Lesson Plan Format

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Grade Level 2 Subject Math Supervisor Dr. Place

PRELIMINARY PLANNING

PA Standards:
2.3.2 Measurement and Estimation
C. Estimate and measure objects to the nearest inch and centimeter.
H. Describe the different attributes of an object and how it can be measured.

Pre-assessment:
Students are just beginning the measurement unit; therefore, they do not know much about measurement just what they have learned from other teachers. For this introductory lesson, they are using a simple, familiar, and a real-life manipulative. Before the lesson, I will show the students how to measure correctly with the manipulative.

Objectives:
Students will be able to use nonstandard units to measure heights and arm spans, compare lengths and discuss why the measurements might differ, and use problem solving and reasoning skills by discussing similarities and differences by using manipulatives in partners and comparing results with the whole class.

Individual Modifications:
For advanced learners, after they are finished with their activity of measuring each other's length with yarn, they can try to estimate their arm spans and heights in inches. Then they can use a yardstick to check their estimations.

Materials:
- Markers
- Scissors
- Yarn
- Tape
- Re-sealable plastic bags labeled with students' names
- Comparing Classmates Activity Sheet

LEARNING SEQUENCE

INTO
1. With all the students seated, ask for a volunteer. Measure the child's arm span to show the class how to measure arm span from fingertip to fingertip. Cut the yarn and label with a piece of tape with the students name and arm span.
2. Ask for another volunteer and show the class how to measure height from head to floor. Cut the length of yarn and label with a piece of tape with the students name and height.

THROUGH

1. Group students into pairs and have them measure each other's arm spans and height. Remind them to label the yarn correctly.*
2. Move around the room and ask the groups **why all the arm spans and heights are not the same**.
3. After students are done have them sit back in their sits. Pass out the Comparing Classmates Activity Sheet. Have the students walk around the room and find people to match these descriptions.*

BEYOND

1. When students have found matches, go over the worksheet. **Ask the students the question on the sheet to find out their answers (same height, shorter, taller, same arm span, smaller, larger)**.
2. Ask students other follow-up questions:*

- **What did you notice when you compared your arm spans? Why were the arm spans alike? Why were they different?**
- **What did you notice when you compared your height with that of your partner? Why were the heights alike or different?**

3. Then pass out a re-sealable bag with the students name written on it and collect the students yarn for the next lesson.

POST INSTRUCTIONAL PLANNING

1. What levels of thinking (Bloom) did your lesson incorporate?
   The students are using knowledge because they are recalling information about the experiment they conducted. Also, the students are using analysis because the students are comparing and contrasting their heights and arm spans with the class. Lastly, the students are using evaluation because at the end they are asked what they noticed when they compared heights and arm spans with their partner and why they are not the same.

2. How did you evaluate your students' performance?
   I am walking around the room to see if the students understand how to use the non-standard unit of measurement. As I walk around, I will write down student's names that seem to not understand and provide them with some extra practice with non-standard units. Furthermore, I am asking students to compare and understand that the lengths are different. I will assess this understanding by asking them various questions.

3. In what ways have you included safeguards that all children will learn including second language learners and special needs students?
   The only safeguards I need for my class are for the advanced learners. For those students, I will pair them together and whenever they are completed, I will ask them to try and estimate their heights and arm spans. Then they will check this estimate by using a yardstick.

4. Total Participation Techniques: How did you make sure all students were engaged in your lesson? Mark high-engagement strategies with an asterisk.
   All the students are involved because they are in pairs measuring the other's height and arm span with yarn. Also, every student gets to walk around to compare and contrast their arm spans and heights with the other students.

5. Describe the instructional modes that you used in each of your activities (VAKT). Vary these in each lesson.
   Visual- I am using yarn so the children can see a concrete object and measure with it themselves.
   Auditory- I am asking the students question about the measurements they are taking with the non-standard unit and why the heights and arm spans are different.
   Kinetic- The students are standing to measure their partners and will also walk around the room to compare their results with others.
   Tactile- The students are using yarn as their non-standard unit of measurement. They are able to touch and see different lengths and understand that not all measures are the same.

6. Describe the changes you would make if you taught this lesson again.

Works Cited

Midgett, Carol. "Measuring Me". National Council of Teachers of Mathematics. <http://illuminations.nctm.org/LessonDetail.aspx?ID=L758>.