FLH Code _____
(for office use only)

Application for NJEA Frederick L. Hipp Foundation for Excellence in Education
Cover Sheet
(Please TYPE or PRINT)

Project Title: Astronomy's Technology Toolbox

PROJECT COORDINATOR:

Name Joseph Outcalt

Home Address 606 Cambridge Avenue

Union Beach, NJ 07735

NJEA Membership PIN # (if any) JN54NA

Home phone (732) 739-0642

Home E-mail geezero@msn.com

School Name: Old Bridge High School

School Address 4205 Route 516

Matawan, NJ 07747

School Phone (732-290-3900) - (Ext. 3985)

School E-mail joe.outcalt@obps.org

County Middlesex

Please indicate the type of grant being sought:

☐ **Continuation Grant:**

Previous recipients will be permitted to request funding for one additional year.

☐ **Cooperative Grant:**

An individual or group may apply for a grant that includes funding from another source.

☐ **Professional Growth Grant:**

An individual or group shall be permitted to apply for grants to provide funding for the development of professional growth programs.

☒ **Partnership Grant:**

An individual or group may apply for a grant to expand a program.

☐ **Individual Grant:**

An individual may apply for a grant designed to improve teaching and learning in general.

As Project Coordinator, I understand and agree to the following should our application be selected to receive a grant:

I will attend a training session regarding the finances connected to the grant.

I will be actively employed in the Old Bridge school district during the term of the grant.

Only those individuals listed below will be participants in this project.

Coordinator's Signature_____Date_____

PROJECT MEMBERS:

The Hipp Foundation expends significant funds to honor grant participants at a special celebration during NJEA's annual convention in Atlantic City. In addition, project members who play an essential role in the success of the project receive a recognition plaque from the Foundation. Therefore, we request that you list only those individuals who are essential to the success of your project.

Name	NJEA Membership PIN # (if any)	Position held in district
Karen Manassa-Walstein	IB77PM	School Media Specialist

NOTE: For promotional purposes, please submit a recent 4" x 6" or larger print-quality color photograph of yourself and/or your team, or submit a CD with highest resolution image available. Photos will not be returned. (Photos may **NOT** be Polaroids or computer generated.)

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Application for NJEA Frederick L. Hipp Foundation for Excellence in Education Cover Sheet (continued)

(Please TYPE or PRINT)

Describe each Project Member's level of participation and responsibility in this project.
Do not include project coordinator's responsibilities.

Karen Manassa-Walstein, school media specialist, will guide students through the steps of scholarly research on astronomy topics. In addition, she will assist students in creating an astronomy web-page and the use of other authoring tools that can be used for classroom teachers throughout the school district.

THIS SECTION SHOULD BE COMPLETED BY THE LOCAL ASSOCIATION PRESIDENT.

Local Association: Old Bridge Education Association

Local Association President: Nicole Saladino

Address: Route 516

Matawan, NJ 07747

Local President's Home Phone _____

Local President's School Phone: (732) 290-3900 (ext.)

My signature below indicates that the Executive Committee of the Old Bridge Education Association Association is aware that this application is being submitted to the NJEA Frederick L. Hipp Foundation.

_____
(Signature of Local Association President)

(Date) _____

THIS SECTION SHOULD BE COMPLETED BY THE LOCAL SUPERINTENDENT.

My signature below indicates that the Old Bridge Township board of education has reviewed this application, supports the proposed project, and agrees to implement it if a grant is awarded.

_____
(Signature of Local Superintendent)

(Date) _____

Please keep three photocopies of your application – one for your local association, one for your local school board, and one for yourself.

Send application, **postmarked by March 1** to:

NJEA Frederick L. Hipp Foundation for Excellence in Education
180 West State Street
P.O. Box 1211
Trenton, NJ 08607-1211

Application for NJEA Frederick L. Hipp Foundation for Excellence in Education

Project Summary Sheet – This information must be typed.

(Please do not include any reference or abbreviation that would allow for the identification of any district, school, county or local association, or individual. Inclusion of any of the above will result in automatic disqualification of the application.)

Project Title: Astronomy's Technology Toolbox

Target Population: The target population draws on the entire school district's student population from K-12 with each grade level having a different focus. Five of our elementary schools, spanning K-5 with a student population of 300, visit the planetarium twice each year. Six hundred of our 6th grade students visit weekly for one semester. A high school astronomy class of 30 students is offered as a science elective. An outreach program to the area Girl Scouts, population 150 girls, enables the girls to earn merit badges in astronomy. In addition, the intention is to expand the outreach program to include Boy Scouts.

Needs Assessment: Astronomy is a science that naturally inspires excitement in children. Although astronomy is a subject unto itself, it lends itself to the versatility of being a cross-curricula science. In order to properly explore the many topics of astronomy students need to use and expand their knowledge of history, physics, geology, geography, mathematics and much more. Students working in a planetarium are encouraged to move beyond fact-based knowledge to a hands-on inquiry based applications. Astronomy is a science that unites all students with deep roots in every society and every culture.
Text-based material can be inadequate due to the ever changing nature of astronomy. Laptops would enable students to access up-to-date data and real-time images.

Community Description: The general population of the district is diverse. Students bring a vast array of knowledge and experiences. Our student population includes port-of-entry students as well as native English speakers. Our district is one that has difficulty receiving grants and other awards due to a small number of students classified below the poverty level. On the other hand, we are not a district that succesfully passes budgets. Therefore, the purchase of technology is often the first item to be cut from our school budget.

Grant Amount Requested: $10,000 (Round off total to the nearest dollar.)

Project to begin on September 1, 2009 and conclude on on-going.

Application for NJEA Frederick L. Hipp Foundation for Excellence in Education

Section A – OBJECTIVES – This information must be typed.

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Astronomy and Astronomy Education are changing rapidly. Education and educators are continuing to develop methods to demonstrate to students how to think like scientists. Classroom interactives enrich the students' learning activities, turning the learning experience from passive to active. The introduction of technology provided by laptop computers to both existing and future programs via the internet and software will provide this enriched atmosphere.

The objectives of this program are to:

. facilitate knowledge of astronomy.
conduct independent and cooperative/collaborative scientific research
demonstrate science in action
demonstrate importance of astronomy in our every day lives

Six of our twelve elementary schools are named for pioneers in the space program and were built in the early sixties during President Kennedy's initiative to land a man on the moon. In this country there was an excitement in science education, in general, and in particular astronomy. The addition of technology will revitalize our commitment to astronomy education and allow the students to become stakeholders in this revitalization.

Application for NJEA Frederick L. Hipp Foundation for Excellence in Education

Section B – PROJECT PLAN – This information must be typed.

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The combination of current internet access coupled with software will allow students to apply pedagogical tools to the learning experience.

This experience includes:

- connecting astronomical observations to theories
- using textual and graphical information to address different learning levels and learning styles
- allowing students to compare beliefs to the findings of modern science
- linking concepts presented in class with enhanced material offered electronically
- having the ability for students to access numerous internet resources such as:

NASA
Worldwide Telescope
Skymaps.com
Space.com

The use of laptops will allow students to have a Virtual Astronomy Laboratory at their fingertips and experience:

The sun and its influence
The earth moon relationship
Constellations
Meteors, comets and asteroids

Students will be enabled to enhance existing community outreach programs that would fund additional state-of-the-art technology.

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Section C – TIMELINE – This information must be typed.

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Junior and senior high school students will attend classes one period for an entire semester. The high school program will continue with a new group of students each semester. The entire 6th grade class of approximately 600 students receives instruction in the planetarium once a week for the entire school year. K-5th grade students visit the planetarium anywhere from 2-6 times a year. Boy and girl scouts visit the planetarium to conduct activities related to their individual programs and visit the planetarium on an as-needed basis.
The material purchased will be used for the next several years.

September 2009-June 2014

Application for NJEA Frederick L. Hipp Foundation for Excellence in Education

Section D – ASSESSMENT – This information must be typed.

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The astronomy program has been in existence for over forty years with no new technology upgrades. Current assessments have been informal. Going forward middle school and elementary assessments will be created collaboratively and cooperatively by the regular education teacher and the astronomy teacher using the new proposed state core curriculum standards as guidelines. Programs that are conducted for area Girl Scouts will be assessed using exit surveys taken from children and scout leaders.
Assessments involving the high school students will focus on the following guidelines:

-summary of key ideas - bulleted list of key concepts
-discussion questions
-web questions
-observing projects - asking students to think like astronomers
-the use of laptops will allow students to conduct real time observations

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Section E – BUDGET – This information must be typed.

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With a zero increase budget this year, and for the last two years, there are inadequate funds to expand the existing program to become a true space research center. The district has a competitive pricing agreement with Hewlett Packard. The laptops that are traditionally purchased for the use by students would include a three-year warranty, 80 gigabyte Hard Drive, and 2 gigabyte of RAM in a wireless environment. It is estimated that this configuration would be approximately $800 per laptop with the possibility of negotiating a more favorable pricing schedule based on the number of units purchased. Currently, at this price point, $10,000 would enable the district to purchase 12-13 laptops for use in the planetarium.