

Northwest Association for Biomedical Research

Biomedical Breakthroughs and My Life Teacher Introductory Packet

- ❖ **Timeline for the 2005 Contest**
The enclosed timeline highlights your responsibilities as well as outlines the judging process.
- ❖ **Topic Focus**
Students are asked to focus on a medical condition that is relevant to them personally. This change in format from previous years allows us to compare essays more readily with one another, while allowing students to draw from their own experience.
- ❖ **NWABR Resources**
This is a list of some of the resources NWABR can provide, including our Speakers' Bureau, our lesson plans, and a wealth of resource brochures, booklets, videos, posters, and pamphlets.
- ❖ **Biomedical Research and the Web**
The web can be a powerful tool, but it is important that accurate and reliable sources are identified. Consider using this list of sites as good points of departure for your students to begin their projects.
- ❖ **Essay & Poster Requirements/Scoring Criteria**
NWABR has provided a detailed list of the required components for both the essay and the poster categories, including the criteria on which they will be judged. Copy these sheets and distribute them to your students so they can be sure to meet all of the requirements.

ESL/ELL Entries
We are pleased to announce that we have a separate category for ESL/ELL (English as a Second Language/English Language Learner) students who have 5 years or less ESL/ELL learning. The ESL/ELL requirements/rubrics are the same as the non-ESL/ELL, but will be scored by a separate group of judges.
- ❖ **Cover Sheet**
This cover sheet must accompany each essay or poster submitted. Copy this page and distribute it to all of your students to include with their final project. (This form may be submitted electronically.)
- ❖ **Student Participant Log**
Please take a moment to fill out this log and submit it with your classroom entries. This log will not be connected to individual student entries in any way and will have no bearing on judging.
- ❖ **Intent to Participate Form**
Please submit an "Intent to Participate" form to us (or call/email) by December 1, 2004, so that we have an estimate for how many judges will need to be recruited.

2005 Contest Timeline

Date	Teachers and Students
December 2004	Intent to Participate Form Due December 1, 2004 It is extremely important for teachers to make contact with NWABR to estimate number of entries prior to December 1, 2004, in order that we may estimate the number of judges required.
March 2005	Submit final entries to NWABR by March 18th, 2005 Essay entries may be submitted electronically as Word documents or pdf files to jchowning@nwabr.org (Please title the document with student last name and first initial (for example, SmithJ.doc)).
April 2005	Winners are announced April 25th, 2005 . Letters go out to students with feedback from the judges along with certificates to the top 10% and invitations to the Award Ceremony for the winners.
May 2005	Scientist for a Day Award Ceremony for winners and accompanying adults. Winners receive awards booklet, which is also posted online.

Judging Process

NWABR recruits judges from the greater Northwest biomedical research community. Once the entries are received, the judges will be sent a packet of essays to review and give comments on. All identifying information is removed from the essays. The ESL/ELL category will have its own judges. During the first week of April, the judges will return their comments and scores to NWABR in order to determine the top 10% of entries. The top 10% will be sent out again to all the judges for review. During this second round, judges will score every essay they receive based upon the criteria. Once the essays scores are returned to NWABR, the winners will be determined. In mid-April, a group of selected judges will convene to score and comment on the posters. The entire judging process parallels the review process which scientists undergo when submitting manuscripts for publication.

Winning entries will receive the following awards!

First prize Poster, Essay, ESL/ELL Poster, ESL/ELL Essay - \$150 each

Second prize Poster, Essay, ESL/ELL Poster, ESL/ELL Essay - \$100 each

Third prize Poster, Essay, ESL/ELL Poster, ESL/ELL Essay - \$50 each

Regional Winners, Two winners in each region (Essay, Poster only) - \$50 each

Regions: Western Washington, Oregon/Southwestern Washington, Inland Northwest (Eastern Washington, Idaho, Montana)

First, Second, and Third Place Winners will be guests of a Seattle research facility for our 'Scientist for a Day' program.

Winners may select one parent and one teacher to accompany them to the 'Scientist for a Day' Program.

Students, teachers and schools will be given special recognition by the Northwest Association for Biomedical Research, which may include local newspaper coverage.

Topic Focus: Biomedical Breakthroughs and My Life

The 2005 contest asks students to focus on how research has impacted, or has the potential to impact, someone they personally know. This could include describing the development of veterinary treatments (pets), or the process by which commonly used drugs are developed. Entries should address the importance of biomedical research and how animal models and/or human clinical trials contribute to medical breakthroughs.

Possible topics:

- Prenatal medicine
- Stem cell research
- Organ transplantation
- Treatments for particular diseases (diabetes, cystic fibrosis)
- Research on physical effects of illegal drugs
- Vaccinations
- Animal medicine (pets)
- Medications: Steroids, Prozac, Ritalin, Antibiotics

NWABR Resources Available for 2005 Contest

WWW.NWABR.ORG – The NWABR website has links to many on-line resources on the use of animals in biomedical research. The winning essays and posters from previous years may also be viewed.

NWABR Speakers' Bureau – Researchers, clinicians, veterinarians and patients are available for personal interviews or classroom presentations on a wide range of topics in biomedical research.

INFECTION – Board game where students race around the board catching diseases and learning which animals have assisted in finding cures for certain diseases.

LESSON PLANS

- **Saving Lorenzo** – This exciting lesson plan is designed to integrate the contest into your curriculum and meet the requirements of the EALRs. It was developed by a teacher who used the contest in her classroom and is available from the NWABR office or in electronic form from the NWABR website.
- **Ethics in the Science Classroom** – Lesson plans built from various case studies are available from the NWABR website or on a CD. These lessons were developed by teachers that attended the 'Ethics in the Science Classroom' workshop.
- **For the Greater Good Curriculum Guide** – A curriculum guide focused on exploring the use of animals in research, designed to complement a five-part series of articles that ran in the *Seattle Post-Intelligencer*.
- **The Effects of Drugs and Alcohol on Daphnia** – This lesson plan serves as a way to incorporate a laboratory activity into a discussion about the use of animals in research.

BROCHURES

- **For the Greater Good** – This five-part series featured in the *Seattle Post-Intelligencer* highlighted the work of professionals who are involved with animals and research.
- **Questions People Ask About Animals in Research** – This thoughtful publication from the American Physiological Society addresses commonly asked questions.
- **The Essential Need for Animals in Medical Research** – This series of fact sheets describes the contributions of different animals to medical discoveries. It includes mice, rats, rabbits, cats, dogs, and other animals.
- **Use of Animals in Biomedical Research: Improving Human and Animal Health** – This publication from the American Association for Laboratory Animal Science explains the importance of animals in biomedical research.
- **National Institute on Drug Abuse** (www.nida.nih.gov) offers a wide variety of brochures and posters that explain how various drugs affect our bodies.

Biomedical Research and the Web

(The following web sites provide additional information on biomedical research)

www.kids4research.org

American Association for Laboratory Animal Science/Charles River Laboratory

This website is intended for students in grades K-12, their teachers, and parents. It contains extensive information about responsible laboratory animal care in biomedical/biological research, testing, and education. Included in the website is information about careers in the laboratory animal medicine field.

www.fbresearch.org

Foundation for Biomedical Research (FBR)

The Foundation for Biomedical Research is an organization that is dedicated to the improvement of the quality of human and animal health by promoting public understanding and support of the ethical use of animals in scientific and medical research. This organization provides a wide variety of educational resources to help the general public understand why animals are so important in the search for new and better ways to treat diseases that afflict both people and animals.

www.iacuc.org

Institutional Animal Care and Use Committee (IACUC)

An IACUC is a committee that exists at every institution that uses animals for research or instruction. The IACUC oversees and evaluates all aspects of the institution's animal care and use program. This web site provides information concerning the responsibilities and functions of this committee.

www.aphis.usda.gov/ac/

United States Department of Agriculture

This federal agency enforces the Animal Welfare Act, which requires that minimum standards of care and treatment be provided for most warm-blooded animals used for research as well as for other purposes such as exhibition at zoos, marine mammal facilities, and circuses. This agency conducts randomly scheduled, unannounced inspections to ensure that all regulated facilities comply with the law.

www.grants.nih.gov/grants/olaw/olaw.htm

Office of Laboratory Animal Welfare, National Institutes of Health

This web site contains the Public Health Service (which includes the National Institutes of Health) policy on the Humane Care and Use of Laboratory Animals. There are numerous links to other federal policies on the website.

<http://clinicaltrials.gov/>

ClinicalTrials.gov is a service of the National Institutes of Health. The 'Understanding Clinical Trials' portion of the site provides an extremely comprehensive outline of all aspects of clinical trials.

<http://www.cancer.gov/clinicaltrials/learning>

National Cancer Institute

The clinical trials section of the National Cancer Institute website provides an overview of human clinical trials.

<http://www.fda.gov/oashi/clinicaltrials/default.htm>

Food and Drug Administration

Basic questions and answers, information on protection of human subjects, and overview articles about clinical trials.

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Biomedical Breakthroughs and My Life Essay Requirements and Scoring Criteria

CONTENT (40%) – My essay demonstrates understanding and uses supporting examples.

- I prepared a 450-500 word paper, typed (double-spaced), on 8.5" x 11" paper.
- My essay addresses the topic of 'Biomedical Breakthroughs and My Life'.
- My essay contains one central idea.
- I have at least 3 specific examples of scientific research that support my central idea.
- I describe the role of animal research and/or human trials (either in research generally or in my topic in particular).
- My essay is organized in its thinking & based on my references.

VOICE (20%) – The essay sounds like me, not an encyclopedia or existing website, and I like what I wrote.

- This is original work created by me, in my own creative words.

MECHANICS (15%)

- I used correct spelling, proper grammar, and made sure that all my work was neat.

REFLECTIVE PARAGRAPH (15%) – I understand the value of this project.

- Separate from the essay, I am submitting an additional 6-9 sentence reflective paragraph that describes my thoughts on the experience of doing this project.

BIBLIOGRAPHY (5%) – These accurately reflect my sources in the proper format.

- I included at least 4 references in bibliography format, with no more than 2 originating from a web-site. (Consider interviewing a scientist, doctor or patient as one source. NWABR may be able to help find someone for you to interview.)

Examples (for details consult the MLA Handbook for Writing Research Papers, Fifth Edition, Joseph Gibaldi, or ask your librarian for assistance):

Periodical/Book

Most, Andrea. "We Know We Belong to the Land." PMLA 113(1998):77-89.

Pamphlet

London. New York:Dover Publishing, 1998.

Website

Britannica Online. Vers. 98.2. Apr. 1998. Encyclopedia Britannica. 17 Jan. 1998. <<http://www.eb.com/>>.

Personal interview

Poussaint, Alvin F. Telephone interview. 21 Jan. 2000.

FORMS (5%) – All my submitted forms are filled out accurately, completely, and neatly.

- I included the cover sheet provided, filled out completely, with ALL required signatures.
- I included my name on the cover sheet only and NOT on the pages of the essay.
- My entry will be **RECEIVED BY MARCH 18, 2005**. (Incomplete entries lacking ANY of the required components WILL NOT be judged.) Entries may be submitted electronically, as a Word document, to jchowning@nwabr.org Please title the document with your last name and first initial (SmithJ.doc)

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Biomedical Breakthroughs and My Life Poster Requirements and Scoring Criteria

CONTENT (35%) – My poster clearly illustrates the theme of the contest.

- My poster contains 20 words or less on the front.
- My poster addresses the theme of 'Biomedical Breakthroughs and My Life'.
- My project is on one sheet of 11" x 17" paper or posterboard (horizontal or vertical orientation).

VISUAL IMPACT (25%) – I use appropriate color, medium, design, and contrast.

- My work is hand-rendered, original work created by myself using any medium, such as charcoal, watercolor, or pen/ink. No photocopies, computer graphics, or scans allowed.
- My work is clearly visible from a distance (approximately 10 feet).

MECHANICS (10%)

- My work is neat and uses proper grammar, spelling, and uniform spacing for any lettering.

WRITTEN INTERPRETATION (20%) – I have written 2 –3 paragraphs that show I understand the value of this project.

- I explain what I am trying to communicate and how my poster relates to the background research I did.
- I describe the role of animal research and/or human trials in biomedical discoveries generally, or in the specific breakthrough described on the poster.
- My additional *reflective* paragraph describes my thoughts on the experience of doing this project. (What did I learn? Did my views change as a result of doing the research for the poster?).

BIBLIOGRAPHY (5%) – These accurately reflect my sources in the proper format.

- I included at least 4 references in bibliography format, with no more than 2 originating from a web-site. (Consider interviewing a scientist, doctor or patient as one source. NWABR may be able to help find someone for you to interview.)

Examples (for details consult the MLA Handbook for Writing Research Papers, Fifth Edition, Joseph Gibaldi, or ask your librarian for assistance):

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Pamphlet

London. New York:Dover Publishing, 1998.

Website

Britannica Online. Vers. 98.2. Apr. 1998. Encyclopedia Britannica. 17 Jan. 1998. <<http://www.eb.com/>>.

Personal interview

Poussaint, Alvin F. Telephone interview. 21 Jan. 2000.

FORMS (5%) – All my submitted forms are filled out accurately, completely, and neatly.

- I included my name on the BACK of my poster only.
- I included the cover sheet provided, filled out completely, with ALL required signatures.
- My entry will be RECEIVED BY MARCH 18, 2005. (Incomplete entries lacking ANY of the required components WILL NOT be judged.)

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Biomedical Breakthroughs and My Life
Cover Sheet

This cover sheet must be filled out completely and accompany ALL entries
All entries must be RECEIVED BY MARCH 18, 2005

Student's Name _____

Home Street Address _____

City, State and Zip Code _____

Home area code and telephone number _____

Student's grade level _____

Teacher's Name _____

Teacher's Email Address _____

School Name _____

School Street Address _____

School City, State and Zip Code _____

School area code and telephone number _____

Contest Category Selected:

Essay Poster ESL/ELL Essay ESL/ELL Poster

Acknowledgement statement:

I acknowledge that I am/my student is entering this contest and I have read and understand the contest information and requirements. I also understand that all entries will become the property of NWABR and may be reproduced by NWABR.

Student signature _____ Date _____

Parent/Guardian signature _____ Date _____

Teacher signature _____ Date _____

Send your entry and the completed cover sheet to:
Northwest Association for Biomedical Research
ATTN: Jeanne Chowning, Education Manager
2033 Sixth Avenue, Suite 1100
Seattle, WA 98121

Northwest Association for Biomedical Research

Biomedical Breakthroughs and My Life Student Participant Log

Thank you so much for your participation in NWABR's "Biomedical Breakthroughs" competition for 6th, 7th and 8th grade students!

Please take a moment to complete the form and return it to NWABR when you submit your students' entries.

Instructors' name: _____

Instructors' email address _____

School: _____

Address: _____

City: _____ State: _____

Please complete the following table:

	<i>Female</i>	<i>Male</i>	<i>Total</i>
African American			
Asian			
Caucasian			
Hispanic			
Native American			
Other			
Total # of participants:			

Call (206) 956-3647, e-mail jchowning@nwabr.org, fax (206) 441-5863 or mail the information to:

NWABR
ATTN: Jeanne Chowning, Education Manager
2033 Sixth Ave., Suite 1100
Seattle, WA 98121

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Biomedical Breakthroughs and My Life Intent to Participate Form Due December 1, 2004

Instructors' name: _____

Instructors' email address _____

School: _____

Address: _____

City: _____ State: _____

Yes! I intend to have approximately _____ (number) students participate in the 2005 contest.

Please send me:

NWABR's 'For the Greater Good' curriculum regarding the use of animals in research (targeted towards 10th grade but capable of being modified for middle school).

NWABR's 'Ethics Primer', which provides teachers with strategies and resources for addressing ethical issues related to science with their classes.

General information about the use of animals in research.

Please contact me about:

Having a speaker come to my class.

Having one or more of my students interview a scientist.

Call (206) 956-3647, e-mail jchowning@nwabr.org, fax (206) 441-5863 or mail the information to:

NWABR
ATTN: Jeanne Chowning, Education Manager
2033 Sixth Ave., Suite 1100
Seattle, WA 98121