Investigation planner: Stages 2 and 3

Name: Sample answer for turbidity investigation

Date:



Other members of your team:

|  |  |  |  |
| --- | --- | --- | --- |
| Question for investigation  *The difference in the turbidity between the dam and the creek.* | | What do you think will happen? Explain why.  *Dependent on student responses, possibilities include:*   * *The dam will be cleaner because it’s a bigger water body (incorrect in this case)* * *The creek will be cleaner because its flowing and the banks are lined with trees (correct)* | |
| **What things (variables) are you going to:** | | | |
| Change  *Location of water body / aquatic habitat* | Measure/observe  *Turbidity – dirt in the water*  *Observe the presence of livestock, evidence of erosion and vegetation.* | | Keep the same  *Sampling technique*  *Time and weather (both samples taken within an hour)*  *Apparatus (turbidity tube)* |
| How will you make it a fair test?  *Controlling variable- Use the same sampling procedure for collection of water. Whole class samples both locations, only compare paired samples i.e same observer*  ***Water*** *- sample from the middle of water, do not scrape dirt from bottom or slicks from surface)*  ***Tube reading*** *(take the tube reading in the shade, read the NTU as the first number under the water level)* | | Draw the equipment you will use and show how it will be set up. | |
| **Write and draw about your observations in your science journal (and record your results in a table).** | | | |



Presenting results

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| **Can you show your results in a graph?** | | | | | | | | | |
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Explaining results

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| When you changed *location / habitat* what happened to the …*turbidity...*...……..………….........?  Turbidity was higher in the dam than the creek. | |
| Why did this happen?  *-erosion at the dam, livestock access to dam*  *-creek is well vegetated* | Did the results match your prediction? If not what was different? |

Evaluating the investigation

What problems did you have in doing this investigation?

*-accurate sampling without stirring up the turbidity*

*- controlling water depth as a variable*How could you improve this investigation (fairness, accuracy)?

*- take more samples at both locations*

*-regular monitoring through the year*