

Writing Specific Answers for the Science OGT

Companies seeking new drug approval are required to conduct clinical trials involving human volunteers. During these trials, people with the disease are separated into different groups. One group receives a placebo (an inert or harmless substance used in controlled experiments). Each of the remaining groups receives a different dose of the drug (i.e., Group A receives a 30 mg dose once a day, Group B receives a 50 mg dose once a day, etc.).

Describe two reasons for testing new drugs at varying doses. (2 points)

One reason to give varying doses is to see which one is better.

(Pretty vague. Better at what? In what way?)

One reason to give varying doses is to see which one is better at curing the disease.

(Clearer, but the word “better” could be more specific...)

One reason to give varying doses is to see how much is needed to cure the disease.

(A strong sentence, replacing “better” with a measurement of “how much”.)

A group of students in Ohio conducted an investigation during the month of January to study the effects of solar warming. The students used a wooden box painted white. The box was mounted on a post in an open area and a thermometer was fastened on each of the four sides. The box was oriented so that each thermometer faced squarely in a different direction: north, south, east or west. The temperature on each thermometer was recorded in degrees Fahrenheit at 12:00 noon during five consecutive days of clear skies.

When designing the investigation, one student suggested painting the wooden box black. Predict how painting the box black would affect the temperature readings from the four thermometers. Explain your reasoning. (2 points)

The temperature would change because the black would absorb more heat.

(It’s not clear if this student knows whether the temperature would go up or down.)

The temperature would increase because the black would absorb more heat.

(A more specific answer which states which direction the temperature changes.)

In a recent agricultural experiment, farmers in Japan inserted fertilized watermelon blooms into square containers, which resulted in the fruit taking the shape of its container as it grew.

Describe two benefits of farming practices that produce square watermelons. (2 points)

One benefit is that square watermelons will be easier to ship.

(Gives an answer, but doesn’t back it up or explain why they are easier to ship.)

One benefit is that square watermelons will be easier to ship because you can stack them.

(Much better - this answer is specific about how the square shape helps.)

Note: These are excerpts from possible answers. None of them are complete answers!!