

The Galaxy Explorers Black Hole Summer Institute

A Project of the Harvard-Smithsonian Center for Astrophysics

EXHIBIT INTERN APPLICATION

The Smithsonian Astrophysical Observatory is producing *The Black Hole Experiment Gallery (BHEG)*, a mid-sized traveling exhibition, along with accompanying educational materials and website that will engage a national audience of science museum visitors in exploring the exciting discoveries and current mysteries in our scientific understanding of black holes. The product is anticipated to reach nearly 1.5 million people directly. Multimedia content for this exhibit and website will be developed by the Galaxy Explorers' Black Hole Summer Institute Interns.

The purpose of The Black Hole Summer Institute is to increase the knowledge and understanding of the concepts and principles of black holes among high school students with an interest in careers in science, technology, engineering, and mathematics.

The summer institute will take place weekdays from August 4-22, 2008 approximately 10am-4pm daily. Lunch will be provided. During the first week of the institute participants will receive advanced astronomy content instruction from Chabot Space & Science Center (CSSC) staff and black hole researchers from UC Berkeley. Throughout the institute, participants will receive coaching on the use of multimedia in museum exhibitions, and instruction on web and multimedia production. Production will take place during weeks two and three. Project wrap-up work is anticipated to extend beyond the three week period, and will be performed by a small team of a few teens who will complete the final editing. Field trips to the Lick Observatory and other Bay Area Laboratories are tentatively planned for participants to observe experts in the field. Participants will have the opportunity to evaluate and contribute suggestions on the current *Black Hole Experiment Gallery* exhibit plan. This evaluation will also be extended to Galaxy Explorers outside of the Summer Institute in the form of surveys. After the project is complete, Institute members will present a featured session during one of the fall Galaxy Explorer classes as well as contribute a feature in the Galaxy Explorers' quarterly newsletter.

Staff and mentors from the Harvard-Smithsonian Center for Astrophysics will visit as well as provide online support to Galaxy Explorers involved in the project. Both pre and post assessments will be given to measure content comprehension.

Enrollment is limited to 10th-12th grade students who have met their floor requirements. Students who graduate high school in 2008 are eligible to apply. Regardless to level, each participant will be paid a stipend upon completion of the three week project of no less than \$600.00 per Galaxy Explorer. No payment will be given should any participant fail to complete the project or attend the full three week program. If less than the necessary number of qualified Galaxy Explorers applies, the opportunity will be opened to teens outside of the Galaxy Explorer program.

Participants will conduct evaluations and feedback sessions with Galaxy Explorers who are not involved in the summer institute to aid in the fine-tuning of their projects. Additionally, some participants will deliver a science enrichment session during the school year on Black Holes to enrich the greater body of Galaxy Explorers; this will be open to the 200 students in the program.

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APPLICATION QUESTIONNAIRE

Directions: Please Submit Completed Application with a 200 word essay about your interest in black holes in relationship to science, video, web publishing or Science Theater. (Select at least one).

Name: _____	GE Level: _____
Entering Grade Level: _____ Age: _____	Date of Birth: ___/___/___
Address: _____	City: _____ State: _____ Zip: _____
Social Security #: _____ - _____ - _____	Career Goal: _____

Please tell us about your high school course work

Indicate with a check the science and mathematics courses which you have taken or are currently taking:

___ Pre-Algebra ___ Algebra I ___ Algebra II ___ Geometry ___ Trigonometry
___ Pre-Calculus ___ Calculus ___ Chemistry ___ AP Chemistry ___ Biology
___ AP Biology ___ Physics ___ AP Physics ___ Earth Science ___ Other (Specify): _____

Indicate with a check the tests that you have taken. Indicate whether you have passed and give the score:

___ SAT: VSAT Score: _____ MSAT Score: _____ WSAT: _____

Tell us about your media skills

Do you have experience with the following software packages?

- | | |
|---|--|
| <input type="checkbox"/> Adobe Flash | <input type="checkbox"/> Adobe Premiere |
| <input type="checkbox"/> Flash ActionScript | <input type="checkbox"/> Adobe After Effects |
| <input type="checkbox"/> Adobe Dreamweaver | <input type="checkbox"/> Apple Final Cut Pro |
| <input type="checkbox"/> Microsoft Front Page | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Adobe Photoshop | |

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EXHIBIT INTERN APPLICATION -- STUDENT AGREEMENT

I, _____ have read and understand the expectations for the Black Hole Summer Institute. I agree to adhere to the policies and procedures described in this application for exhibit intern with Chabot. I agree to participate in the complete three week project.

Internet Use Policy

With access to computers and people from around the world also comes the availability of material that may not be considered to be of educational value in the context of the school setting. Families should be warned that some material obtained via the Net may contain items that are illegal, defamatory, inaccurate, or potentially offensive. We have taken precautions to restrict access to controversial materials. However, on a global network it is impossible to control all materials and an industrious user may discover controversial information, either by accident or deliberately. We firmly believe, however, that the benefits to students from online access far outweigh the possibility that users may procure material that is not consistent with our educational goals.

The purpose of this agreement is to ensure that use of Internet resources is consistent with our stated mission, goals, and objectives. The smooth operation of the network relies upon the proper conduct of the students and faculty who must adhere to strict guidelines. These guidelines are provided here so that you are aware of the responsibilities you are about to acquire.

If a user violates any of these provisions, his or her account will be terminated and future access could be denied in accord with the rules and regulations discussed with each user during Internet training sessions.

Internet Terms and Conditions

1. The network is provided for students to conduct or to perform work related duties. Access is a privilege - not a right. That access entails responsibility. Inappropriate use will result in a cancellation of the internship.
2. Users are expected to abide by their generally accepted rules of network behavior and etiquette.
3. Users are not permitted to transmit, receive, submit, or publish any defamatory, inaccurate, abusive, obscene, profane, sexually oriented, threatening, offensive, or illegal material.
4. Users must respect all copyright laws that protect software owners, artists and writers. Plagiarism in any form will not be tolerated.
5. The Chabot Space & Science Center or Community Partners make no warranties of any kind, whether expressed or implied, for the service it is providing.
6. All communication and information accessible via the computer resources shall be regarded as private property. However, people who operate the system may review files and messages to maintain system integrity. Messages relating to or in support of illegal activities may be reported to the authorities.

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Summer Institute Tentative Outline

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1 Aug. 4- 9	<ul style="list-style-type: none"> • Introductions/ Overview • Pre-assessment survey • Planetarium Show: Black Holes • Speaker: Intro to Black Holes • Lunch • Speaker Con't. • Project Brainstorming 	<ul style="list-style-type: none"> • Astronomy & Black Holes • Lunch • Media use in museum exhibits • Using the web to engage / extend museum visit • Brainstorming 	<ul style="list-style-type: none"> • Speaker • Lunch • Speaker: web publishing • Brainstorming • Review the Ontario Science Center teen media Cosmic Questions 	<ul style="list-style-type: none"> • Speaker: Intro to Film • Lunch • Speaker: Science Theater • Workshop: Digital Storytelling • Team/Project Assignments 	<ul style="list-style-type: none"> • Field Trip to Lick Observatory or UC Berkeley Black Hole Research Lab. • Planning session during lunch
Week 2 Aug. 11-15	<ul style="list-style-type: none"> • Project outline • Team Divisions • Story boarding 	Erika: review project concepts & storyboards	Non-Black Hole GE Evaluation		
		Project Development			
Week 3 Aug. 18-22	Teams share progress w/ group	Project Development			<ul style="list-style-type: none"> • Share projects & discuss exhibit completion • Videoconference focus group • Post Assessment Survey

Parent Permission form -- Galaxy Explorers Black Hole Summer Institute

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I give my permission for my child, _____ to participate in the 2008 Galaxy Explorers Black Hole Summer Institute. I understand that my son/daughter must complete and contribute to the full three week project to be eligible to receive a stipend. I understand that this project will take place at Chabot Space & Science Center and will include science and technology related field trips. I understand that participation in this program is purely voluntary. I hereby give permission to Chabot Space & Science Center and the Smithsonian to display, license, sell, publish, etc. the images taken of me/my child in the student produced project at various museums, science center and on the internet, including those of advertising.

I release the Chabot Space & Science Center from liability for property damage, theft or personal injury to my child/ward/self during or by reason of these activities. I authorize those in charge to furnish reasonable emergency treatment during this project for my child.

I request that my son/daughter _____ be allowed to attend any field trip sponsored by the Chabot Space and Science Center as part of the Galaxy Explorers' program between **August 4, 2008 and August 22, 2008**. I understand that the method of transportation for field trips will be chartered buses, Chabot van or private cars driven by the instructors.

In the event my son/daughter, a minor, becomes ill or sustains an injury while in the care or under supervision of the directors, counselors or instructors of the Chabot Space & Science Center, any of its professional staff is given permission to administer First Aid for his/her relief. If it is not practical to return him/her to us or to receive our instructions for his/her care, I, _____parent/legal guardian, do hereby authorize Chabot Space & Science Center as agents for the undersigned to consent to any X-ray examination, anesthetic, medical or surgical diagnosis or treatment, and hospital care which is deemed advisable by and is to be rendered under the provisions of the Medicine Practice Act on the medical staff of a licensed hospital whether such diagnosis or treatment is rendered at the office of said physician or at said hospital.

I understand that this authorization is given in advance of any specific diagnosis, treatment, or hospital care being required. This authorization is given pursuant to Section 25.8 of the Civil Code of California and remains effective only for the events and dates listed above. Parents will be contacted immediately if possible, should any illness or accident occur to their son/daughter on the trip.

I will not hold liable the Chabot Space & Science Center or its directors, agents, professional staff or community partners for medical aid rendered and will reimburse the Chabot Space & Science Center or its directors, agents, professional staff or community partners for any medical or other expenses incurred in the care of my son/daughter.

Parent/Guardian Name: _____

Please Print Clearly

Parent/Guardian's Signature: _____ Date: ____/____/____

Home Phone #: _____ Work Phone #: _____ Cell phone #: _____

MEALS

Do you have any special dietary restrictions? If so, please describe below:

TRANSPORTATION

What arrangements you have made for your child to get to and from the center? Parent Pickup

Participant will drive him/herself Assistance is needed