zoo Miami
Day 2 PERIOD 2,4&6	Advanced Comprehensive Science 2 Richmond Heights

#### Typical 8<sup>th</sup> Grade Zoology Schedule

Day 1 PERIOD 1,3&5	Zoo Research 1 Zoo Miami
Day 2 PERIOD 2,4&6	Honors Physical Science

#### BLOCK BELL SCHEDULE

Breakfast	8:35a.m -9:05a.m.
Advisement	9:10a.m – 9:35 a.m.
Block I	9:40a.m.-11:30 a.m.
Block II	11:35a.m.-1:55p.m.
Block III	2:00p.m. – 3:50p.m.

**Grading Criteria:** The students enrolled in the Science Zoo Magnet Program will receive two grades: one for the zoo component and one for the Comprehensive Advanced Science 1 and 2 (6<sup>th</sup> and 7<sup>th</sup> graders) or Honors Physical Science (8<sup>th</sup> grade however, 9<sup>th</sup> grade credit) courses.

At the end of each nine-week grading period, students will receive a report card the report card issued at the end of the year (36 weeks) represents an average of all grades to determine the annual grade unless a teacher decides to manually override a grade.

Interim Progress Reports will be sent home midway (4.5 weeks) through each grading period throughout the year.

**Community Service Hours:** As a requirement for successfully completing the Zoo Magnet program, each participant **must** complete and document a minimum of 10 community service hours each year. Public relation and Marketing Outreach is a mandatory component of the program. Completed forms and any additional documentation should be turned into the magnet office.

**Grading Criteria:** The grading policy is designed to accommodate numerous learning styles. This will be accomplished by providing the students with a variety of assignments and learning experiences. Grades will be derived from assignments generated through home learning, class work, investigations, projects, and class participation. Students should be eager to give their best effort on all assignments. Homework will be assigned on a daily basis. It will not always consist of a written assignment that will be collected, such as reviewing for tests, researching a concept fund in a class discussion, experiences that may not be considered as a graded assignment. **STUDENTS NOT COMPLETING ASSIGNMENTS WILL RECEIVE ZEROS AVERAGED INTO THEIR GRADES.** Zeros seriously negatively impact a student's overall grade. All assignments are important! If a student does not submit an assignment, he or she is required to submit a standard sheet of notebook paper explaining why the assignment was not completed. The explanation will be filed in the students work folder. **Late assignments will not be accepted.** The only exceptions will be for students whose tardy is permissible or who is absent from school.

<b>Grading Scale for Academic Grades</b>		
A	90-100	3.5 - 4.0
B	80-90	2.5- 3.49
C	70-80	1.5-2.49
D	60-70	1.00-1.49
F	0-59	00-.99

**Transportation:** Transportation will be provided by the Miami-Dade County Public Schools system for students who reside in the transportation service zone schools.

Students living outside the transportation service zones school may apply to the Zoology Magnet Program with the understanding that transportation will not be provided for these students unless there is an existing bus stop near their homes and the bus is not filled to capacity. Space availability accommodations cannot be made during the first ten days of school.

Transportation will also be provided by the Miami-Dade County Public Schools for the six-mile round trip from Richmond Heights Middle School to *Zoo Miami*.

A postcard is mailed to the homes of all participants with information concerning bus departure time, location, and homeroom assignment for transportation to and from home.

All participants should notify the Instructor, Lead Teacher, and Facilities Director of *Zoo Miami* or Zoo Security Manager of any injuries or accidents occurring at the zoo. An emergency contact sheet for each student is maintained by instructors and zoo personnel as well Richmond Heights Middle School.

**Field Trips**

Many field trips will be planned for this school year. Destination and cost information will be available at a later time. All field trip permission forms and money must be turned in before the due date.

**Parents, please volunteer to chaperone if possible.** Any special materials or supplies you will needed for the field trip are to be signed out before trip, carefully taken care of during the trip, and signed in after the field trip (You are responsible for the equipment).

**Zoological Research 1 (6<sup>th</sup> Grade)**

**Course Description:** This course is intended to be the introductory stage of Zoological Research. The concepts covered in this course will prepare the students for Zoological Research 2 and 3. Students will have unique opportunities to explore *Zoo Miami* with more details and direct contact through the use of numerous scheduled Zoo Talks and Zoo Walks. The Zoo Talks will be conducted by professionals from *Zoo Miami*. Students will analyze *Zoo Miami's* ability to provide education, conservation, research and recreation. The course will require the completion of a 'Zoo Webpage' that will document all of the student's experiences while at the Zoo. This project is extensive and thus will be completed in stages throughout the school year. The following is a list of major components that will be discussed during this course:

<b>Unit I – Introduction to the Zoo</b>
<b>Purpose, Function, Career, History</b>
<b>Unit 2- Animal Taxonomy Classification</b>
<b>Methods of Classification, Binomial nomenclature, Five Kingdoms, Seven levels of classification</b>
<b>Unit 3 – Zoo Environment</b>
<b>Habitats, Climate, Mapping Climates, Field Techniques</b>
<b>Unit 4 – Animal Behavioral Adaptations for Survival</b>
<b>Body Structure and function, Feeding and Diet, Movement, Shelter and Protection, Communication, Social Behavior, Observational Tools</b>
<b>Unit 5- Zoo Animal Investigation and Conservation</b>
<b>Natural and man-made efforts, Environmental crisis worldwide, Protection agencies, Sustainability</b>
<b>Unit 6 – Zoo Webpage</b>
<b>Complete information about zoo animal, specific animals and present webpage</b>

**Zoological Research Courses are** intended to be a spiraled program consisting of three different courses. This spiraled program was designed to meet out students' needs and interests, reinforcing at the same time basic and higher order thinking skills. The courses offer a hands-on approach to learning science through team and individual research and problem solving. In Zoological Research, the students will be able to compare and contrast different zoos, analyze their management, functions and after analysis, propose ways to improve them. The students will experience the adventure and excitement of learning inside *Zoo Miami* and other zoological and national parks. They will acquire knowledge about animal behavior, the natural habitats of animals, and the conservation and preservation of several species. One of our main goals is to improve and develop in our students the ability to utilize many research methods and presentation techniques and technology.

**Zoological Research 2 (7<sup>th</sup> Grade)**

**Unit 1 - Biomes**

**Characteristic, Fresh water and marine, Grassland, Desert, Tundra, Forest environment**

**Unit 2 - Ecosystems**

**Components, Environmental patterns, Predation, Competition and Symbiosis, Endangered species classification, Environmental interactions, Social behavior**

**Unit 3 – Conservation and Human Impact**

**Zoo conservation projects, Endangered species worldwide, World issues, Recycling and preservation, Issues affecting natural selection**

**Unit 4- Zoo Careers**

**Animal care overview, Zoo operations, Veterinary hospitals**

**Unit 5 – Teen Zoologist**

**Develop a brochure, Presentation of brochure to the public**

**Zoological Research 3 (8<sup>th</sup> Grade)**

**Unit 1 – Animal Behavioral Studies of Primates**

**Habitat, Observation tools, Classification, Locomotion characteristics, Body structure and functions, Feeding & diet, Communication, Social behavior**

**Unit 2 – Evolution and Natural Selection**

**Geological eras and corresponding organisms, Theories, Genetic influences, Human Impact**

**Unit 3 – Interaction Between Society and Environment**

**Stages of extinction, Laws protecting wildlife, Sustaining animal populations, Species survival programs, Operation and management of zoos**

**Unit 4– Animal Care**

**Animal handling and restraint, Captive management, Animal Nutrition, Zoo records**

**Unit 5 –Zoo Inquiry**

**Characteristics and functions, Design and themes, Essentials factors, Zoological parks, Zoological law**

## Transportation to/from Zoo

Students arriving to school after the buses have departed for *Zoo Miami* should report to the Main Office on the first floor of Richmond Heights Middle School. Transportation of students to the zoo site by staff will not be provided. After the second week of classes, students will receive a zero for missed days spent at school and will be notified and students will be placed on probation. Continuation of this problem will result in suspension from the Zoo Magnet Program.

For parents transporting students to school, if the student is late, they should report to the attendance office for an admit. Parents should then drive the late student to the zoo.

If students need to leave school early and are scheduled to be at the zoo at that time, parents are to sign the student out from school first before coming to the zoo to retrieve the student. The teacher must see the permit to leave in order to release the student.

## Rules for Zoo Grounds & All Park Facilities

The zoo experience can be exciting and fulfilling. These rules are for your safety, as well as, the safety of the animals at the zoo.

1. Remain with the group at all times.
2. Keep off the grass.
3. Bring a water bottle, containing water only. Due to limited amount of time, stopping at water fountains may not be possible. There is a water fountain in the classroom that students may use before and after zoo walks.
4. Do not feed the animals.
5. Respect all forms of life.
6. Respect all patrons and employees of the zoo.

## RULES & RESPONSIBILITIES

**AREA:** All students are restricted to the public areas and the classrooms of Zoo Miami; students will remain with the teacher at all times.

**POLITENESS:** All students are expected to be quiet and mannerly in the halls, lunchroom, classrooms, and auditorium, on the school buses and especially at the zoo. No noise or running in the halls is permitted.

**GROOMING:** All students are expected to dress appropriately for school (follow dress code). The dress code will **NOT** be changed because of participation in the Magnet Program.

**DISTRACTION:** IPODS, cell phone, MP3 players, and all other electronic equipment distract others from doing their best. They do not belong in school or at the zoo. Leave them at home.

**NUTRITION:** Gum, candy, chips and other junk foods are not permitted. They should not be eaten, in or brought to school. No students may use the vending machines or purchase anything from the food service areas at the zoo.

**COOPERATIVENESS:** All students are required to show respect for, and cooperate with, all school staff, bus drivers, asides, teachers of all grades, clerks, custodians, and other students.

**RESPONSIBILITY:** All students are expected to help care for their school property (books, lavatories, lunchroom, classrooms, and zoo facilities). NO magic markers may be bought to school. Markers are available from the teacher.

**DEPENDABILITY:** All students are required to wear the identification badges which are issued by Zoo Miami while they are participating in the program on the zoo grounds.

**TIME MANAGEMENT:** Students may NOT waste class time by using the school or zoo telephones. In an emergency, a pay telephone is available, but teacher permission is required.

**PREPAREDNESS:** All students are required to be prepared for class. Students are responsible for all materials (gym clothes, pens, pencils, books, assignment, lunches, etc.)

**PUNCTUALITY:** All students are required to arrive at school on time and leave the school premises immediately following dismissal. Loitering is prohibited on school property before or after school hours.

**ACCIDENTS:** All injuries and illnesses should be reported immediately to the instructor.

**ZOO ANIMALS: DO NOT feed or throw food or other objects at the animals.** All animals are on special diets.

**COMPONENT:** Students are to comply with these rules of conduct at all time. Zoo Miami personnel reserve the right to exclude disruptive students from the zoo facilities. The Zoo Component is part of Miami-Dade County Public Schools and Zoo Miami with the support of the Zoological Society of Florida. As such, teachers and students are on the public display AT ALL TIMES.

**ACCEPTABLE CONDUCT IS REQUIRED OF ALL PARTICIPANTS.**

**STUDENTS ARE EXPECTED TO ALWAYS CONDUCT THEMSELVES IN AN EXEMPLARY MANNER WHILE ON ZOO GROUNDS.**

**NOT ONLY WILL STUDENTS BE REPRESENTING OUR SCHOOL AND MORE SPECIFICALLY, THE ZOOLOGY MAGNET PROGRAM, BUT WHILE WITHIN THE PARK, THE ANIMALS, THEIR EXHIBITS AND THE ZOO GROUNDS MUST BE RESPECTED AT ALL TIMES.**

**ACCESS TO THE PARK AND ITS INHABITANTS IS A PRIVILEGE THAT MUST BE APPRECIATED AND VALUED.**

Student Name: \_\_\_\_\_ Student I.D. # \_\_\_\_\_

**Parent-Student- School Agreement**

**As a parent of a Zoological Magnet student at Richmond Heights Middle School, I will ensure that my child will:**

- **Adhere to the guidelines, policies and procedures set forth in the Parent-Student –School Agreement.**
- Complete daily assignments such as laboratory experiments; class activities and assignments; class notes; research projects, both group and independent; computer station modules; zoo research tasks, expeditions, and special projects.
- Complete a minimum of 10 community service hours each year.
- Maintain **appropriate behavior** in the classroom, on the bus, on field trips, other off-site facilities and especially while on zoo grounds.
- **Maintain nothing lower than a “C” average in ALL core content subjects and conduct** every nine weeks.
- Pay the mandatory annual Zoo Magnet Fee of \$20 and the Zoo Magnet Booster Club fee of \$10

**Failure to comply and adhere to the expectations of the magnet program may result to the student being placed on probation and or exiting the magnet program and returning to his/her home school.**

**I have read and will comply with the general procedures and requirements for the Zoological Research course and magnet program.**

\_\_\_\_\_

Students Signature and Date

\_\_\_\_\_

Parent/Guardian Signature and Date

\_\_\_\_\_ **Check here if you would be interested to be a chaperone for field trips.**

## ANNUAL ZOO MAGNET FEE

The \$20.00 annual zoo magnet fee will ensure that your child will participate in hands-on, fun, educational experiences throughout the school year. This fee will be collected during the first week of school in their zoo research course. Some experiences that this fee may apply to are as follows:

- Rhino Encounter
- Giraffe Feeding
- Parrot Feeding Adventure
- Safari Tram Rides/ Tour
- Aerial View of Zoo Miami from the Monorail Ride
- Other zoo related activities

• \_\_\_\_\_  
Please make money order payable to: Richmond Heights Middle or Cash Payment.

**Parent(s) Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Home Phone:** \_\_\_\_\_ **Cell:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**\*\*Please Print clearly**

**Student Name** \_\_\_\_\_ **Grade:** \_\_\_\_\_

**Zoo Magnet Teacher:** \_\_\_\_\_

**Student Email:** \_\_\_\_\_

**Please Check Payment Method: Cash:** \_\_\_\_\_ **Money Order#:** \_\_\_\_\_

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