



3. How might a mutation be creative?

It might emphasize a trait that isn't common or create something new.

response analysis: correct ("something new") + irrelevant ("trait that isn't common")

3. How might a mutation be creative?

it might exhibit heterozygous advantage as carriers of the recessive sickle cell trait are more fit in an environment with malaria

response analysis: irrelevant statements only

3. How might a mutation be creative?

I don't think mutation is creative, it is random.

response analysis: incorrect statements

3. How might a mutation be creative?

They can be random, not from parents or from parents genes

response analysis: irrelevant

3. How might a mutation be creative?

A mutation that leads to better survival skills is great.

response analysis: irrelevant

1. Natural selection produces evolutionary change by ...

- changing the frequency of various versions of genes.
- changing the number of new mutations.
- producing genes needed for new environments.
- reducing the effects of detrimental versions of genes.

2. Please explain your choice for question 1.

the less fit genes are eventually reduced in frequency because the organisms with these traits tend to die before they can reproduce

3. How might a mutation be creative?

it might exhibit heterozygous advantage as carriers of the recessive sickle cell trait are more fit in an environment with malaria

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

a line/curve is useful when trying to observe an overall trend or make an estimate (as in a calibration curve)

connecting the data points is useful when the exact data points are useful or any spikes/outliers need to be observed

5. Consider a diploid organism that is homozygous for a particular gene. How might the

deletion of this gene from one of the two chromosomes produce a phenotype? aa AA

- If the gene encodes a multifunctional protein.
- If one copy of the gene did not produce enough gene product.
- If the deleted allele were dominant.
- If the gene encoded a transcription factor.

6. You follow the temperature of a person for a 24 hour period, taking readings every 15 minutes. You graph this data. Would you connect the dots or draw a line that best fits the dots, and why?

connect the dots. you are probably observing for any spikes or outliers in the data

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2. Please explain your choice for question 1.

For example the moth that was brown then the industrial era came & they turned grey to blend in w/ the trees.

3. How might a mutation be creative?

I don't think mutation is creative, it is random.

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

Most of the time a line of best fit is used to model data.

5. Consider a diploid organism that is homozygous for a particular gene. How might the deletion of this gene from one of the two chromosomes produce a phenotype?

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Draw a trendline because it is unlikely that the temp jumped from one temp to another, it gradually changed over time.

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2. Please explain your choice for question 1.

It does not create new genes, but <sup>certain</sup> genes/<sup>organisms</sup> ~~with~~ will have a greater chance of surviving from pre-existing mutations to the genes.

3. How might a mutation be creative?

It might emphasize a trait that isn't common or create something new.

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

you connect the points ~~when~~ to show a change of something over time. If the points are linear then fit a line, if ~~not~~ they are exponential, then fit a curve.

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connect the dots to show how the temperature went up and down. ~~and~~ ~~not the~~ ~~can~~ To show the change.

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2. Please explain your choice for question 1.

-species adapt to new environments and slowly new genes are made so that they live more comfortably or have a better way to achieve something

3. How might a mutation be creative?

They can be random, not from parents or from parents genes

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

Yes, there are many rules to graphing

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draw a line of best fit because the graph would be a scatter graph, lines are used for these

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I based it on survival of fittest. The better genes will produce more.

3. How might a mutation be creative?

A mutation that leads to better survival skills is great.

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

No rules, unless asked.

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Body temp is constant so i dk.

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because natural selection simply selects for the most fit individuals, it does not change the frequency of mutations

3. How might a mutation be creative?

it changes a gene

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Yes, depends on the type of data

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connect the dots best fit - see a trend.



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2. Please explain your choice for question 1.

Some genes allow for an advantage. Because of the advantage the organisms with the mutation can proliferate. Over time the frequency of various versions change towards the genes that allowed for the advantage.

3. How might a mutation be creative?

When it is not detrimental.

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

~~I would~~ I would create a line of best fit when I wanted to know the equation to model my data.

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Connect the dots.

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~~The~~ Natural Selections make those with greatest fitness for reproduction more prominent in a population over time, thus those genes that are detrimental to reproduction are reduced.

3. How might a mutation be creative?

It might be creative but mutating often a in a way that makes it resistant.

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When you need an ~~an~~ average, especially in cases with a few outliers you would draw a line of best fit. In cases when all the data is consistent a line can be drawn connecting the dots.

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Connect the dots. A line of best fit would show the average across the day, but not individual dips or increases in temperature, which would be relevant to know. Although actually this might depend on what you were using this data for.

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Natural Selection  
~~Evolution~~ makes useful genes more frequent

3. How might a mutation be creative?

it can adapt based on the environment

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if the data is linear do a line of best fit, but if nothing is linear then don't do a line

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draw a line b/c the temp should be linear

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Genes develop to allow living organisms to have higher survival rates in the environment in which they live (even if its changing).

3. How might a mutation be creative?

If the mutation is introduced into a gene intentionally.

4. You are looking at some data, plotted on a graph. Are there any rules for when you would connect the data points and when you would try and fit a line or a curve to the data?

- You have to take into account any outliers, or numbers that do not fit the trend of the graph.

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You would draw a line that best fits the dots, because it will help to create a constant slope, allowing you to analyze the rate at which temperature changes.