Introduction:
This birthday celebration is designed to give the students an opportunity to apply basic skills that have been previously learned, in an exciting and child-centered format. This activity offers explorations in math - however, the teacher could easily add additional social studies, language arts, science, P.E., art, music, and drama activities to completely integrate the lesson. This integrated unit reinforces the application of measurement, data collection, number sense, geometry and patterns.

Standards:
Collect, organize and describe data

Behavioral Objectives:
Students will accurately utilize measurement, data collection, number sense, geometry and patterns with 80% accuracy.

Anticipatory Set:
The teacher will decorate the classroom decorated with birthday party materials. When the students come in the classroom have them sit on the area rug. Ask the students, “What do they think the room looks like?” After a few responses tell them that they are right, that it looks like there is going to be a birthday party. Ask students to tell their neighbor (another classmate) about their favorite birthday party. Have a chart ready with a web-map (the web can be drawn to look like a present, cake, balloon, etc., anything that goes with the theme). In the center of the web write the word, “birthday party.” Students will tell you what they see at a birthday party and you write it around the web. After this activity, read any book about birthdays. One suggestion is the book entitled, “Birthdays! Celebrating life Around the World,” by Eve B. Fieldman. This book has very simple text illustrated with children’s artwork, depicting typical birthday celebrations in 25 different cultures.

Teacher input:
1. Distribute a bag of a variety of candles.
2. Ask the students to arrange the candles from the shortest to the longest.
3. Ask the students to describe the candle that is in the third position, the fifth position, the last position, etc.
4. Direct the students to choose a measuring tool and to measure their candles. Tell them to record the result in their journal

Part 2
Ask the students to create a pattern with their candles. Tell them to draw a picture of this pattern in their journals. Ask them to represent this same pattern using hand motions, unifix cues, sounds, etc. Invite the students to bring their unifix cube representation of their pattern to a floor graph with the rest of the class. Ask them to compare their patterns and to graph them according
to the type of patterns. For example: all the $a b a b$ patterns together; all the $ABC ABC$ patterns together; all the $ABBC$ patterns together; etc. Discuss how the patterns may appear to be different in color arrangement, but that they are the same according to pattern definition.

Part 3
Sorting, Data organization, thinking skills
1. Direct the students to sort the candles. Tell them to record the rules they used for each category. Challenge them to sort again and again, using different rules each time.
2. Challenge the groups to ask question about their group of candles that they could answer through organizing these candles.
3. Ask them to choose an appropriate graph format.
4. Direct them to use the candles or to draw pictures of the candles to organize them into the graph. Tell them to label the graph.
5. Direct the group to write questions to ask the others about the graph, or to write the story the graph tells them about their collection of candles.

The following are some of the questions you may ask the students:
1. How many candles did your group have?
2. How many red candles, green candles, glitter candles, etc.?
3. How many more red than blue?
4. Which color candle did you have more of in your collection?
5. Describe how you sorted your candles.
6. Tell the story of the graph.
7. What do you know about your collection of candles?
8. Can we say that these are all the sizes and colors of candles available to use on cakes? Why do you think that?
9. If we all brought in the candles we use on your birthday cakes, do you think we would get the same kinds of candles? Explain.
10. What kind of candle would you like on your cake?
11. How many candles will you have on your cake on your next birthday?

Modeling Behavior:
Teacher walks around the room redirecting students’ behavior. Teacher compliments on the correct behavior.

Check for Comprehension:
Since this is a group project, most of the assessment will be done by observation. A checklist can also be done to see if students answer questions about the graph.

Closure:
When the students finish with the graph, the students present their graph to the class and tell the story of their graph. Students will also write in their journal about the activity and their findings. At the end of this unit the students will make and bake a cake to celebrate every ones birthday. In that lesson the students will focus on following directions and measurement.

Resources and materials:
For each group of four students-
  • Set of a variety of candles in a brown paper bag
  • Chart paper
  • Makers or crayons,
  • Unifix cubes

For the class
  • Party decorations
  • Birthday party literature