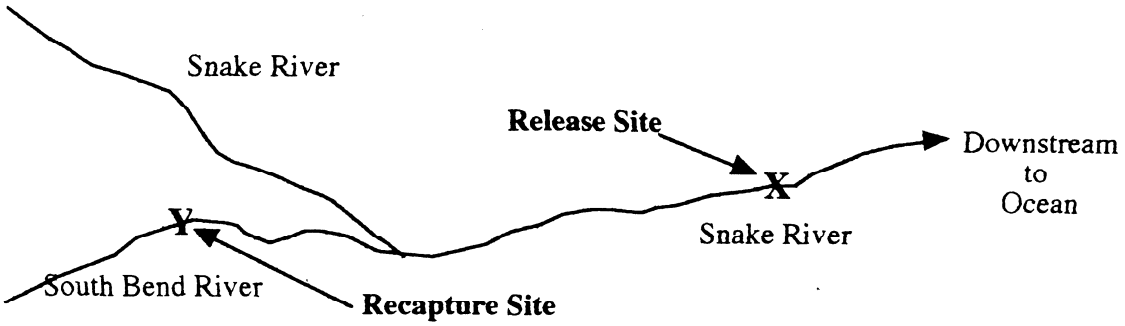
Scientific Method

Base your answers to the next three questions on the illustration and paragraph below, and on your knowledge of biology.



In an experiment to determine the way salmon find their way to their home stream, a biologist captured 50 salmon from the South Bend River. She then blocked the nostrils (chemical sensors) of one half of them (the experimental group), and did nothing to the other half of the captured salmon (the control group)

She next tagged all of the captured salmon and transported them downstream to the location indicated by X on the Snake River, and released them. The scientist then returned to point Y on the South Bend River (upstream from the release site), and netted salmon as they swam up the river to their home stream

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A total of 50 salmon were caught at the recapture site: 22 from the control group, and 12 from the experimental group. She also caught 16 salmon that were not tagged at all.

1) Using one or more complete sentences, state the hypothesis that the biologist is testing.

2) Using one or more complete sentences, state the independent variable in the scientist's experiment.

3) In the space provided on the answer sheet, create a data table that identifies the three categories and the numbers of fish caught at the recapture site. The table must include an appropriate heading for each column.