dentify the Controls and Variables

Smithers thinks the drug AZT will cure AIDS. He takes 100 patients with AIDS and gives the drug to 50 of them (group A). To the other 50, he gives `m a drug that looks just like AZT but is really just a sugar pill (group B). h groups were told that they were getting a drug that would cure AIDS r 6 months, 30 patients in group A reported having fewer symptoms. 10 people in group B reported having fewer symptoms.

Identify the -

1. Control Group

2. Independent Variable

3. Dependent Variable

4. What should Smithers conclusion be?

5. Why was group B given a sugar pill?

6. Why do you think 10 people in group B reported feeling better

Homer notices that his shower is covered in a strange green slime. His friend Barney tells him that coconut juice will get rid of the green slime. Homer decides to test this out by spraying half of the shower with coconut juice. He sprays the other half of the shower with water. After 3 days of "treatment" there is no change in the appearance of the green slime on either side of the shower.

7. What was the initial observation?

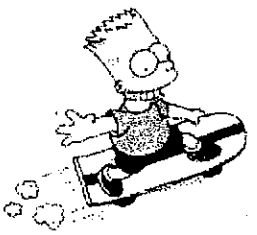
Identify the -
8. Control Group

9. Independent Variable

10. Dependent Variable

11. What should Homer's conclusion be?

Bart believes that mice exposed to microwaves will become extra strong (maybe he's been reading too much RadioactiveMan). He decides to perform this experiment by placing 10 mice in a microwave for 10 seconds. He compared these 10 mice to another 10 mice that had not been exposed. His test consisted of a heavy block of wood that blocked the mouse food. He found that 8 out of the 10 microwaved mice were able to push the block away. 7 out of the 10 non-microwaved mice were able to do the same.



12. What was Bart's hypothesis?

Identify the
13. Control Group

14. Independent Variable

15. Dependent Variable

16. What should Bart's conclusion be?

Krusty was told that a certain itching powder was the newest best thing on the market, it even claims to cause 50 % longer lasting itches. Interested in this product, he buys the itching powder and compares it to his usual produce. One test subject (A) is sprinkled with the original itching powder, and another test subject (B) is sprinkled with the Experimental itching power. Subject A reported having itches for 30 minutes, Subject B reported to have itches for 10 hours.

Identify the-

17. Control Group

18. Independent Variable

19. Dependent Variable

20. What should Krusty's conclusion be?

Scientific Method In Action

In 1987 a strange nerve disease attacked the people in the Dustch East Indies. The disease was beriberi. Those who fell ill could not eat and became paralyzed. Scientists thought the disease mihgt be caused by bacteria. They injected chickens with bacteria from the blood of patients with beriberi. The injected chickens became sick. However, so did a group of chickens that were not injected with bacteria.

One of the scientists, Dr. Eijkman, noticed something. Before the experiment, all the chickens had eaten whole-grain rice, but dur the experiment, the chickens ate polished rice. Dr. Eijkman researched this interesting case. he found that polished rice lacked thiamine, a vitamin necessary for good health.

1. State the Problem

2. What was the hypothesis?

3. How was the hypothesis tested?

4. Should the hypothesis be supported or rejected based on the experiment?

5. What should be the new hypothesis?

In 1928, Sir Alexander Fleming was studying Staphylococcus bacteria growing in culture dishes. He noticed that a mold called Penicillium also growing in some of the dishes. A clear area existed around the mold. All the bacteria that had grown in this clear area had died. In the culture dishes without the mold, no clear areas were present.

Fleming hypothesized that the mold must be producing a chemical that killed the bacteria. He decided to isolate this substance ar test it to seee if it would kill bacteria. Fleming transferred the mold to a nutrient broth solution. This solution contained all the materials the mold needed to grow. After the mold grew, he removed it from the nutruient broth. Fleming then added the nutrient broth in which the mold had grown to a culture of bacteria. He observed that the bacteria died.

6. Identify the problem.

7. What was Fleming's hypothesis?

8. How was the hypothesis tested?

9. Should the hypothesis be supported or rejected based on the experiment?