Respiration Station:

A Breath of Fresh Air… The need to Breathe

A group of Aliens want to come to Earth and experience what it’s like to be a human being. However, they are aware that lungs are needed to properly breathe in oxygen like people. On their planet oxygen is inhaled through their nose-like structure. But there’s no passageway for the gas as humans have. Your task is to design a suitable respiratory system model or a way for our visiting Aliens neighbors to “breathe”.

IMPORTANT INFORMATION:

* The Aliens have can breathe oxygen.
* They have a nose-like structure and mouth similar to ours.
* The Aliens will be on Earth for at least a month, so design needs to be long lasting.
* The materials you use need to be easily accessible and affordable.
* Your textbook (p. 208-215) would be a great research guide.

Complete this in your Science Notebooks

**Part A:** Order and Sequence

These are 7 steps of human breathing, but they are not in order. Put these in order and write them in the correct order in your notebook. (Refer to p. 210-212)

* Air moves into the trachea into the right and left bronchi.
* You inhale though your nose or mouth.
* Rib muscles and diaphragm relax as you exhale.
* Carbon dioxide is released back into the atmosphere.
* Air enters the pharynx (throat) then to the trachea.
* Oxygen moves into blood from the alveoli in the lungs.
* The lungs receive air from bronchi.

**Part B:** Lab Write-Up

Purpose: What is the purpose or problem you are solving?

Hypothesis: In a complete sentence, state what you and your team believe will be the best design

to help the Aliens breathe and survive here on Earth. This NEEDS to be written before

completing the rest of the steps below.

Materials: List the materials you will need or use for the Aliens’ respiration model. You may use the items at your table to make a model if you need to.

Procedure: Write the steps of the experiment and design.

Results: Draw a picture of the model. Label the supplies you used and which parts of the respiration system are being represented.

Concerns: What are possible problems you may have in making this?

Explanation:Using complete sentences, explain how you would demonstrate your solution to the

Aliens. Do you think they will understand? Why or why not?