

## **Matter, Energy and Life in the Earth System**

Group A: Earth's Matter, pages 10-11

Group B: Earth's Energy, pages 12-13

Group C: Earth's Life, pages 14-15

Your Group Letter: \_\_\_\_\_

Your Group Members: \_\_\_\_\_

Look at the picture and read the big text box that is connected with it. Write any words or phrases that are in the text box that you are not sure of their meaning or why that word or phrase is there:

Read the longer text in your assigned pages. Does that text help you understand the picture and the big text box? \_\_\_Yes \_\_\_No

What words or parts of the image might be confusing for Marshall Island Grade 6-9 students? What would you change or do so it would be less confusing to them?

## Matter, Energy and Life: Hints for Instructor

### Group A: Earth's Matter, pages 10-11

Words/phrases they might write about:

“elements” – students should have been taught about chemical elements

“vital for life” – could be replaced by “important for life”

“closed loop of cyclical changes” – could be replaced by “is part of a cycle”

“From a systems point of view” – phrase could be deleted

“essentially” – since some small amounts of matter enter as meteors and cosmic dust, it is not quite accurate to say that “Earth is a closed system for matter.” There are often minor exceptions to general statements, and scientists use words like “essentially” in order to be more accurate.

Image aspect that might be confusing:

Picture shows water cycle, but the idea is much bigger than the water cycle. The water cycle is just one example of how matter cycles.

### Group B: Earth's Energy, pages 12-13

Words/phrases they might write about:

“The functioning of our planet relies on a constant input” – could be simplified to “Our planet gets most of its”

“From a systems point of view” – phrase could be deleted

Image aspect that might be confusing:

Arrows are different colors. We usually use yellow to represent sunlight and red to represent heat.

### Group C: Earth's Life, pages 14-15

Words/phrases they might write about:

“A vast and intricate network of relationships connects” – could be simplified to “Every Earth organism is connected with other organisms and with the cycles of matter and the flows of energy”

“From a systems point of view” – phrase could be deleted

“networked” – this word may not be familiar, but it is the best choice. Could be replaced with “very interconnected”

Image aspect that might be confusing:

Spider web with a planet Earth body might be confusing. The image is meant to be engaging and memorable.