

Children's Literature Math Assignment

1. Book: Carlson, Nancy. Harriet's Halloween Candy. Minneapolis: Carolrhoda Books, Inc, 2002. ISBN PZ7. C21665H272002

Harriet's Halloween Candy is a story about a dog that goes trick or treating on Halloween. When Harriet gets home she sorts her candy into different groups such as size, colour and favourites. Harriet does not want to share her candy with her younger brother so she spends most of the story counting and re-counting her candy and hiding in different places. Once Harriet has run out of hiding places she finally decides that she needs to eat all the candy to keep it from her brother. Harriet organizes her candy into groups and begins to eat each category of candy until she feels sick. She feels so sick to her stomach that she finally decides to share her candy with her little brother.

2. Book Critique

Accuracy 2/6

In this story there is a small focus on how Harriet organizes her candy into different groups. When Harriet takes part in this activity the book states that she is "organizing" her candy. If we were to use this book for our chosen activity it would be beneficial to have proper mathematical terms such as "sorting the different candy". There are no layers to this book, the mathematical concepts are not evident. This is not a story that you could use to help students see deeper meanings of math concepts.

Visual and Verbal Appeal 3/6

The visuals in this book are pretty well done. They are bright and would appeal to younger children but we feel that it would not be interesting for students who are in the junior grade level. The pictures correspond very well with the writing. They support what is happening in the book but do not take away from the text. The text is not very interesting or engaging. The story is very predictable; we did not feel a huge desire to keep reading.

Connections 4/6

This story has a great premise. Students would really enjoy reading it because they would be able to directly connect with what is happening. We feel that if this is to be used as a Math book the author could use the content and make it connect more with Math. This topic is a great way to connect Math to the students real lives but it wasn't done that well or it wasn't meant to be done.

Audience 2.5/6

The audience for this book would not exceed students in Grade 3, we would probably only use it until the Grade 2 level. The text is very simple and the book is so predictable that older students would not stay engaged. There is no foreshadowing that occurs, probably because this book was not meant to focus on Math content.

"Wow" Factor 1/6

There is absolutely no "wow" factor in this book. The area in the story that touches on math concepts does so very simply. The content does not allow for new ideas and rich knowledge. Students would not feel that they have been exposed to a new and exciting element of math that they were not aware of before.

1. Lesson Plan Information	
Subject/Course: Mathematics	Name: Kathryn Boyd and Erin Gallant PJ 2
Grade Level: 2	Date: Jan 21, 2009
Topic: Data Management and Probability	Time and Length of Period: 70 min

2. Expectation(s) and Learning Skills
<p>The students will:</p> <ul style="list-style-type: none"> -collect and organize primary data that is categorical and display the data using one-to-one correspondence in concrete graphs and simple bar graphs -read primary data presented in concrete graphs, pictographs, line, plots, simple bar graphs, and other graphic organizers and describe the data using mathematical language <p>Today, students will:</p> <ul style="list-style-type: none"> -use found information to create and properly label bar graph -use bar graph to answer questions regarding their bar graph

3. Pre-assessment
<p>A. (i) Students</p> <ul style="list-style-type: none"> -able to sort and classify objects based on attributes -gather information using tally marks -count forward by 1's, 2's, 5's, 10's and 25's -have created pictographs and analyzed the data given from this type of graph <p>(ii) Differentiation of content, process, and/or product (may be accommodations and/or modifications)</p> <ul style="list-style-type: none"> -P has difficulty with application, should make sure to clarify understanding after the lesson is done -T will need extra assistance with spelling and writing during application
<p>B. Learning Environment</p> <ul style="list-style-type: none"> -students will begin lesson on carpet for story and sorting activity -students will return to their desks for application
<p>C. Resources/Materials</p> <ul style="list-style-type: none"> -Book: -sorting worksheet: picture of Harriet's Halloween candy -graphing worksheet of Harriet's Halloween candy -chart paper

-individual bags of treats	
4. Content (The What)	Teaching/Learning Strategies (The How)
A. Introduction (motivational steps/hook/activation of students' prior knowledge)	
<p>(10 min)</p> <p>-the lesson will begin with the reading of Harriet's Halloween Candy by Nancy Carlson</p> <p>-students will be asked to look at the cover and think about what the story might be about</p> <p>-ask students: "what do you notice about the candy on the front cover?"</p> <p>-"it says here that Harriet 'organized her candy', what ways could we organize or sort our candy into different groups?"</p> <p>>students will likely answer: colour, size, shape</p> <p>>students may need guidance towards other options such as wrapper or no wrapper, healthy and unhealthy etc.</p> <p>-draw attention to the fact that Harriet begins to eat her candy based on the sorted groups</p> <p>>"wow Harriet begins to eat all her candy up, what do you notice about the way she is eating her candy?"</p> <p>>"It seems that she's sorting her candy and eating it based on the groups that they are in"</p> <p>-"why do you think it was important for Harriet to organize her candy into groups?"</p> <p>-the discussion of sorting Harriet's candy will reintroduce the concept of sorting</p>	
B. Content for New Learning	B. Teaching/Learning Strategies for New Learning
<p>-learn that bar graphs are for recording data that we have found</p> <p>-bar graphs can be shown in different ways, such as concrete or written</p> <p>-bar graphs need a title and have an x- axis and a y-axis</p> <p>-each axis gives us information</p> <p>-we use colours to differentiate the data given</p> <p>-graphs help us see our data in other ways</p>	<p>(25 min)</p> <p>-teacher will begin by activating the students prior knowledge about the subject area about to be covered</p> <p>>"boys and girls who can explain to me what a pictograph is?"</p> <p>-answers will range: ex. graphs that show us information, we use pictures to show us information etc.</p> <p>-teacher will then move towards the introduction of our new activity</p> <p>>"well today we are going to try a new type of graph, it's just like a pictograph because it shows us information but it's shown a little differently, we are going to create what's called a bar graph"</p> <p>>"does anyone know what a bar graph is?"</p> <p>-teacher will explain to students that the difference between a bar graph and a picture graph is how it shows our information, "in picture graphs we use pictures to show our information, but in bar graphs we use bars"</p> <p>-the class will now use the book to help gather information</p> <p>>"if we wanted to use some information or data that is from the story Harriet's Halloween Candy what type of information could we look at?"</p> <p>>guide students towards gathering information about the type of candy Harriet got</p> <p>-work with students to decide what type of information we want and how to gather it</p> <p>>"before creating a bar graph we need to decide what information</p>

about Harriet's candy we want to know, for example do we want to know how many healthy and how many unhealthy treats she got?"

>"what other types of information might you want to know about Harriet's candy?"

>guide students to ideas such as different sizes, colours, types etc.

-teacher will explain to the students that for this activity we are going to look at the different types of candy

-teacher will write the 3 categories of candy on the chart paper

>"we are going to find out how many chocolates, candies and healthy treats Harriet got for Halloween, our category or group titles will be Chocolate, Candy, and Healthy"

-teacher will tell students that it is their job to find out how many of each treat Harriet has

>"I am going to give you a bag, in it is Harriet's Halloween treats, I would like you to sort the treats using the three categories we have picked, once you have finished you are to write the data you found, meaning how many of each treat Harriet has on a piece of paper"

>"you will go to your desks and work quietly, I would like you to collect the data that we need to create the bar graph, when you have finished you can come back to the carpet and we can go over the data together"

*students will take the next 5-10 minutes to work on counting and sorting Harriet's treats

*while the students are working the teacher will produce a pre-drawn bar graph that will be used to fill in the found data

-when the students have gathered back at the carpet I will ask three volunteers to tell me the amount of treats that Harriet has in each category, students will be asked if anyone had anything different (assuming that everyone has the same thing teacher will move to the bar graph)

-teacher will use the chart paper and write the total of each treat under the appropriate category

-teacher will show the students the outline of the bar graph

>"here we have a bar graph that needs to be filled in"

-teacher will explain that it is important for us to have a title and label our graph so if someone from outside the class needed to look at it they would understand what the graph is all about

-teacher will ask the students to help name the bar graph, "what do you think a good title for the bar graph is? Remember that we need to consider what this graph is all about"

-teacher will point to the x-axis and the y-axis
 >"this is what we call an x-axis and this is what we call a y-axis (it's important to begin introducing proper terminology)
 >"each axis needs a title if our x-axis is the one that shows us the types of treats Harriet has what would be a good title for it?"
 >"if our y-axis is telling the number of treats in each group what would be a good title for it?"
 for the first lesson in bar graphs the numbers will be written in already

-teacher will ask students to think back to the picture graphs we have created
 >"what did we use to represent one 'thing' in our picture graph?"
 >students will respond "one picture represented one 'thing'"

-teacher will explain to students that when using a bar graph we use squares to represent one 'thing', in this case each square will represent one treat"
 -teacher refers to the data gathered on the chart paper
 >"how many chocolates did Harriet have?"
 >"well if we know that Harriet had 10 chocolates and we know that one square represents one chocolate how many squares should we colour in?"
 -teacher will colour in 10 squares in one colour to represent Harriet's chocolates
 -teacher will complete the bar graph asking the same question for candy and healthy treats

-teacher will ask students what they notice about each bar
 >students may state that each bar is a different colour
 -teacher explains that it helps to make each bar a different colour so when you look at it you can see the different categories on the graph

-once the bar graph has been filled in the teacher will ask the students if they notice anything about the numbers on the y-axis and the amount of squares that are coloured in each category
 >"you can use these numbers to find out how many treats are in each category rather than counting each square every time"

-students will have a chance to look at the graph to see what exactly it shows
 >"now that we have done all this work to create a graph what kind of information would you see if you are looking at this graph for the first time?"
 >students may answer: "that there are 10 chocolates, 12 candies etc.

5. Consolidation/Recapitulation Questions (Check for understanding/scaffolded practice)

(5 min)

- students will be asked why bar graphs are important?
- what should all bar graphs have?
- why are the numbers at the bottom of the graph so important?

6. Application (Moving from guided, scaffolded practice to increasingly independent practice and understanding / gradual release of responsibility)

(25 min)

*first half of lesson

>students sort treats into three categories

*second half of lesson

>provided worksheet

>students will practice filling in own bar graph using all required information such as title, labels, numbers

>students will use data gathered from Harriet's Halloween candy and colour in their own graph

>this activity is the same that was done with the whole class but they will be required to do it on their own, this will show if they understand the process of graphing

7. Lesson Conclusion

(5 min)

- students will be asked to work quietly on their worksheets and hand them in when they are finished
- for students that finish early they will be asked to work at the math centre where there are different activities outlined:

>graphing math activities on the computer

>sorting objects based on attributes (objects will be placed out)> students will be asked to call on the teacher when they are finished to explain their sorting

-for those who do not finish during math period they can finish during catch-up time the next day

8. Assessment (collection of data) / Evaluation (interpretation of data)

-teacher will circulate during sorting activity and take anecdotal notes

-students will be marked based on the worksheet that have been given to them

-marking will be based on proper labelling, accurate graphing and accurate interpretation of the data presented

9. Teacher Candidate's Reflections on the Lesson

A. (i) Evidence of Student Learning Related to the Lesson Expectation(s)

(ii) Next Steps for Student Learning Related to Lesson Expectation(s)

- students will create individual graphs based on given data
- will work towards collecting own data and graphing found information

B. (i) Evidence of the Effectiveness of the Teacher Candidate

(ii) Next Steps Related to the Effectiveness of the Teacher Candidate

Name: _____

Help Harriet Find Out How Much Halloween Candy She Has

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		

Answer the following questions:

1) How many more chocolate than candy does Harriet have?

2) What was the least amount of treats that Harriet got?

3) How many healthy treats did Harriet have?

