A Meter of Candy

Activities to connect the concepts of fractions, decimals, and percents…

The linear model - slide 1

- ☐ Students…
  - ■ mark out 100 cm along a paper meter.
 - ■ label each decimeter.

- ☐ Instructional notes…
  - ■ Caution the students to be accurate.
  - ■ Students can take turns marking and labeling.

The linear model - slide 2

- Students…
  - estimate fractional amounts and/or percentages of colors.
  - group by color and count.
  - record data.

- Instructional notes…
  - Students should count and verify a total of 100.
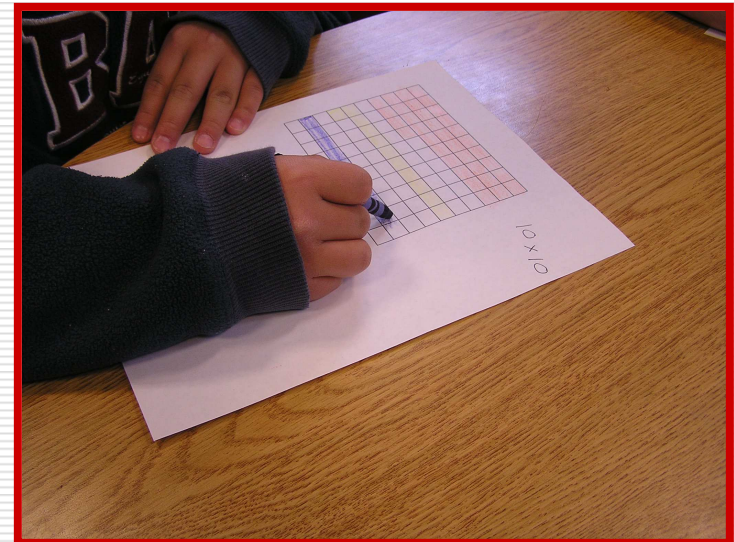 - Be sure to promote students' discussion of the accuracy of their estimations.
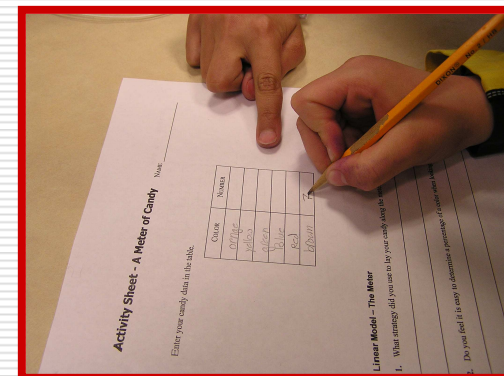
The linear model - slide 3

- ☐ Students…
  - ■ lay candies along the meter flexibly, adjusting to fit 1 piece per 1 cm.
  - ■ color the paper meter according to color.
  - ■ label by fraction, decimal, and/or percent.
- ☐ Instructional notes…
  - ■ Some students want to have 10 pieces fit into 10 cm perfectly (side-by-side), so let them know this probably won't happen!
  - ■ Watch that students do understand that in this activity 1 candy "equals" 1 cm.

The grid area model - slide 1

- ☐ Students…
  - ■ color in grids according to candy color.
- ☐ Instructional notes…
  - ■ Let students choose how to color - some leave spaces (and then have to fill in).
  - ■ Students may question when their colors do not fit neatly into continuous rows.
  - ■ Concept: The colored fractional amounts remain constant no matter the pattern of coloring.

The grid area model - slide 2

- ☐ Students…
  - ■ color grids that are 10x10, 2x50, 4x25, and 5x20.
- ☐ Instructional notes…
  - ■ Comparison of the different rectangular grids promotes discussion of what is 17/100? 0.17? 17%?
  - ■ Have students think…in this activity, what is the unit (the whole)?

The circle area model - slide 1

- ☐ Students…
  - ■ take their meter and tape to form a circle.
  - ■ mark every point where two colors meet and label the color wedges.
- ☐ Instructional notes…
  - ■ Create the circle with a diameter of 12.5 inches or 32 cm and mark the center.
 - ■ Ask the students if they feel their meter is represented accurately around the circle.

The circle area model - slide 2

- ☐ Students…
  - ■ connect each mark with the center point of the circle to form "pieces of the pie"
- ☐ Instructional Notes…
  - ■ Have students use a straightedge!
  - ■ Student discussion is important. If they felt the meter colors were accurately represented around the circle, are the "pieces of the pie" an accurate reflection of area in a circular model?

The circle area model - slide 3

- ☐ Students…
  - ■ label the pie graph.
- ☐ Instructional Notes…
  - ■ Student can label using fractions, decimals, and/or percents - teacher directs.
  - ■ This is a great journaling time. They can reflect on the mathematical information presented in one pie graph; higher students can compare graphs.
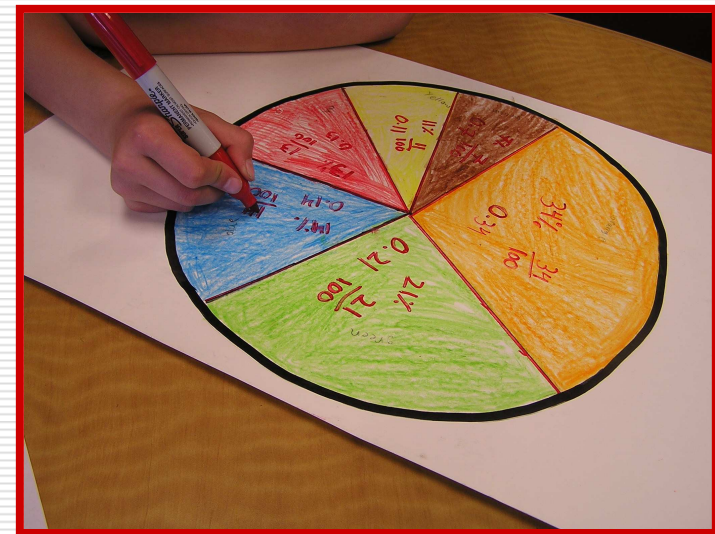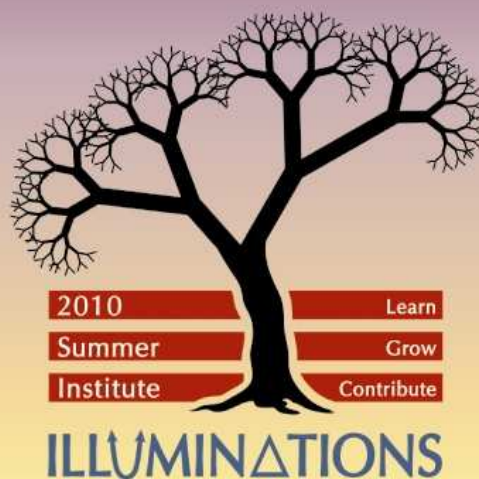
The circle area model - slide 4

- ☐ Students…
  - ■ read and discuss the pie graphs.
  - ■ write and post math problems based on the graph's information.
- ☐ Instructional Notes…
  - ■ Differentiated, small group work lets you model appropriately leveled math questions based on one or more graphs.
  - ■ Have students write their name and answer on the back of a "stickie." This can be an assessment for you and a self-check for students!