Drug Worksheet Activity Pros and Cons
Target audience: 11,12 grade

Background and Notes: Active molecules used in medicines and drugs can have positive and negative effects. This activity enhances student understanding of the active ingredients from generic and name brand medicines, their dose and their effects.

Knowledge and skills:
- Students should know basic concepts of molecular and ionic bonding, structure and intermolecular forces.
- Students should be able to obtain information from medicinal informational inserts and reference books such as the Physician’s Desk Reference.

Fundamental understanding:
- Students should see that medicines/natural products can have positive or negative effects depending on the dose or the specific person.

Essential Questions:
- Students will observe through research positive and negative effects of medicines/natural products.

National standard(s):
- National content standards content standard A: the ability to do and understand scientific inquiry.

State standard(s):
- North Carolina Standard Course of Study Objective 1.071 and 1.072: Assess the structure of compounds relating bonding and molecular geometry to chemical and physical properties

Purpose: For students to research chemicals used for medicinal or mind altering purposes to assess their positive and negative effects.

Safety Precautions:
- none

Materials:
- Resources, books and websites:
  1. The Pill Book
  2. Physician’s Desk Reference
  3. “Medicinal Plants and Herbs” Peterson Field Guide
  4. “Buzzed”


Procedure:

1. A worksheet (click here or see below) is provided for the students work in pairs or groups researching on the internet or from reference materials available in the room.
2. Students present their information in a shared classroom setting.
3. Optionally, they can just turn in the work sheet.

Conclusion:

1. Restate Purpose of the exercise
2. What was learned?
3. How would you change or improve this activity i.e. would you do next in an investigation?

References and Resources:

Books:

6. Physician’s Desk References

**Teacher Notes:** Allow students to start at beginning of class, first day. Fill in as much as possible, and then lead into a discussion. How drugs and toxins might affect you. Discuss why you need to understand chemistry to achieve a happy, healthful and safe life. Student notes (Unit1) from the introduction of the *Murder, Magic and Medicine* and from Marc Plotkin’s *Tales of a Shaman’s apprentice*. Useful website for the students to research the drugs of their interest.
http://www.mayohealth.org/usp/di/uspA-AM.htm
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Generic Name</th>
<th>Prescription, Illegal, or OTC</th>
<th>Negative Effects</th>
<th>Positive Effects</th>
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