

Sustainable Jersey for Schools Certification Report

This is the Sustainable Jersey for Schools Certification Report of Mount Arlington Public Elementary School (Morris), a Sustainable Jersey for Schools bronze certified applicant.

Mount Arlington Public Elementary School (Morris) was certified on August 09, 2016 with 180 points. Listed below is information regarding Mount Arlington Public Elementary School (Morris)'s Sustainable Jersey for Schools efforts and materials associated with the applicant's certified actions.

Contact Information

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Actions Implemented

Each approved action and supporting documentation for which Mount Arlington Public Elementary School (Morris) was approved for in 2016 appears below. Note: Standards for the actions below may have changed and the documentation listed may no longer satisfy requirements for that action. Additionally, points associated with actions prior to 2013 certifications may not be accurate.

Innovation Projects

Innovative Project #2

10 Points

School District

Program Summary: MAPS WEATHER RESEARCH PROJECT & WEBSITE The Borough of Mount

Arlington is located on Lake Hopatcong and is impacted by the lake effect of weather conditions. MAPS has designed an extensive weather research site which integrates real world research for each Grade level. The site includes advanced topics including the use of satellite imagery and online data bases for oceanic buoy measurements. The program uses the ProVantage Remote Sensing equipment for real-time on-site data including traditional meteorological data was well as UV and Solar Radiation parameters. The program also addresses student self-esteem as students can participate in the SOARS program (Students Observing the Atmosphere through Remote Sensing). This program involves advanced research on the use of weather data and satellite images for weather forecasting. Members also provide the school with daily weather reports.

WORD: INNOVATIVE PROJECT #2 DOCUMENTATION
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Learning Environment

Curriculum Mapping

20 Points

School District

Program Summary: Last year the District adopted the on-line OnCourse Systems lesson planner, curriculum development program, and teacher evaluation program. A copy of the comprehensive database to address a variety of state and national standards is attached including reference to career, college, and civic life frameworks. More information about this awarding winner program is available at https://oncoursesystems.com/products (see the lesson planner video) and attached as support documentation In addition, the District has held vertical articulation meetings during staff meetings and within professional learning communities which meet during teachers' common planning time. The curriculum reflects interdisciplinary connections to meet career and workplace readiness standards. To transition to the Next Generation Science Standards, all faculty are currently reviewing and integrating the Next Generation Science Standards to address the interdisciplinary connections of Common Core for ELA and Math skills to plan for curriculum map revisions across the disciplines.

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School Grounds

Green Infrastructure Installation

10 Points

School

Program Summary: The Rain Garden, which was originally established with a collaborative effort of the Borough Green Team and the students, was certified in the fall of 2016 as a demonstration Rain Garden by Rutgers University. (SEE

http://www.newjerseyhills.com/roxbury_register/news/rain-garden-s-role-grows-at-mount-arlington-school/article_b4d0dd62-011b-54c4-8555-846dd6318bf1.html). Annually students complete maintenance field work on the school's Rain Garden. The students have plans to create an educational website for the community at large and to promote the installation of another garden closer to Lake Hopatcong and to promote the installation of gardens near homeowner driveways. NJ Sustainability reached out to the school to pursue this project and in March 2016 awarded \$2000 as a grant to expand the program. A field map shows the targeted species used to attract pollinators, and Rutgers has updated the curriculum for this program.

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Student & Community Outreach

Green Team

10 Points

Bronze Required School District

Program Summary: The Mount Arlington Board of Education has established district-level and school-level Green Teams. There are over two dozen representatives from the BOE, PTA, Teachers, Consultants, Town Council, the Mount Arlington Educational Association, community and district. The file also includes identification of local media. A broadcast of Sustainability webinars was sent to the members so that the team could move forward on other actions in the future. This group was formally appointed in January 2016, and meetings to review NJ Sustainable Schools submissions and to set goals for additional certification status were scheduled. The group has reviewed on-going efforts to model a sustainable school to prioritize actions, and presentations have been given to all staff members, the PTA, the Town Council, and the Board of Education. At the Faculty/Staff meetings training was provided to teachers regarding opportunities for Professional Development and a review of the Education for Sustainability (EfS) Questionnaire. At the PTA meeting information about the program as well as grant opportunities were presented. At the Town Council Meeting students in Grade 7 presented the status of the actions and requested input on a recommendation for an expanded rain garden program. At the BOE meetings approved actions, revised actions, grant opportunities, and future action goals were discussed. Mount Arlington School targeted the following actions for this year: Green Team Curriculum Maps Innovative Project (Weather Research Project) Recycling Non-Mandate Materials (SOLEMATE Recycling) Materials Reuse (Our Free Little Library) Green Infrastructure (Rain Garden) Enrichment through Partnerships (Musconetcong Watershed Program & Lake Hopatcong Foundation) Community Outreach & Education (Mount Arlington History Program) Civics and Stewardship Initiatives (Veterans Day and Troops Programs) Programs to Promote Physical Activities (Family Fitness & Fitness Journals) Education for Sustainable Technology (Solar Cars Program) Education for Sustainable Career & Tech Education (Peaceville Infrastructure Program) Education for Sustainable Art Education (Recycled Art Projects) Education for Sustainable Health Education (Wellness and Longevity Programs) Education for Sustainable Social Students (Model

UN Program) Education for Sustainable Science Education (Wind Turbine Program) Grade 3 Sustainable Education (Peaceville Ambassador/Civics Program) Education for Sustainable ELA (Plastic is Drastic) Bicycle Safety Program (Liaison with Police Department) Anti-Idling Campaign (Education Year) Attachment 1 includes the letter regarding the Green Team Resolution, Union Representatives, and Green Team Members. Attachment 2 includes the Green Team Final Report for 2016. Attachment 3 identifies meeting dates and activities. Attachment 4 provides a Green Team Scoring Rubric. Attachment 5 is a copy of a student speech given to the Town Council to share goals and opportunities. Attachment 6 is a sample communications regarding training and webinar opportunities to all members.

PDF: GREEN TEAM DOCUMENTATION

Community Education & Outreach

10 Points

Bronze Priority Silver Priority School

Program Summary: MY TOWN THROUGH A CHILD'S EYES: PRESERVING THE PAST TO PROTECT THE FUTURE: Students have partnered with Seniors from the Mount Arlington Historical Society and established an Mount Arlington Historical Society website and an on-site historical museum and archive at the school. The students ideas and solutions have been presented on project websites and displayed on project boards at the local library, town hall, Morris County Historical Society ACORN Hall Museum, and the NJEA Morris County Mall Program. The project website recently was officially acknowledged and published on the Morris County Heritage Society webpage as a county resource. MAPS HISTORICAL SOCIETY PROJECT WEBSITE: https://sites.google.com/site/mapshistoricalsocietyproject/home Attachment 1 shows samples from the project and the display case. Attachment 2 presents the unit lesson plan. Attachment 3 presents the students' full research project. Attachment 4 presents a media release.

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Civic & Stewardship Volunteer Initiatives

10 Points

School

Program Summary: VETERANS AND TROOPS PROGRAMS Mount Arlington students participated in an Annual Veterans Day Event which is a school-wide project that celebrates Veterans and their families through a school-wide assembly and oral history project. Students in all grades spend enrichment time for weeks in advance to prepare patriotic songs, essays, and poems which are presented to dozens of veterans who are honored. The band and chorus sing all anthems of each service branch. Veterans are each honored for their service including a slide video production of photos from their service days. After the assembly, the school has a parade down the decorated

hallways for the Veterans and family members. 8th grade students spend over 2 hours interviewing veterans in small groups. The on-going program has been highlighted by NJEA Classroom Close Up in the past (Video links: http://bcove.me/r451o70f and http://bcove.me/pif4sxq5). As an extension of the program Mount Arlington has established relationships with the local VFW Post, Lyons Veteran Administration Hospital, and Boy Scouts. Through their Social Studies enrichment period and in their art class, students also actively participate in Support the Troops projects. Students actively contribute their time to create care packages and cards for the troops, Valentines for Veterans, writing letters, and have downloaded and donated sets of Veterans Day Posters by the VA to the local VFW Post and Lyons VA Rehabilitation Center. The link which the students used to download the digital posters is http://www.va.gov/opa/vetsday/gallery.asp

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Enrichment Programs through Partnership

10 Points

School

Program Summary: MUSCONETCONG WATERSHED PROGRAM Team Respect (Grades 5 & 6) have developed a field monitoring program in conjunction with the Musconetcong Watershed Association. Each year field scientists meet with the students for classroom instruction with follow-up field work. The students collect stream velocity calculations, create a field map of Memorial Park which as a tributary that feed Lake Hopatcong, and collect water samples for water quality testing. There students identify indicator organisms. The stream velocity calculations are then used as a data set for the students required box-and-whisker plot graphs which are a mandated Common Core Math Standard. Students walk from the school and collect litter along the way to the park. Attached are snips of the scientists' presentation and an article published in the Roxbury Register along with photos of the event. In addition, a student research project on local geology, hydrology, and limnology, which was developed as part of a program called My Town Through a Child's Eye, is now part of the Musconetcong Program. The detailed research includes maps as well as information about the USGS monitoring stations and dam gauges for water release. A website about the program will be developed by students in the future.

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Student Learning

Education for Sustainability 3rd Grade

10 Points

Program Summary: PEACEVILLE PROJECT: INTEGRATED DIGITAL ART, MATH, AND CIVICS This project is an innovative city planning project which integrates all disciplines. In Grade 3, students create town ambassadors using the geometric shapes in PowerPoint. They celebrate their own heritage and write biographies of the characters focused on good citizenship and develop a biography for their ambassador including wellness and volunteer activities for their ambassador. They learn about city government and use resources and websites to begin to explore town planning. They also create a word bank of words for peace which serves to name ambassadors, streets, neighborhoods, and regions within the Town of Peaceville.

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Education for Sustainability Grades 4-12 Arts

10 Points

School

Program Summary: In the 4th Grade "Cardboard Animals with Texture Project" students created cardboard animals in collaboration with their classroom New Jersey projects. Using technology students research what types of animals live in New Jersey and then begin to sketch out the animal of their choice. Next the fourth grade class has a conversation about texture, and what types of texture are found on their animals. Students are given a wide variety of materials and recycled items to achieve a realistic version of how their animal looks and feels. In the schoolwide "Recycled Winter Decorations Project" students in grades third through eighth work together on a school-wide recycled art project. The question asked in each class was, "How can we use recycled materials to create art?" Students began by experimenting with and manipulating recycled materials; bending, folding, rolling, cutting, ripping, in order to change the original form. After having classroom dialogue about how the once recycled materials had now become mini sculptures, classes begin to plan sculpture ideas for the winter concert. Each class contributed by rolling, folding, painting, or assembling a part of each object. Overall the art classes produced wreaths made completely from newspaper, snowflakes made from toilet paper rolls, a snowman made from old boxes and bottle caps, and an evergreen tree made from cardboard and newspaper and icicles made from rolled up newspapers. The decorations are used throughout the building and for the annual Holiday Concerts. Students also opt to participate in the SLAM DUNK YOUR JUNK Morris County Recycles Poster contests each year.

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Education for Sustainability Grades 4-12 Career and Technical Education

10 Points

School

Program Summary: PEACEVILLE PROJECT: INTEGRATED CIVICS, ENGINEERING DESIGN, ENVIRONMENTAL COMPLIANCE PROJECT This project is an innovative city planning project which

integrates all disciplines. Students create the town of Peaceville. They learn about city government and urban planning and design a town including the infrastructure. The infrastructure needs of a municipality are reviewed through the lens of where to best place water supply and sewerage treatment as how to design green transportation systems. The regions and streets are named using the word bank they created for terms related to peace. They use on-line resources and on-line simulation games as SimCity to design a city of the future. Technical writing activities are included based on student interest.

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Education for Sustainability Grades 4-12 Health

10 Points

School

Program Summary: WELLNESS & LONGEVITY GOALS As part of their health class students in Grade 6 & 7 work with their technology and health teachers to create personal digital posters on longevity goals. Students address strategies to promote positive mental and physical health and wellness. Wellness is addressed through many lenses: social, emotional, occupational, multicultural, environmental, spiritual, intellectual, and physical. Students view wellness as a way of life - a lifestyle you design to achieve your highest potential and well-being. They examine both uncontrollable risk factors (age, gender, and heredity) and controllable risk factors (nutrition, weight management, exercise routine, stress management, medical check-ups, smoking, and alcohol and drug abuse)

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Education for Sustainability Grades 4-12 Science

10 Points

School

Program Summary: WIND TURBINE: This program has been presented at MIT as a model program and uses the KIDSWind program as an interdisciplinary project modified to include CCCS ELA & Math tasks and standards. After background research on wind power technology and on the scientific design process, students create blades and collect voltage data to create tables and graphs using spreadsheet technology. Students also hand plot the data by traditional scattered plots. Students can also opt to research other forms of renewable energy. In addition they identify the three forms of alternative energy they believe the government should fund using taxpayers monies and write formal letters to members of Congress.

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Education for Sustainability Grades 4-12 Social Studies

10 Points

School

Program Summary: MODEL UNITED NATIONS Students participate in the Junior Model United Nations Program and publish their solutions to major world issues on an educational website. The research topics include such topics as global climate change, global education, global pandemic management, and refugee management They also collaborate with other students in the region to present their solutions at Drew University. Media coverage is presented at the following site: http://www.newjerseyhills.com/roxbury_register/news/mount-arlington-students-tackle-worldly-issues/article_b9ce85de-fa6a-5f2f-aea7-57f7bbff78a2.html The students have posted their research and final resolutions on the MAPS United Nations Website:

https://sites.google.com/site/mapsmodelunitednations/ In addition, project boards are displayed at the local library, town hall, and the Morris County Educational Association annual Mall Project.

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Education for Sustainability Grades 4-12 Technology

10 Points

School

Program Summary: SOLAR VEHICLE DESIGN For this interdisciplinary project students work in teams to design a vehicle powered by a solar panel. They apply the engineering design process including background research on solar energy and physics and use applied physics and math applications to analyze their vehicle which must carry a payload and have a back-up battery pack in the event the sun is not available. Students also use spreadsheet technology and on-line data analysis tools to analyze their data. A copy of the unit plan including reference to Next Generation Science Standards and Common Core Curriculum Standards are provided along with the Grading Rubrics and a sample student portfolio.

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Programs to Promote Physical Activity

10 Points

School

Program Summary: During the extended Enrichment Block (80 minutes) which exceeds the Physical Education state requirements, the physical education department plans a "Fitness Friday" for all grades which focuses on different fitness components to enhance the students' health and to promote physical activity. Students keep a fitness journal in order to encourage a healthy lifestyle. The fitness journal covers many aspects of health such as: resting heart rate, post workout heart rate, jogging, tracking sets and repetitions of different exercises, as well a food and sleep diary. The journals help to reinforce the importance of exercise, choosing healthy foods, and getting the right amount of sleep. Using fitness journals and quantitative benchmark data, students track their physical fitness development over the course of the year. The students analyze their data to determine factors such as changes in pulse rate and increase in speed, agility, endurance, and strength. Copies of the PE instructors student data sheet is attached. It is noted that there has been a decrease in obesity due to this program. In the future, a student database will be developed to let the students manage their data in a digital platform. PROMOTING FAMILY PHYSICAL FITNESS AND WELLNESS: Family Fitness Friday Fridays in the Mount Arlington Public School are all about fitness! Every Friday, students in grades 3-8 get the opportunity to participate in a "Fitness Friday" physical education class, run by PE teachers Chris Merker and Andrea Danysh. On November 13th and 20th parents were invited to join in for a special "Family Fitness Friday". Over 50 family members attended and participated alongside the students in "Fitness Monopoly" stations, each focused on a different fitness component. The goal of this program is to promote fitness and healthy lifestyle choices both inside and outside of the classroom.

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Waste Reduction & Recycling

Materials Reuse

10 Points

School

Program Summary: Mount Arlington School's "Our Little Free Library" project has been developed to provide a center to reuse books of all kinds. This student lead project is a service learning project and includes tracking of donated books and output of books exchanged. The program has been promoted throughout the school and a detail log book of students' reflections on various tasks for the project are completed on a monthly basis. The project tasks includes creation of posters and donation boxes, book collection, creation of persuasive flyers, using graphic organizers and chromebooks for informational writing activities, donation of books to class rooms and libraries for reuse, and tabulation and graphing of books' input and output data.

Over 1000 books have been collected for reuse.

PDF: MATERIALS REUSE DOCUMENTATION
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Recycling Non-Mandated Materials

10 Points

School

Program Summary: Mount Arlington School annually participates in the Solemate Shoe Recycling Program. This program is coordinated by the School Safety and Climate Team as a fundraising event. Boxes provided by Solemate are stored in the hallway for students, faculty, and PTA members to drop off shoes. The program is promoted on the District website and within the school using an announcement bulletin board. PTA also mentions the program at meetings. The end of year posting is listed at http://www.mtarlingtonk8.org/solemate-shoe-recycling-project/ To date over 600 pounds of shoes have been sent out to Solemate. An article by Federal Express highlights the program: http://access.van.fedex.com/shoebox-recycling/ The SOLEMATE shoe recycling program (www.shoeboxrecycling.com) allows groups to participate in a great cause in a no-cost, feel-good way. It's a simple way for schools to make money. ShoeBox Recycling pays \$.50 per pound for paired, secondhand shoes. The shoe recycling program is easy! ShoeBox gives you boxes. You fill them up and make them heavy — 40+ lbs. heavy! ShoeBox gives you a label and pays for UPS shipping. ShoeBox sends you checks cut monthly based on the pounds of shoes collected. You make your network of recyclers happy, the planet happy, and generate money for your school.

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