

Learning Center Day- Overview

Phase 2- critical analysis of your own/students learning

Part 1- The intended student **learning outcomes** for our learning center are:

Primary- Students will be able to understand what causes day and night and will be able to recognize and discuss the importance of the sun.

Intermediate- Students will be able to identify all planets in order from the sun and will have a brief understanding of the size of the planets compared to one another.

The center design process was as follows:

1. Started with some quick introductions and a brief overview of our learning center.
2. Gathered any background information from the students on our Solar System.
3. Primary- ask if they know what causes day and night. Have a short discussion on this.
Through a visual demonstration with props and students help, we were showing and describing why we have day and night. We did this under our constructed “solar system” (a blank blanket assembled to look like space)
4. After the day and night demonstration, we discussed with the younger students the importance of our sun. We guided them to lead the discussion with prompts. This was a great opportunity to record down some of their comments and questions. We both simplified the conversation at the end by saying the sun gives us 3 main things: heat, light, and energy. We asked them all sorts of different questions about this.
5. After the discussion, which was “under our Solar-System”, we asked the students to sit crossed legged on the floor in front of our center. We had a pre-cut out Sun that was already attached to a string the students could then just put it over the head and wear it around their necks. (we made it this way so they did not have to carry it to every station they went to) In the center of the sun it said “Without the sun, life on Earth would not

exist.” We discussed this one more time while we gave students a chance to colour their suns before putting them around their necks.

6. Intermediate- We asked what they remember learning about space in their science classes. We asked them if they could remember all the planets. If they did we congratulated them and asked them if they knew all of the planets in order from the sun. At this point we could see that the majority of the students did not know, or were not comfortable with listing these planets. This was our opportunity to teach them a trick for remembering the planets. This next step went as follows:

Asked a volunteer to read out a coloured printout with all the planets in order from the sun. We explained that we are just going to write down the first letter from each of the planets on our white board. This step was done so everyone could see what was going on. As student A said Mercury, I wrote M. They said Venus, I wrote V, and so on. This list of letters went down so I could write the “riddle, acronym trick” beside the first letters.

M y

V ery

E xcited

M other

J ust

S erved

U s

N achos

After this was written on the board I discussed how memorizing something like this is very beneficial so linking the sentence with the proper, appropriate planets. We asked

the students to repeat after us so they would have a chance at saying this trick. Then we said to your best to memorize this and we will test you at the end. We asked a question to clarify the understanding, and seemed like the students understood how the trick works and that they could remember this 'phrase'.

7. After these steps we explained to all grades a little bit about the size of the Earth compared to other planets and stars. We gathered any background information in this area before viewing a short youtube video called "Star size comparison HD". The majority of the students were amazed at actually how small Earth is compared to other objects in our Solar System.
8. After viewing the video we quickly discussed the content of the video. With the intermediate students we then asked them to try and remember the trick we taught them about 5 minutes prior. We gave them a worksheet with planets in order from the sun. We asked them to label each planet and suggested using the trick if they got stuck.
9. We went over the worksheets and saw great results. We gave every student that passed through our center a space sticker and gave them positive encouragement and gratitude for their hard work and contribution.

Assessment plan and data

The plan of our assessment of the students learning was through our conversations and discussions with them before, during, and after the activities. We also had worksheets for the intermediate students to fill out, and the answers the students gave us when we asked questions at the very end solidified their learning.

With the younger students we did not have any 'hard copy' evidence of their

assessment. However, we assessed their learning through a group discussion and questions to determine their level of understanding. So after gathering background information and doing the day and night activity, we would ask students, “Ok, so who can tell us what causes day and night?” The answers really varied. The majority of the answers were on task, a lot of the answers were correct, while some of the answers were incorrect and off task, at which point we would discuss and re-explain the description using the visual manipulative. We then asked if everyone understood, to check for clarification.

When assessing the intermediate students our synthesized data that we collected from them was a worksheet that demonstrated that the students could correctly label the planets in order from the sun. We saw many students using the trick we taught them while completing the worksheet. This was an example of summative assessment that we gathered through our observations showing us that they remembered the trick and were able to apply what we had just taught them.

Reflective analysis

After gathering some background information from the younger students we realized that the majority of students did not really understand what we meant by, “Do you know what causes day and night?” Students were responding with answers like “we need sleep, we need rest.” Etc. At this point we directed their thoughts with some prompting comments regarding not what IS day and night, rather, what CAUSES day and night.

--Through observation in our conversations, we were able to determine that students understood the value and importance of our sun.

Since students were not asked to demonstrate their learning in writing, we found it important to directly connect our questioning techniques to the learning intentions.

Intermediate students were able to demonstrate their learning through performance-based tasks. For example: they were able to give descriptions of the 'planet in order' from the sun. (See attached worksheet)

From the correctly completed worksheets, we concluded that the students were able to apply the trick we taught them and could identify all of the planets in order from the sun.

Our Learning

Throughout this process we found that it was a good idea to have different learning intentions for the primary and for the intermediate groups.

As teachers we will always be adapting materials, lessons, directions, to meet the needs of different grade levels.

We can see the benefits of having hands-on learning as we observed all the students moving through the center.

--We found it a little difficult to find the time to record our observations from each group that went through because there was such a quick turn over from each group. There was no time to transition between each group which gave us some challenges with recording the evidence of their learning.

We also were challenged to make judgements on the students learning based on only a few minutes of evidence. We understand that learning is a long process...

--Having a positive, enthusiastic teacher presence was valuable when working with these students.

--To effectively teach in a different setting with all different levels of students, we can see that you have to be prepared, enthusiastic, and confident in our lesson and center as a

whole. We also saw the importance of making connections with the students right away. Starting with introductions, a brief overview of the center, and background information was a great way to allow the students to feel comfortable and `safe` before the activities started.

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We found it a little easier to assess the intermediate students because they had more prior knowledge to apply and they were able to complete a worksheet which provided us with hard evidence of their learning. They were also asking 'on-task' questions which gave us an idea that they were understanding and applying the learning.

Overall, this experience was both challenging and rewarding in many ways. Throughout the day we used a lot of questioning techniques and descriptive feedback...

This was a rewarding process as we learned a lot about the teaching and learning process.