

Picture Graph Lesson Plan

Time Frame: 5 days

Goals: The students will:

- Gain knowledge and understand the fundamental concepts of a picture graph and what the purpose of the graph is for.
- Learn how to record information on a picture graph
- Understand how the information on a graph is important to make conclusions
- Be able to make their own picture graph to demonstrate something that they have surveyed.
- Compare and contrast between a vertical and horizontal picture graph

Objectives: The students will:

- Identify and respond to questions about the basic concepts of picture graph terms/vocabulary with 90% accuracy.
- Use various websites with 90% accuracy, and be able to answer questions using the graph provided thru the website.
- Compare and Contrast 100% the difference between the two graphs.
- Be able to create their own picture graph with 90% accuracy depending on the information provided for them.

Procedures:

- Read a short book to them and introduce the topic *The Great Graph Contest* ; by Loreen Leedy(15 minutes).
- We will discuss what a picture graph is after reading the story and ask the students if they have ever seen a picture graph and how has it been used.
- Each student will receive a small Ziploc bag with 5 different skittles in it and also they will receive 5 different colors of construction paper (they will be cut out in the shape of squares.) The student must taste each skittle and record their favorite flavor/color. The students will be instructed what color skittle they will try first, second, last etc. I will say okay " We all need to try the orange skittle and we need to be really quiet so we can think about the flavor and remember if that is one that we are really going to like. Then we will continue through all the flavors until they are all gone. (10 minutes)
- I will have a key drawn at the bottom of the graph that will indicate the category/ tallies and the total and explain what the key is for.
- Then I will have a graph already made that will be on colorful butcher paper with the different flavors/colors of the skittles and they will each have an opportunity to come up to the board and place their appropriate construction color paper in one of the different colors. (20 minutes).
- Short discussion reviewing the idea of a picture graph, their purpose, and how to use the colors that they have placed on the graph to make any type of conclusion (10 minutes).

- Then as a class we will discuss what color/flavor was best liked in the class and which was least liked in the class. I will ask questions of higher level thinking or Blooms Taxonomy questions to see that the students are comprehending the concept of a picture graph. Some examples of questions are: How do you know what color/flavor was liked the most? Is the picture graph the only type of graph or are there other types? Who can tell me what are the names of the type of graph that we talked about yesterday. How is that graph different from the graph we have done today? Those are just a few of the questions that I will ask. (20 minutes)
- The students will get in groups and first they will survey their group members to see what color/flavor was their favorite.
- Before starting their own picture graph I will have them look up at the board while I give them instructions how to use the ruler and create their graph.
- Then I will ask students to get into their small groups and on a piece of construction paper to create a small picture graph using the information from the data that they recorded among themselves. Each set of 4 students will have a different graph to share with the class.(15 min)
- Then once they are done their group will share with the whole class and explain to us how they came up with their result. (15min)
- After each group has shared I will ask them to talk with their group and compare and contrast their groups graph with the big graph in the front of the room.(10min)
- Then after all have shared the next day we will go over some vocabulary words that they learned on Monday and then I will give them a handout to practice drawing picture graphs horizontal and vertical graphs with the information that I will provide in the class. (25min)

Vocabulary:

symbols	pictographs
keys	bar graphs
horizontal	tally
vertical	

Main Materials:

Websites:

- <http://gwydir.demon.co.uk/jo/numbers/pictogram/pictogram.htm>
- http://www.abcteach.com/free/g/graph_picture_pumpkins.pdf

Other Materials:

- skittles (only 5 per student)
- Ziploc bags
- notebook paper to record findings
- Construction paper cut outs
- Butcher paper for the graph and the key
- Construction paper for groups to make graph

- Markers
- rulers
- glue sticks
- worksheet
- Pens
- Pencils

Context/Modifications:

The students will have reviewed basic vocabulary and have some type of knowledge on what a graph is so that they may have a better understanding of the concept of the picture graph. In case there are students who have not heard much or understand about graph I will review what they already know and what they need to know in order for the student to be successful. I will have a sample graph from the previous day up on the board so that the students who are still struggling can have something to refer back to.

Anticipatory Focus:

To begin the lesson I will have this short clip playing on the computer for all students to see and hear <http://www.youtube.com/watch?v=V87I10yMib4>. Then I will have a question on the whiteboard that will say " what do you know about a graph?" All the students will call out answer and I will begin to write it down so that they can have an idea as to what they already know. This will give them an opportunity to began to unfold their thinking and their knowledge.

Setting Expectations:

The students will be working cooperatively with the groups to assure that they are understanding the concept of graphs and they will help one another to draw and put the appropriate information into the tally chart as well as the graph. Each student will be designated a job with the project. One student will draw the tally chart another will write the flavors at the top another student will record the tallies and the last student will write down the totals. Then when they get ready to do their graph they will follow the same pattern. The first person will draw the graph and so forth. The students will be expected to put the information in the correct form and be able to explain it to the whole group.

Input:

Different books showing how graphs can be implemented and how they can be used for large amounts of information.

A handout to show students how they can come up with their own ideas and graph whatever it is that is of interest to them.

A PowerPoint presentation showing the different forms in which one could use a graph and briefly introducing the other types of graphs that are similar to that of a picture graph.

Modeling:

The students will learn how to survey their peers and gather information in order that they can create a horizontal or vertical picture graphs. They may also use the websites mentioned above to help them understand the concept.

- <http://gwydir.demon.co.uk/jo/numbers/pictogram/pictogram.htm>
- http://www.abcteach.com/free/g/graph_picture_pumpkins.pdf

Checking for Understanding:

The students will be asked several questions and they will have the opportunity to discuss as a group and then answer the question as a whole if there is a discrepancy between a group member then I will ask that they discuss again and try to come up with one solution or answer and if they are still not agreeing then I will ask them to share with group and we will try to answer their question.

Guided Practice:

Students will work in groups and each group will have to create an accurate graph and tally chart. I will walk around and monitor each group of students to make sure that they are labeling their tally chart and graph correctly. Each group member will have the opportunity to do their own drawing on the graph. For instance since we will be graphing skittle each student will get to draw their skittle with the corresponding color.

Reteach:

I will pass out a hand out for students to do as a group and see where they stand. I will evaluate each student and if I see that only a few students are struggling I will make time to just sit with them and discuss the concept again, but if I notice that the majority of the class is confused I will then ask the students to look up at the front and we will regroup and I will try a different way of teaching the concept. I could incorporate some kinesthetic activity using the students and having all the students who are wearing white tennis to get up and all the ones who are wearing black tennis to sit and all the ones who are wearing a different color other than black and white will raise their hands. This will give them a visual and could help them understand the graphing concept.

Independent Practice:

- Each student will be asked to take out their math journal and they will write what they learned about picture graphs and two things as to how they could use a picture graph.
- Then once they are done writing in their journal they will be handed a sheet that they will have to fill out answering some questions that deal with picture graphs.
- The students will do the handout individually and when all are done they will then have the opportunity to compare with their group their answers and do some problem solving...How will you decide whose answer is correct??

Mastery Check:

Each group will then go up to the board and they will write down two things that as a group they came up with that they learned about graphs and we will discuss as a whole

class and make sure that the information on the white board is correct. They will have to give a small explanation as to why they choose the two things that they choose.

Extension:

The student will then be asked to choose something that is of interest to them and they will have to do a survey and create a tally chart and then create a picture graph. This will be done at home as part of the students homework. This will give me a good ideas as to you understands the concept really well and who does not. The student will be asked to do this on their own so that the information is accurate.

Closure:

I will ask for volunteers to raise their hand and tell us as a class what it was that we learned about today and when is it appropriate for use to create tally charts and picture graphs. I will also go over the vocabulary that we learned and asked volunteers to tell us definitions of the new terminology.

Reflective Technique:

I will analyze every part of my lesson. I will ask myself several questions. Was the modeling that I conducted appropriate for the grade level, did all the students understand what I was trying to teach them. How was my motivation strategies did I put them to use whenever a student answered something correctly. Which model did I use most often and was it effective, discipline with dignity, love and logic or assertive discipline. Did I use the time effectively or did I spend a lot of time with one student. Was my lesson interesting to the students. I think there are many ways in which I could reflect on my teaching and these are just a few.

Mentor teacher: Mrs. Srb gave me back some excellent feedback after I was done with my lesson she told me that whenever I did not know the answer to one of the students questions to just let the students know that I didn't know the answer but I would look it up for them for next class. She also complemented me on my posture and the pace in which I gave the lesson. She told me to be a little bit more relaxed and to let the students create their graph without a ruler it would of made it easier for me. Other than that she said my lesson went really well.

Provisions for Students with Special Needs:

I will ensure that my classroom is arranged in such a way that visibility, accessibility and distractibility are all covered. I will make sure that I can see all students at all times whether instructing the whole group, small group or individuals. I will also make sure that I can get to all students in a timely manner and that I have access between all desk so that I can be efficient in helping all my students specially those who need extra attention. For those students who have a hard time focusing I will make sure that those students who I know have a hard time paying attention are not distracted by anyone or anything in the class. I will also ensure that those students who have visual or hearing problems are closer to the front and that I talk at a pace that is easy for them to hear and see me talking. I will also take into account those students who are English language learners and who

might have a difficult time with the new vocabulary or the new concept. I will adjust the assignment if I see that they are really struggling even after their peers have provided some time of guidance. In the circumstance that I have students who are special ed I will adjust the assignment based on an individual need. I will monitor all students especially those with provisions so that by no means they feel left behind.

Integration of Technology:

When it's computer time I will write down two websites that I would like them to navigate and complete the activities on the websites. For those students who understand the concept and finish earlier I will give them the opportunity to go into paint and create a fancy graph using the different colors and shapes. This will only happen once I've walked around and checked off those students that have completed the two assignments.