

Jeanie Ritchie Grants - Funded by MPAEF

Application must be submitted no later than 10/14/22 for consideration.

Jeanie Ritchie Grant Application 2022-23	
Project Title:	Bioluminescence and Phosphorescence: Glowing Animals: Gruesome and Glorious
Lead Teacher/School Project Director Name:	Steffany Cressey
Email Address:	scressey@mpcd.org
Best Phone Number:	650 346 7831
Names of Other Teacher Participants and contact emails for all (also include school if project will span multiple campuses):	Alison Howard Joyce Chan Sara Bartlett
Principal's Name:	Alicia Peyton-Miyasaki
Director of Technology Name: (if applicable)	

Before this application is submitted, it is necessary for the principal to review it.

Has the review been completed? Yes No

Principal Signature / Date: _____ alicia payton- Miyazaki

I have reviewed this proposal and am aware that it is being proposed for implementation and will be supported through the Technology Department.

Director of Technology Signature/Date: _____

PLEASE NOTE: The Jeanie Ritchie grant process is anonymous. Your application will be considered according to an ID number only. Please do not include the name of your school in the body of your application. This title page will not be made available to the committee until the grants are awarded.

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Project Title: Bioluminescence: Glowing Animals: Gruesome and Glorious	
This year, JRG will reserve \$20k for grants focusing on SEL/Mental Health. Please check box if grant fits this category.	Type of Grant (check all that apply) <input checked="" type="checkbox"/> New <input type="checkbox"/> Repeat (____ # years) <input type="checkbox"/> Technology Support Approved <input type="checkbox"/> Mental Health/SEL
Cost per student \$13.77	# Students involved: 80 # Schools involved: one Grades involved: 2nd Grade
Total Funding Requested* \$ 1102.17	Date(s) when will the project be conducted: January-February, 2023
Project Description	
<p>Goals: What are the goals of the project? What are you trying to teach? <i>Please limit your response to one paragraph and be concise.</i></p> <p>Our goal is to explore and more deeply understand animals that glow in the dark: How they glow and why they glow. Students will study and gather facts about types of animals that glow in the dark such as fireflies, lanternfish, squids, etc.</p>	
<p>Core Activities: Describe what students will <u>do</u> as they participate in the project. How will the project accomplish its goals?</p> <p>Students will study luminescence, light and reflection as well as draw scientific diagrams, use maps to mark habitats and create paintings and models. Small groups of students will together research and write their findings, present to the other second grade classes: Final projects will be viewed by students' important adults and friends during the culminating event "Glowing: Gruesome and Glorious Projects and Art Gallery" by 2nd Grade.</p> <p>Activities:</p> <ol style="list-style-type: none"> 1. Students in small groups will read then write about an animal (phosphorescent) of their choice. 2. Students will frame with neon paper: non-fiction reports, labeled scientific drawings, photographs as well as a map with areas marked where the animal they studied lives (highlighted). 3. Students will draw on black or white paper using highlighters and neon glow paint an artistic rendering of their animal. Art will be framed using neon paper. 4. Students will mold a sculpture of a "glow" animal then paint and decorate their sculpture. 	

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5. Students will use flashlights and mirrors to direct and reflect light onto their art pieces. (Mirrors and flashlights are sourced from discontinued FOSS science kit materials.)
6. Students will set up and label their art exhibit.
7. They will write invitations to their significant adults, administration, past teachers and their Big Buddies: All will be invited to the opening.

Innovation: To what standards and/or aspects of the curriculum is the project linked? In what ways does it go above and beyond what is normally required?

Combined with our Units of Study, Reading and Writing Workshop (Informational Units) using black lights, mirrors, reflective and glowing paint students will learn and understand more about remarkable animals that glow. During the winter months, rainy and dark, students will light up their learning with these unusual tools and supplies. Second grade standards require that students understand landforms and habitats. With this grant not only will students gain knowledge of these but also go deeper into understanding adaptations and environments of these little known animals.

1.10. Vocabulary and Concept Development: Identify simple multiple-meaning words.

2.1. Structural Features of Informational Materials: Use titles, tables of contents, and chapter headings to locate information in an expository text. 4

2.2. Comprehension and Analysis of Grade-Level-Appropriate Text: State the purpose in reading (i.e., tell what information is sought).

2.4. Comprehension and Analysis of Grade-Level-Appropriate Text: Ask clarifying questions about essential textual elements of exposition (e.g., why, what if, how).

2.5. Comprehension and Analysis of Grade-Level-Appropriate Text: Restate facts and details in the text to clarify and organize ideas.

2.6. Comprehension and Analysis of Grade-Level-Appropriate Text: Recognize cause-and-effect relationship in a text.

2.c. Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment.

4.g. Follow oral instructions for a scientific investigation.

Next Generation Science Standards

2-LS-4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

Common Core State Standards Connections:

ELA/Literacy –

W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-LS4-1)

W.2.8 Recall information from experiences or gather information from provided sources to answer a question.

Success Evaluation:

- a. If this is a new grant, how will you know that the program has been successful?

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Children's final research projects (non-fiction writing and art pieces) will display their understanding. (TC rubric can be used to assess abilities.). Students involved in curating the exhibit will also add to success. Although this is not a true PBL unit, it does involve students in not only the gathering of information, writing up their findings, adding visuals and creating a 'space' for others to enjoy their work, they are involved from beginning to end in their learning. Our "Gruesome and Glorious Glowing" Exhibit will be the culminating event of the unit: Our writing celebration!

- b. If this is a repeat grant request, attach last year's completed evaluation form.
PLEASE NOTE: REPEAT APPLICATIONS WILL NOT BE CONSIDERED WITHOUT AN EVALUATION.
- c. If this is your 3rd year of funding, what steps are you taking to obtain funding from other sources? Funding from Jeanie Ritchie ends at year four.

Detailed Budget: Include all expenses, e.g., sales tax, shipping, etc. If any materials can be re-used in future years, please indicate this in the information provided.

Black lights Link	4@ 71.00	284.00*
Glow paint Link	8@ 24.00	184.00
Glow Sticks (144) Link		14.00
Neon copy paper Link	4@ 21.00	84.00
Glow Tape Link	4@ 14.00	56.00
Glow Tape large Link		54.00
Glow Cups Link	4@ 23.00	92.00
Neon Highlighters Link	4@ 16.00	64.00*
Model Magic Link	2 @ 32.00	64.00

Books:

<u>Jellyfish That Glow</u>	17.00*
<u>Extreme Life of the Sea</u>	18.00*
<u>Curious Creatures That Glow</u>	16.00*
<u>Way To Glow</u>	12.00*
<u>Creatures That Glow</u>	7.00*
<u>National Geographic Animals That Glow</u>	5.00*
<u>Glow in the Dark Creatures</u>	12.00*
<u>Glow Down Deep</u>	15.00*
<u>Nature and Science at Work: Bioluminescence</u>	15.00*
<u>Octopuses and Squid (Lights On! Animals That Glow)</u>	13.00*

(Other titles are available in our library.
Additional titles can be read on Epic and RAZ Kids.)

Black and white paper: donated by a parent

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total cost	\$ 1,026.00
tax and shipping	123.12
Total	\$1,149.12

*Asterisk indicates that the item will be used next year. Books shared between 4 classes.

* Currently there is no limit on the amount a grant application can request; however, any application requesting \$3000+ is expected to reach a large number of students and should include ample description and explanation of finances.

Final applications must be emailed to jeanieritchiegrants@mpaef.org as Google Docs with a clear subject line.

Any questions or comments? Please reach out to us at Jeanieritchiegrants@mpaef.org.

Thank you for submitting a Jeanie Ritchie Grant Application!