

# *The Bathysphere Underwater Biological Laboratory*

## **The BUBL™ Project Teacher's Guide 2004-2005**



This guide is intended to supplement the teacher training session at the Rochester Museum & Science Center. These are recommendations, based on our past experience, to help you guide your students into getting the most out of this virtual learning environment.



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## Preparing for your BUBL Voyage

- Obtain the date(s) of voyage & teacher training from district liaison.
- You may also obtain this information from the BUBL Project Coordinator; Peter Robson at 585-473-7112
- Reserve the bus transportation, copy all confirmations and save.
- Reserve the dates and class periods for your schools computer lab for student pre-voyage and post-voyage training. (Minimum 4 40-minute class periods for pre-voyage training, 1 40-minute for post voyage activities.)
- Arrange for chaperones
  - 2 adults per voyage minimum- **A chaperone for each lab is required**
  - 1 adult is recommended, but not required, for every 3 students with special needs.
- **Attend BUBL teacher training. The only way to be of assistance to your students is to attend the teacher training. The facilities, equipment and curriculum are modified frequently and you will need to attend in order to update yourself.**
- Prepare yourself by going to the BUBL website [www.bubl.org](http://www.bubl.org)
  - Review all sections of teacher area
  - Print out and copy all required forms for students
  - Be aware that the following teams have pages that students will need to print.
- Navigation/Weather
- Remote Sensing
- Chemical
- Biology

## **Classroom Pre-Voyage student preparation for BUBL**

Suggested Guideline (Based on 40 minute learning periods)

- Day 1 – Introduction and logistics
  - Introduce BUBL Project, show 17 minute video
  - Distribute and review BUBL Permission Slip
  - Distribute and review BUBL Code of Conduct, sign and turn in
  - Distribute one page overview with application for students to review for homework
- Day 2 – In Computer Lab
  - Collect permission slips.
  - Access BUBL website. [www.bubl.org](http://www.bubl.org)
  - Review station overviews and applications are turned in.
  - Common Training on Web completed by students.
- Day 3 – In Computer Lab
  - Assign students to teams from voyage manifest.
  - Students begin Officer's Training for their assigned team.
  - Use BoSAT Kit #300 for concise materials and curriculum connections.
- Day 4 – In Computer Lab
  - Students complete Officer's Training.
  - Confirm all paper work, i.e., code of conduct, permission slips, etc.
  - Emphasize that students bring minimal possessions

***Teacher completes Voyage Manifest based on team applications and Fax to BUBL 5 days prior to your visit at 473-4209. Make sure that you inform us of students with special needs. (i.e., wheelchair, crutches, etc.)***

***\*Be sure to confirm transportation, chaperones, student medications, etc.***

## **Transportation**

*(Plan on **2.25 hours** from scheduled bus drop off to bus pick up at RMSC)*

- Bus drop off location is directly in front of the museum in the loop. Buses may park in the back parking lot if they are going to stay.
- Voyage Commanders will greet the group at the main entrance. The West group will go with the West Voyage Commander and the East group will go with the East Voyage Commander.
- Students will proceed to the simulator area, hang up their coats, and put on their life jackets.
- Simulator Journey Out (6 minutes)  
Students will experience an interactive journey to the BUBL on the bottom of Lake Ontario. If students choose not to ride in the simulator they will be taken to a viewing area to experience the journey through videotape.
- Code of Conduct  
Commanders will review the Code; provide general information to the students.

## **BUBL: The Lab Experience**

- Students will work on their team tasks for approximately 95 minutes. All student data as a result of the tasks is automatically saved to a data log that is available via the World Wide Web at [www.bubl.org](http://www.bubl.org) under the Post-Voyage link. A data protected password and I.D. will be provided to your group for this protected link.
- Teachers/chaperones will facilitate student learning by helping students read and follow directions. (Math, Science, and Technology background not required.)
- Teachers and Chaperones are asked to complete a brief survey about their experience while still in the BUBL Labs. The information is reviewed and feedback is utilized in order to make further changes to the curriculum and simulation.
- Simulator Journey Back (4 minutes)  
*Voyage Commanders will lead the students back to the simulators/viewing area for the return trip to the museum.*

### **Post Voyage** *(Activities for back at school)*

- Post-Voyage Web Site
  - Access to the Post-Voyage Web site is limited to groups who have participated in a BUBL Journey.
  - Teachers will be provided a session ID number and password to allow teacher and student log in to the post- web.
- Data Log Book
  - Data that students collected and entered into their workstation while at BUBL will be accessible on the web for approximately one month after the journey to analyze and apply. This data will include text, digital pictures, video, maps, and measurements.
- Reflective Questions
  - Students will be asked to answer questions that challenge them to reflect on their experiences at the BUBL. Teachers may use the questions/responses in a manner that they deem appropriate for their class. (i.e., homework assignment, quiz, etc.)
  - Some teachers choose to have their students create web pages based on their BUBL experience. Teachers have the option of having these pages linked to the Official BUBL website.

**Permission Slip**  
**Bathysphere Underwater Biological Laboratory**



\_\_\_\_\_ has my permission to attend the Bathysphere Underwater Biological Laboratory (BUBL™) field trip at the Rochester Museum and Science Center on \_\_\_\_\_. The bus will leave our school at \_\_\_\_\_ and return at approximately \_\_\_\_\_. Students are expected to check with the teachers of the classes that they will miss and make up any classwork/homework.

The BUBL experience includes the use of a simulator that simulates an educational journey to the BUBL (6 minutes) and then a return trip back to the RMSC (3 minutes). The simulator makes use of high quality video animation and a hydraulic system that moves the simulator in unison with the animation. The effect is to simulate an underwater adventure.

While the majority of people have no problem with the motion or video, there are some that can experience motion sickness or a strobe affect from the animation. If your child has had difficulties with these types of rides in the past or if he/she has any other medical condition that makes the ride not suitable, it is recommended that he/she does not participate in the simulated journey. In the alternative, your child will be able to view the animation without the use of the simulator. ***Please check the box below if you do not want your child to use the simulator.*** (The simulator is wheelchair accessible.)

The BUBL experience promises to be one of the best activities that your child will participate in during his/her middle school years. If you have any questions or concerns, please contact me at \_\_\_\_\_.

If you have specific questions about the facility, simulators or the BUBL™ Project, please contact Peter E. Robson; Project Coordinator at (585)-473-7112

If this permission slip is not returned with your signature, then your child will not be allowed to ride the simulator.

\_\_\_\_\_  
(Parent/guardian signature)

\_\_\_\_\_  
(Date)

***My child does not have permission to use the simulator.***



*Bathysphere Underwater Biological Laboratory*

***BUBL***

***Team Application***

Students: In order to make an informed decision, you need to read all of the station overviews for the 7 teams that are at BUBL **before** completing the application.

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Period: \_\_\_\_\_ Grade: \_\_\_\_\_ Teacher: \_\_\_\_\_

**Career Objective:** I am applying for a position on the following workstation as my ***number one*** choice. (Circle one)

- Archeology*      *Biology*      *Chemical*      *Communications*  
*Marine Geology*      *Navigation/Weather*      *Remote Sensing*

***What personal qualities do you have that will enable you to be successful at this position?***

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What experiences and skills do you have that qualify you for this position?

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My second workstation choice is: \_\_\_\_\_ Third choice: \_\_\_\_\_

***Previous Experience***

Job Title: \_\_\_\_\_ Dates from: \_\_\_\_\_ to: \_\_\_\_\_

Responsibilities: \_\_\_\_\_

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**Bathysphere Underwater Biological Laboratory**  
**BUBL**  
**Code of Conduct**

**I will,**

- ...read the team overviews and select three teams that I am interested in.
- ...complete my team application and submit it to my teacher on time.
- ...confirm with my teacher the team that I am assigned to and complete all pre-voyage training.
- ...turn in my signed permission slip on time.
- ...respect the BUBL facility, equipment and all crew members.
- ...focus my attention on the Voyage Commanders and realize that they are in charge at all times.
- ...read my task cards and follow all instructions.
- ...ask for assistance when I do not understand an instruction.
- ...act in a manner appropriate for school and realize that the BUBL field trip is a privilege

**YOUr\* success at BUBL will depend on YOUr\* ability to:**

- complete your training.
- be a team player and respect others.
- act appropriately.
- actively participate.

I agree to follow all the procedures outlined in the code of conduct to the best of my ability.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

(\*Your success depends on YOU!)