Nothing to Rave About

(From: GVL)

Directions:
Go to: http://webadventures.rice.edu/stu/Games/Reconstructors/

You will be completing all 3 episodes but it is important to note that you will need 20-30 minutes per episode. You can do them each separately but if you exit in the middle of one you will have to start that episode all over again.

Scenario:
The city of Neuropolis has seen a dramatic increase of young people being admitted to the emergency room. Your only lead is a night club called “Buzzco”. Follow the online directions to advance through the game and solve the mystery. Be sure to answer the questions below.

Episode 1:

1. What year is the mission set in? 2253
2. Who is the leader of the Reconstructors? An elite Team charged with safeguarding public health.
3. How long did it take you to get through the maze to Club Buzzco? A Dramatic Increase in the number of young persons admitted to the emergency room.
4. What is the mystery that the Reconstructors need to solve? A Dramatic Increase in the number of young persons admitted to the emergency room.
5. Which three vitals signs are elevated in Rune and in the other teens that have become ill? Blood Pressure, Temperature and Heart Rate
6. Who is the Chief Science Officer? Alpha**
7. Which drugs increased heart rate in the Daphnia experiment? B and C
8. According to Beta, what type of drug can increase heart rate and make you feel full of energy? Stimulants
9. List the 6 stimulants described in the “Stim Trek” video and where they originated in the world.
   Tobacco – North America, Cocaine – Peru and Ecuador, Amphetamine – Germany, Caffeine – Ethiopia, Methamphetamine - Japan
10. List the 5 areas of the brain that are affected by stimulants and what functions they perform.
    Cerebral Cortex, Hippocampus, Nucleus Accumbens and Amygdale, Brain Stem and Hypothalamus.
11. What are hallucinogens?
    Can alter sense of time, how things seem to feel, taste, smell, sound and look

Adapted from The Reconstructors®, Source: http://reconstructors.rice.edu/recon2/index.html
12. List four examples of hallucinogens?
   LSD, Mescaline, PCP, Magic Mushrooms

13. What happens to the lab that Beta and Eureka are in at the end of the story?
   It gets flooded

14. Conclusions: Teens in Neuropolis are becoming ill from a drug that can act like both a Hallucinogens and a Stimulants

Episode 2:

1. Beta uses a mass spectrometer to analyze the pills and the contents of the vial. What chemical is present in the vial of liquid?
   GHB

2. What is the chemical formula for GHB?
   C4H8O3

3. What are 2 other “nicknames” for GHB?
   Georgia Home Boy and Soap

4. What happens to a chemical in the mass spec when it passes through the ion source?
   The chemical gets a positive charge and breaks up into fragments.

5. What does the analyzer do?
   Sorts the fragments of each chemical by similar properties.

6. What does the detector do?
   Adds up the number of chemical fragments of each time.

7. Analysis of the blue pills reveals that two chemicals are present. The first chemical found is caffeine. What is the name of the drug in the blue pills that can act like a stimulant and hallucinogen?
   Methylenedioxymethamphetamine (MDMA) or Ecstasy

8. A visit to the DSI uncovers past cases dealing with various club drugs. Summarize each of the following cases:
   a. Case #56
      i. The Crime - Sexually Assaulted
      ii. The Evidence – Witness seeing Eric Ramses pour something into the victims Bubbling Springs Water Bottle, Empty Bubbling Springs Water Bottle
      iii. Report (List the 3 drugs discussed and what was found) – Date Rape Drug: GHB, Ketamine, Rohypnol. GHB was found
      iv. Status – Ceric Ramses was arrested for Rape, Kidnapping, Illegal Possession and Unlawful Distribution

Adapted from The Reconstructors®, Source: http://reconstructors.rice.edu/recon2/index.html
b. Case # 81
   i. The Crime – Creating Drugs
   ii. The Evidence – a Drug Lab, Chemicals, A Chomlink (dates, names, addresses and phone numbers), Methamphetamine
   iii. Report (Describe what a methamphetamine is and what the effects of long term use can be) – a synthetic stimulant, addictive,
   iv. Status – Vincent Mars was arrested, for illegal fabrication, possession and distribution of a controlled substance.

c. Case #11
   i. The Crime – Murder
   ii. The Evidence – Gemma John’s Confession of using Ecstasy and Alcohol and hitting the victim
   iii. Report (Describe the events of the re-enactment) –
       a. Gemma is at a rave and consumes alcohol and ecstasy;
       b. She gets in her car to drive home;
       c. She hits the victim, Brave Runner;
       d. She continues going home instead of getting help for Brave Runner;
       e. Monday morning work crews find Brave Runner’s body;
       f. Later that morning Gemma remembers what happened and she calls the police
   iv. Status (What happened to Chante Mallard in the real case discussed?) – Mallard was found guilty of murder and tampering with evidence

9. Terry and Mig are talking about the effects of Ecstasy. Can you tell from the way an Ecstasy pill looks how dangerous it is or what is really in it?
   You cannot tell by how the pill looks if it is safe or not.

10. Conclusions: What drug does Beta believe is responsible for the mysterious teen illnesses?
    Ecstasy

11. How does episode 2 end?
    The rave gets broken up (invaded)

**Episode 3**

1. When Ecstasy blocks transporters, what happens to the amount of serotonin in the synapse?
   It keeps the amount of serotonin in the synapse high for a time.

2. List five functions that serotonin regulates.
   Mood, memory, sleep, appetite, learning

3. What does repeated or regular Ecstasy use do to the level of serotonin in certain areas of a rat’s brain?
Long term Ecstasy use lowers the creation of serotonin.

4. What is one problem with studying Ecstasy users?
   Most people who use Ecstasy also use other drugs so the other drugs will interfere with testing

5. Is the activity of the hippocampus of Ecstasy users the same as or different from that of non-users?
   They were different

6. How do regular Ecstasy users do on working, visual, and verbal memory tests when compared with non-users?
   They have poorer working, visual and verbal memory than non-user’s.

7. Do depression and anxiety regular Ecstasy users have more or less depression and anxiety when compared with non-users?
   User’s have more depression “blues” and anxiety than non-user’s

8. Conclusions: Why is Ecstasy illegal?
   Your Own Opinion