

Name: _____

Date: _____ Hour: _____

C-E-R Identification

Use three different colored highlighters or three different styles of underlining to separate the claim, evidence, and reasoning in the scientific explanations below. Use the key to remember what color or style of underlining is used for each part of the scientific explanation.

<u>Key</u>
Claim:
Evidence:
Reasoning:

Use the Rubric below to help you identify each part of the scientific explanations.

BASE EXPLANATION RUBRIC

Component	Level		
	0	1	2
Claim – A conclusion that answers the original question.	Does not make a claim, or makes an inaccurate claim.	Makes an accurate but incomplete claim.	Makes an accurate and complete claim.
Evidence – Scientific data that supports the claim. The data needs to be appropriate and sufficient to support the claim.	Does not provide evidence, or only provides inappropriate evidence (Evidence that does not support claim).	Provides appropriate, but insufficient evidence to support claim. May include some inappropriate evidence.	Provides appropriate and sufficient evidence to support claim.
Reasoning – A justification that links the claim and evidence. It shows why the data counts as evidence by using appropriate and sufficient scientific principles.	Does not provide reasoning, or only provides reasoning that does not link evidence to claim.	Provides reasoning that links the claim and evidence. Repeats the evidence and/or includes some scientific principles, but not sufficient.	Provides reasoning that links evidence to claim. Includes appropriate and sufficient scientific principles.

Question: What shape are Cells?

Scientific Explanation:

Cells can have lots of different shapes. In this lab, the animal cell was like a wavy circle. The plant cell looked like a rectangle. The bacteria was squiggly like this ~~~. Since all these cells had different shapes, I can tell that cells don't just have one shape.

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Question: Does a lever make work easier?

Scientific Explanation

Levers sometimes make work easier. When we picked up the load without the level, it was 2.2 N. When the load was 5.0 cm from the fulcrum and the effort was 10 cm from the fulcrum, it was 0.8 N. When the load was 20 cm from the fulcrum and the effort was 10 cm from the fulcrum, it was 5.3 N. Doing work is the ability to move an object. If it takes less force, the work is easier. A lever can make work easier depending on the position of the fulcrum, effort and load. When the fulcrum is close to the load and far from the effort, the work is easier.

Question: Why do we have day or night?

Scientific Explanation

When the Earth faces the sun, we have day. We have night when Earth faces away from the sun. The sun and stars appear to rise in the east and set in the west. The Earth rotates on an axis every 24 hours. As we rotate counterclockwise, the sun rises in the East every morning. Throughout the day, the sun rises to its highest point around mid-day and sets in the West each evening. The sun continues to light the other half of the world at one time. Although it appears as though the sun and stars move, the Earth is actually what is rotating.

Question: What type of movement is occurring between the Antarctic and Australian plates?

Scientific Explanation

The Antarctic and Australian plates are moving apart from each other at their boundary. The geochronology map shows new seafloor at the boundary. It also shows slightly higher elevation at the boundary. The volcanology map shows only one volcano at the boundary. The seismology map shows earthquakes occurring all along the boundary. The convection currents in the mantle cause warmer, less dense magma to rise from the mantle and form new crust or seafloor. As this new crust is being formed the plates are pushed apart. This type of boundary is called divergent and it usually has new seafloor, higher elevation at a ridge and earthquakes and sometimes volcanoes.