**Seasons Assessment Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due Date: \_\_\_\_\_\_\_**

*Phenomena: The Sun, Moon, and Earth system cause seasons*

*Big Idea: Seasons occur due to the orbit of earth around the sun and the tilt of earth’s axis*

Over the last two weeks, you’ve learned all about what causes the earth’s seasons: you researched and recorded data on daylight and temperature, you read articles and watched videos and you even used your bodies to model this amazing phenomenon! The challenge is: can you use these things to *teach* it??

Assignment:

You will conduct the same model demonstration you did at school (with the miniature globes and lamp) and use it at home to teach a friend or family member all about the causes of our earth’s seasons. Remember to use all of the things we’ve done in class to help you form your explanation! Here’s what you will need to do:

1. Make sure you have a “sun” (a lamp without its shade will work great), an earth\* (a tennis ball or an orange can work), a north star and access to a dark room.
2. Walk through each season as you explain to your friend or family member what causes our seasons. Be sure to say what is going on in both the northern and southern hemispheres and WHY.
   1. Be sure to use the following key terms while explaining: northern hemisphere, southern hemisphere, indirect sunlight, direct sunlight, equator, tilt, and axis.
3. Film your demonstration\*\* and explanation and email\*\*\* it to your teacher. **It must be less than 5 minutes long.** 
   1. [dtabery@canyonrimacademy.org](mailto:dtabery@canyonrimacademy.org)
   2. [mniles@canyonrimacademy.org](mailto:mniles@canyonrimacademy.org)

**Please note that your explanation must not sound scripted. You must demonstrate that you truly understand what causes the seasons, and not just read off of a script.**

\*Be sure to show that your earth is tilted about 23 degrees!

\*\*If you do not have access to a device with filming capabilities, you may conduct your demonstration before or after school.

\*\*\*If your file is too big to email, you may bring it to school on a flash drive.

**Be sure to read the rubric on the back of this sheet.**

Rubric:

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| --- | --- | --- | --- |
| Score of 4 | Score of 3 | Score of 2 | Score of 1 |
| Achieves a level 3, as well as accurately explains solstices, equinoxes, and seasonal differences based on latitude. Student can make conjectures that are based on evidence about what might happen if the axis was not tilted. | Model correctly shows the position of the earth in relation to the sun. Student is able to describe how they know which season is experienced in both the northern and southern hemisphere. Student explains, using the model, what causes more or less sunlight and either direct or indirect heat. Student uses correct scientific vocabulary. | Student shows the tilt and the revolution, and is able to say what season it is in the hemispheres. Student cannot yet explain what changes daylight length and heat absorption. | Student can do the model with help, but can’t use scientific vocabulary correctly. |