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Science Department Meeting
Safety Notes
Volume 5–6

Topic: Dissection Safety Issues

Dissection of preserved organisms is an integral part of many life sciences courses. Here are a few safety tips that will make the dissection a positive and safe experience.

General Considerations

- The rationale for dissection work should be well thought out and available in written form for answering parental and community questions.
- Careful and clearly written directions are critical for safe and meaningful dissection work. Professionally-illustrated dissection guides add an important degree of authenticity to classroom dissection work.
- Many software programs are available that prepare students for dissection. However, nothing can replace the actual experience of dissection.
- Common-sense rules relative to jewelry, nails, hair length, etc. should be reviewed in terms of student personal safety during dissection work.

Equipment Considerations

- Protective latex gloves, chemical-resistant aprons, and protective eyewear are dissection requirements.
- Quality dissection tools that are sharp and free of rust must be provided. Routine procedures for inspecting dissection tools should be instituted. (Dull and dirty scissors, scalpels, or blades are much more dangerous than sharp, clean ones!)
- Student laboratory directions must include the proper techniques for using specific dissection instruments as well as how to dispose of sharps.
- Appropriate dissection pans and table protection should be provided at each workstation.

Preservatives and Ventilation

Preserved materials are often fixed in formaldehyde or other strong chemicals. After the fixing process, the excess fixative is removed and replaced with safer preservatives. A certain degree of preservative odor is likely to linger, and thus, good ventilation of the work area is critical. Good ventilation will assure breathing fresh air as well as not announcing to the entire school that it is dissection time.

Rinsing procedures are often specified with specimens. Follow any such directions carefully, especially if the preserved materials will be used over an extended period of time. With the extremely low levels of preservative in most specimens, odors are minimal but the expected lifetime of a preserved specimen is also shortened.

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Clean Up and Disposal of Preserved Materials

Proper cleanup and disposal of dissected materials is critical. Disposal of dissection materials is no different than any other laboratory waste. Common sense, knowledge of the material, and a familiarity with local disposal regulations, procedures and policies must prevail.

It is important to have a section of your general departmental disposal plan addressing the disposal of preserved materials often used in life sciences classes. Many resources already exist to help you formulate your written statement.

Be sure to read the Flinn Scientific article *Biological Waste Disposal* that can be downloaded from the Flinn website and note especially the section on the disposal of Type III Biological Materials.

For a free copy of the Flinn Scientific article entitled "Biological Waste Disposal," go to www.flinnsci.com/Documents/miscPDFs/SF10492.pdf

Local conditions (septic systems, sewers, etc.) and local regulations might influence the proper disposal procedures of your biological materials. It is critical to know your local regulations and guidelines for such materials.

Students should be reminded to thoroughly wash their hands with plenty of soap and water after all dissection work. Also provide adequate cleanup time to properly put specimens away, clean dissection equipment, and sterilize their work area.

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Flinn Scientific has provided today's Science Department Meeting Notes. Without your valuable orders, the safety notes Flinn Scientific provides along with their wonderful Catalog/Reference Manual would not be possible. Please continue to support the efforts of Flinn Scientific by sending them your orders.

Next Month's Topic
Chemical Spill Control

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Flinn Scientific
Science Department Meeting
Safety Notes

Safety Meeting Presenter Notes

Volume 5–6: Dissection Safety Issues

Dissections are an important part of any life science program. However, proper safeguards and procedures must be implemented to ensure they can be performed safely. This month's Science Department Meeting Safety Notes will review the basic safety precautions for conducting classroom dissection.

The safety meeting should take only 6–8 minutes to present. The discussion period will vary depending on the issues that need to be addressed. Some issues your department may want to discuss are:

1. Courses where dissection activities are used
2. What is the policy for students who do not wish to participate in dissection activities?
3. Quality of the dissection guides used in these courses
4. Quality of the dissection tools and workspace available for these courses
5. Nature of the preservatives in the dissection materials used by your department
6. Inventory of preserved materials in the department and the date of their purchase
7. Ventilation in biology work areas
8. Review all local regulations relative to the disposal of preserved materials

It is important to keep a copy of these safety meeting notes and a signed attendance sheet to verify that regular safety training meetings were held. The sign-up sheet is almost as important as the meeting notes and is usually the first thing that is reviewed by regulatory inspectors. A copy of the signup sheet we suggest using can be found at www.flinnsci.com/Sections/Safety/SNotes/signup.pdf.

Materials: (one per staff member)

- Flinn Scientific Science Department Meeting Safety Notes, Volume 2–5
- The article "Biological Waste Disposal"
  For a free copy of the Flinn Scientific article entitled "Biological Waste Disposal," go to www.flinnsci.com/Documents/miscPDFs/SF10492.pdf
- Sign-up sheet (one for the group)

Additional Questions for Discussion

1. What is the department philosophy concerning dissection? Do we have/need a written statement?
2. Do we have the resources for alternative activities for students who object to or cannot participate in dissection?
3. Is our school on a septic or municipal sewage system? What are the local and state regulations relative to the disposal of preserved materials?

We Welcome Your Comments

Please e-mail Flinn Scientific at *flinn@flinnsci.com* with your comments and feedback on the Flinn Scientific Department Meeting Safety Notes. Were they easy to use? How can we make them better? What other topics would you like to cover? Your input is very important to us.