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one group Science Background Paper and one group lyrics/score, access to musical piece.

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Category Requirements – 30%	
10 pts.	<p>Artist's statement (1-3 pages) Provide insight into the work. This could include (but is not limited to) the following: What provided the inspiration for the work? Why was the work made? What was the purpose? What are ideas that are conveyed? What references are made? What do you hope listeners will get out of the piece? What did you learn about science from doing this work? If you worked with a group, why was a group needed? What role did each member of the group fulfill?</p>
20 pts.	<p>Lyrics/Score - Concept and Form The music should communicate your stated goals, and the form selected should enhance your message. Options:</p> <ol style="list-style-type: none"> 1) Original score only, no lyrics 2) Original score and original lyrics: Create <i>at least</i> one 3-minute song 3) Original lyrics but set to existing music: Create a suite of <i>at least</i> 4 3-minute songs <p>Please send in a CD or upload your piece to YouTube (instructions at end of requirements)</p> <p><i>The composer's intent and connection to the science content must be fully explained in the Artist's Statement and/or the Science Background Paper. Option #1 may require a lengthier paper since there are no lyrics to aid the listener.</i></p>

Science Content– 30%	
30 pts.	<p>Science Background Paper (5-8 pages) What are the main scientific concepts that your art is based on? For example, if your piece references stem cells, provide information on the science of stem cells. Demonstrate a mastery of relevant scientific ideas by accurately explaining difficult concepts in terms a layperson could understand. The work should provide an appropriate combination of explanations, examples, and details that are specific, clear, and relevant to the topic. The content of your work should reflect critical thinking about the topic.</p>

Connections and Collaborations; General Written Requirements – 10%	
5 pts.	<p>Connections and Collaborations Include 1-2 typed pages describing the connections you have made with other people as well as the resources you have used the most. More weight is given in judging to those students who put more effort into locating and using available resources. A good use of resources may include working with an advisor or mentor, making arrangements to tour a company, interviewing an adult in your field, in addition to reading an important paper or uncovering an invaluable website. What did you learn? How did this resource help you? An interview with an adult in the field carries far more weight than a Google search. You do <i>not</i> have to request a mentor through NWABR to excel in this area. If a qualified adult (i.e. your Expo Mentor, someone you interviewed or a tour guide at site visit) significantly helped you with your project, please include:</p>

	<p>a) The person's name, title and contact information. b) Dates you emailed, talked on the phone or met. c) Your thoughtful reflections on the experience of working with that person</p> <p>If you are working in a team, this is the place to describe the different roles and responsibilities</p>
5 pts.	<p>Paper Format and Annotated Bibliography Papers should be typed/word processed with one-inch margins. Use an easily readable font such as Times Roman or Arial, 10-12 point, double-spaced. If included, illustrations must be neat and applicable, with a title and a source. Number your pages and label section headings. Consistently follow the rules of Standard English for usage, spelling, capitalization, and punctuation. If you are using Windows <i>Vista</i> or 7, please use the 'save as' function to save your paper as a "Word 97-2003 Document."</p> <p>Annotated bibliography should be in standard MLA or APA format. Use a minimum of 5 sources. The bibliography should include all books, papers, journal articles, and communications used in your research. For at least 5 sources, provide one reason why you believe the source is credible and describe how it was used in your project.</p>

Creativity -- 10%	
10 pts.	<p>Creativity The most successful projects look at music and the connection to biotechnology/biomedicine in unique ways. Show your ability to creatively approach or solve a problem, or present evidence of your understanding in ways that are novel or unique. Your project should reflect your special insights and abilities.</p>

Poster/Interview at Expo Event – 20%	
5 pts.	<p>Poster Music Projects should have posters that are more like advertisements/promotions for their work (such as one would see to promote a CD or show) Posters should convey important information about your project in a visually appealing manner. Displays must be freestanding and have the following maximum dimensions: 4 feet width, 2.5 feet depth, and 3 feet height (from table).</p>
15 pts.	<p>Interview <i>Judges will be looking at your effectiveness in communicating your project to them, and your understanding of your topic.</i> Your judge will want an overview of your project - practice giving a short (2-3-minute) 'walk-through' of your project that explains it in straightforward terms. Be prepared to provide a 5-minute 'mini-performance' for the judges and any interested viewers.</p> <p>You will receive written feedback from your judge regarding the strengths of your project, and how you could make it even better in the future.</p> <p><i>The following are samples of the types of additional questions a judge might ask you: Why were you interested in this topic? What did you learn from doing your project? What was the most enjoyable/difficult aspect of doing this project? What else would you like to find out about this topic?</i></p>
100 points total	

What you need to do on or before April 22nd, 2018

Register for the Student Bio Expo. Student registration will be open between April 2nd with a deadline of Sunday midnight April 22, 2018

Submit an electronic copy of your project to NWABR (and your teacher) using the **BOX cloud storage**. Further registration and submission information will be posted at: <https://www.nwabr.org/events-programs/student-events/student-bio-expo>

What you need to bring to the Expo

Bring a hard copy of your written work. Include the following

- Cover Sheet**
- Artist's Statement**
- Science Background Paper**
- Lyrics/Score**
- Music on CD**
- Any instruments, CD players, or sound equipment you might need.**
Each music entry may actually perform during their judging time, so be prepared!
- Bibliography + Connections and Collaborations**
- Poster**

YouTube Uploading Instructions

For the Music (MU) category, you may download your piece onto YouTube for the judges to hear. You can upload your song at www.youtube.com <<http://www.youtube.com/>> using the following instructions:

1. The maximum video time on YouTube is 10 min. 59 seconds.
2. Once on the main YouTube page, click "Sign In" on the upper right hand corner. Use the following log-in information:
Username: bioexpo2018@gmail.com
Password: studentbioexpo2017 (Alternatively, use your own Gmail account to upload your video but make sure to label your video as described below.)
3. Once signed in:
 - a. Click on the "upload" link at the top right.
 - b. On the next screen, click the "upload video" link and select your video from your saved files.
 - c. In the title section: Type the title of your project.
 - d. In the description section type: "A music project for the 2017 Student Bio Expo by (your name)." Next type a brief description of your project topic.
 - e. In the tag section type: "Student Bio Expo 2017, 'music', 'your topic' (eg. Autism, Down Syndrome, Thyroid Disorders etc.)
 - f. Select an appropriate category from the drop-down menu.
 - g. Under Broadcasting and Sharing Options, change the "comments" section to "Don't allow comments." Leave the other options as they are by default.
 - h. When you are done uploading your videos, click "save changes".
4. Log out of YouTube and you are done!

Music Tips

Music From a Place of Knowledge

"Our poets do not write about it; Our artists do not try to portray this remarkable thing. I don't know why. Is no one inspired by our present picture of the universe? The value of science remains unsung by singers: you are reduced to hearing not a song or poem, but an evening lecture about it. This is not yet a scientific age."¹
--Richard Feynman

This project is similar to the art category in that it is concerned with using artistic expression to communicate about science. Students who feel that their strongest talents lie in the musical realm are encouraged to participate in this category.

The work should make reference to biotechnology through a theme (cloning, DNA structure, the Human Genome Project, etc.) that is described in detail in the artist's statement. Because of the subjective nature of music, the artist's statement is a critical part of this project.

Projects with both original lyrics and score are strongly encouraged.

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The top 2-3 semifinalists will have a chance to perform a short segment of their music (approximately 5 minutes) for the audience at the Expo.

Potential Resources

Science Entertainment: <http://www.scientainment.com/khowto1.html>

Music About Science: <http://www.edu-cyberpg.com/IEC/iecscience.html>

Sing About Science (lead by UW scientist): <http://singaboutscience.org>

Science Songwriter's Association
<http://www.science-groove.org/SSA/resource.html>

MASSIVE: Math And Science Song Information
<http://www.science-groove.org/MASSIVE/>

¹ <http://www.science-groove.org/SSA/>

Student Bio Expo

Student Name:

Student School:

Project Title:

Music MU

Judging Criteria <small>(Judging criteria are explained in the <i>Student Requirements</i>)</small>	Superior	Excellent	Good	Developing	Limited
Music Category Requirements (30%)					
Artist's Statement (10 pts)					
Lyrics/Score (20 pts)					
Science Content (30%)					
Science Background Paper (30 pts)					
Connections/Written Req. (10%)					
Connections and Collaborations (5 pts)					
Paper Format; Annotated Bibliography (5 pts)					
Creativity (10%)					
Creativity (10 pts)					
Poster/Interview at Expo Event (20%)					
Poster (5 pts)					
Interview (15 pts)					

Comments

(Please continue on back, if needed)

What I found particularly impressive about your project:

Pre-Judging:

Final Judging:

What you could do in the future to make it better:

Overall Rating (circle one)

Superior

Excellent

Good

Developing

Limited