Who Measures What in Our Neighborhood?

K-1 Classroom

Measurement Calendar
Step-by-Step Lessons

Phase 1

1 **Opening Event** At a whole group meeting, the students shared a number of measurement events that they remembered from the fall project.	2 **Brainstorm Ideas** Students brainstormed ideas about measurement from their own experiences.	3 **Categorize Ideas** The students discussed how to categorize their ideas and experiences.	4 **Label Categories** Students debated how to title the categories for Measurement Topic Web 1.	5 **Share Personal Stories** The head teacher shared stories and pictures of the special wall in her kitchen where family members recorded their heights. She asked students to share personal stories about measurement.
6 **Illustrate Stories** Many students drew and wrote about times when they were measured or times when they helped someone measure.	7 **Share Stories** The students shared their experience stories and grouped them by similarities.	8 **Collect Data** Students developed questionnaires and asked their peers questions such as, "Have you been weighed at the doctor's?"	9 **Represent Findings** The students represented their findings using a pie chart.	10 **Articulate Questions** The teachers and students wondered about measurement. Students wrote or dictated questions that they would like to investigate about measurement.

Phase 2

11 **Group Planning**	12 **Make Predictions**	13 **Engage in Field Work***	14 **Debrief**	15 **Create Representations**
The students measured items found in the classroom. They decided they needed to visit people in and around the school building to see how and what they measured.	Before each site visit, students wrote questions for the experts and predicted the responses. They also made a list of things they thought they would see.	Students collected data to answer their measurement questions. Teachers planned field trips to the Water Survey, Illini Credit Union, ceramics studio, Fire Service Institute, Children's Research Center, and sheep farm. Students interviewed experts, collected artifacts, counted, made observational field sketches, and took pictures with a digital and video camera. *This may take weeks!	Students shared experiences and compared their findings with their predictions.	Students represented their findings with constructions, clay models, paintings, and graphic organizers.

16 **Share**	17 **Plans for Visiting Expert**	18 **Expert Visitor**	19 **Debrief**	20 **Continue Investigation**
The students shared their progress on their representations at whole group meetings. Classmates offered suggestions for refinement.	Students formulated questions about measurement and predicted what the visiting expert might say to answer their questions.	Students interviewed a mechanical engineer, a food inspector, an animal researcher, a potter, a pilot, a seamstress, and a car owner.	Students compared experts' answers to their predictions. They made observational drawings of the artifacts loaned by the experts. Examples include an antique spring scale, pilot calculating equipment and sectional maps.	Students did experiments related to measurement. For example, they weighed collected items and placed them from lightest to heaviest.

Phase 3

21 **Representations**	22 **Articulate What Children Have Learned**	23 **Brainstorm Second Topic Web**	24 **Label and Categorize Ideas**	25 **Plan for Sharing**
Students made many 3-dimensional representations of measurement tools including a coin counter, baler, coil, kiln, and sheep gate.	The whole group discussed what they learned about measurement.	Students listed their ideas of "What they now know" about measurement.	Students formed categories of similar findings, understandings, and ideas. Students completed their Measurement Topic Web 2.	The teachers and students planned the culminating event together. Students decided to make "What's Important about Measurement" murals and display their representations. The teachers planned for students to reflect upon their investigations and create PowerPoint presentations.

26 **Project Highlights** Students prepared to share aspects of the project investigation by using murals, reports, Power Point Presentations, and displays in a museum format.	27 **Imaginative Activity** Students wrote variations on the *Gingerbread Boy* story emphasizing measurement. They integrated new understandings about measurement in their homophones and poems.	28 **Display** Students contributed to the class display. Teachers showed work from all phases to show growth in knowledge and understanding.	29 **Culmination** Parents toured the displays and heard their children share what they had learned about measurement.	30 **Evaluation** Students and parents reflected on the project by responding to a questionnaire. Teachers examined students' project portfolios to assess growth and learning.