

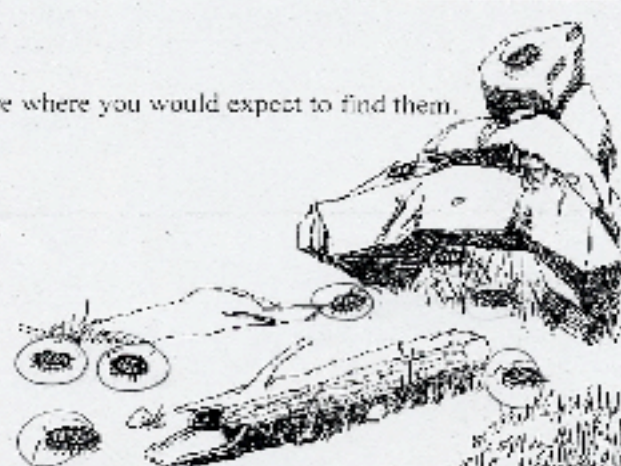
The sample below is representative of the data analysis skills typical fourth graders have. When reporting the optimal amount of light, the student simply states “bright and medium.” She does not provide any evidence to support her decision. In selecting locations to find isopods, she identifies open spots that would be exposed to the sun. She does cite the experiment results as her rationale. However, this does not match what she should be observing in the terrarium. In the terrarium she should see many isopods burrow. She also appears to base her decision solely on her own experiment results rather than the class histogram.

Look at the class histogram.

What do you think is the optimum amount of light for isopods? Why?

I think that the optimum light for isopods is bright and medium.

Circle the isopods that are where you would expect to find them.



Explain your choice(s) for where you would expect to find the isopods.

I expect the isopods to be in the light because when we did our experiment most of them were by the bright and Medium. I think I would find them on the ground in the sun.

**\*Scroll down to see another sample.**

The following sample illustrates quality data analysis. The student reports the optimal amount of light for the isopods based on the class histogram; however, she legitimately calls it into question based on her observations of the isopods during the experiment. In choosing locations that one might find isopods, she uses prior knowledge about isopods and/or observations from the terrarium to select locations. The student should be encouraged to explain how she knows isopods like to burrow.

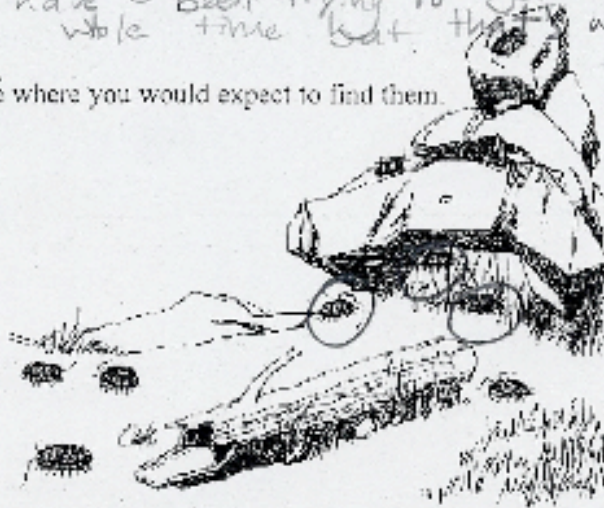
Look at the class histogram.

What do you think is the optimum amount of light for isopods? Why?

I think the optimum amount of light  
(based on our class results) is medium.

I think so because our class  
histogram has most Xs on the  
medium. It might not be accurate because  
they could have been trying to get out of the  
trough the whole time but that's what the  
charts say.

Circle the isopods that are where you would expect to find them.



Explain your choice(s) for where you would expect to find the isopods.

I circled the ones under the rock  
because they like to burrow. If they  
like to burrow, they might like it  
under a rock.

**\*Scroll down to see another sample.**



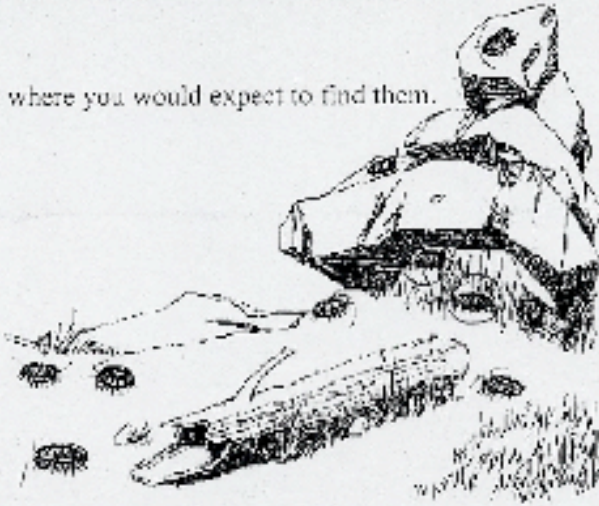
The last sample was chosen due to the student's integration of past and present experiments. In the second answer, she provides outstanding reasoning for selecting particular isopod locations. Throughout the unit, teachers should encourage students to make connections between the experiments. Many students will not automatically make or see the connections—the teacher will have to deliberately help students understand how the experiments are related.

Look at the class histogram.

What do you think is the optimum amount of light for isopods? Why?

I think it is dark because they live underground.  
In our terrarium, we find isopods under  
the water bowl or buried underground, or  
under there or the hermit crabs food dish.  
Very few are playing in the light

Circle the isopods that are where you would expect to find them.



Explain your choice(s) for where you would expect to find the isopods.

I think they like dark, so that is the only  
dark place I can find. Also, dark places  
are cooler, and we found out from  
one of the experiments that isopods like  
cooler temperatures.