CMC Parent Involvement and Awareness:

Sneaker Math Day

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CONCEPTS Measurement, Number

SKILLS Using nonstandard, standard and/or metric measurement of the length, weight, area, perimeter, and capacity of a sneaker; estimating; counting; recording data

MATERIALS A six page *Sneaker Math* booklet for each child (see Student Activity Sheets); plain paper; construction paper; pencils, colored pens, crayons and/or colored pencils; either standard, nonstandard and/or metric measurement tools

DESCRIPTION Theme days offer opportunities for rich mathematical measurement activities. They also meet the mathematical standards for measurement as well as provide hands-on experiences for children. All of the activities provide:

- ✔ experiences with metric, standard, or nonstandard units of measurement depending on the choice of tools;
- ✔ practice with estimation;
- ✔ reinforcement of the concepts of the measurement of length, area, perimeter, capacity, and weight;
- ✔ opportunities to collaborate with a partner.

PREPARATION

1. To prepare the children for "Sneaker Math Day," send an announcement home with the date and details of the event.
2. Depending on the choice of measuring tools, gather the items listed below.

   Metric measurement tools: metric measuring tapes and rulers, metric weights and scales, cubic centimeter cubes

   Standard measurement tools: standard measuring tapes and rulers, ounces/pounds scales, one-inch cubes

   Nonstandard measurement tools: a collection of objects for measuring length, weight, area, and perimeter, such as plastic counting bears, frogs, or pigs; paperclips, plastic chips, beads, fancy macaroni; a balance scale and common objects for weighing and comparing such as small canned goods, small juice boxes, a baby shoe, ball of string, box of crayons, roll of pennies, a wooden apple
3. Place measurement tools around the room so they are easily accessible.
4. Prepare *Sneaker Math* booklets for each child (pages 57–59).
5. Write any new vocabulary words on the board (area, perimeter, weight, length, capacity, etc.).

DIRECTIONS

1. If possible ask children to work as partners.
2. Model all procedures for each activity before partners begin to work on their own. During the modeling, discuss the measurement tools and how to use them.
3. Explain that each child may complete the pages in the booklet in any order depending on access to the measurement tools. Discuss each page of the *Sneaker Math* booklet.
   - **Cover**: Partners write the title "Sneaker Math" on a construction paper cover and then decorate the cover with a picture of a sneaker.
   - **Activity 1**: Partners use a balance scale to compare the weight of their sneakers by placing one sneaker on one side of the scale and another sneaker on the other side. They then record their findings.
   - **Activity 2**: Children estimate and weigh their sneakers. They then record the data.
   - **Activity 3**: Children trace around their sneaker on a sheet of chart paper. They complete the page by estimating and measuring the length, area, and perimeter of the traced sneaker. Suggest using a piece of string to go around the perimeter of the traced line and then measuring the string with the appropriate tool to find the perimeter. Children can count squares to find the area.
   - **Activity 4**: Children estimate and measure the capacity of the inside of their sneaker by filling the sneaker with cubes or counters.
   - **Activity 5**: Children write and illustrate: "Where do my sneakers go at night?"

Meeting the measurement standards can be interesting and engaging when children participate in activities such as these. Similar measurement theme days could focus on socks during "Crazy Socks Day" or peanuts during the World Series on "Nutty Math Day."

EXTENSIONS

- Sing "Where Do My Sneakers Go at Night?" from the tape of the same name by Rick Charette and/or "Walk a Mile" from *Big, Big World* by Bill Harley (available at The Pocket Book, 1-800-95THEME, 1-800-958-4363).
- Read *Shoes* by Elizabeth Winthrop and/or *Whose Shoes Are These?* by Ron Roy.
- Sort and classify the shoes children are wearing.

REFERENCES

Charette, Rick. *Where Do My Sneakers Go?* Windham, ME: Point Record.

Harley, Bill. *Big, Big, World.* Seekonk, MA: Round River Records.

Roy, Ron. *Whose Shoes Are These?* New York: Clarion Books, 1988.

Winthrop, Elizabeth. *Shoes.* New York: Harper & Row, 1986.

Student Activity Sheets follow . . .


Sneaker Math 1

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Sneaker Math Activity 1

Compare your sneaker by weight with others in the room.

My sneaker weighs (more than less than the same as)
circle one

_____ sneaker.

My sneaker weighs (more than less than the same as)
circle one

_____ sneaker.

Sneaker Math Activity 2

How much does your sneaker weigh? Record your estimate first. Then weigh and record the actual weight. Do the same with your partner's sneaker.

_____
Estimate

My sneaker

_____
Actual weight

_____
Estimate

My partner's sneaker

_____
Actual weight

Sneaker Math 2

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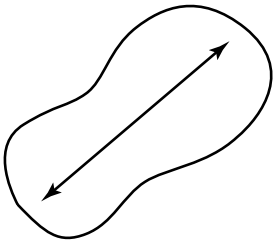
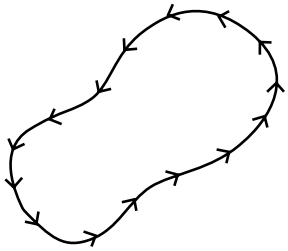
Sneaker Math Activity 3

Trace around your sneaker on paper.



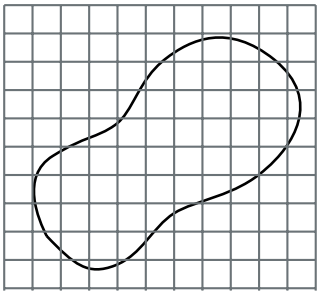
My footprint's length:

_____



My footprint's perimeter:

_____



My footprint's area:

_____

What measuring tools did you use?

_____

_____

_____

Sneaker Math Activity 4

How much does your sneaker hold?

I filled my sneaker with _____


Sneaker Math 3

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Sneaker Math Activity 5


Where do my sneakers go at night?

Sneaker Math Activity 5 Continued

Illustrate here