

ROSEMARY REUILLE IRONS · CALVIN IRONS

# measurement

MATHEMATICS FOR YOUNG MINDS

Sample Activities

# Making Equal Weight

Children add weight to pan balances to make objects in the pans have equal weight.

Blackline Master 16 (page 88)

Box of soft and hard toys

Two pan balances

Box of loose washers

One piece of paper for each child

Pencils or markers

Two unusual hats



## Preparation

- Collect the toys over several days before the activity. Place pan balances, box of toys, paper, and writing tools on a worktable. Place one hat near each pan balance. Copy Blackline Master 16 onto large paper. Place the instructions near the worktable.  
*Note:* Keep the box of toys for Predict the Weight (page 71).



## Activity



Say, **We will be investigators today. Put the hat on when it is your turn to be the investigator.** Put on a hat. Place one toy in each pan. Ask the children to identify which toy weighs more and which toy weighs less by looking at the balance. Place washers in the pan that has less weight until the pans balance. Say, **The (doll) and (6) washers equal the weight of the (wooden soldier).** Ask for suggestions on how to record the investigation.

Read the instructions from the blackline master to the class. Say, **When it is your turn to investigate:**

**Step 1. Put on an investigator hat.**

**Step 2. Choose two toys and put one toy in each pan.**

**Step 3. Tell the other child the toy that weighs more and the toy that weighs less.**

**Step 4. Add washers to one pan until the pans have equal weight.**

**Step 5. Record the results on your own paper.**

**Step 6. Exchange roles with the other child.**

Leave the instructions visible at the worktable.



## Extension

Instruct each pair to show their recorded results to another pair of children. Say, **Show and tell the other pair your results. Tell them your thinking.**

# Predict the Weight

Children predict and investigate total weight of two objects using a pan balance.

Box of soft and hard toys from Making Equal Weight (page 70)

One pan balance

Box washers (some loose washers and some tied in tens)

Paper, pencils, and non-permanent markers



## Preparation

- Place toys, pan balance, and washers on a worktable. Place the paper and writing tools nearby.



## Activity

Work with a group of four children. Ask one child to choose two toys. Say, **Find the weight of each toy. Use the washers. Draw a picture or write the name of each toy and record the weight by writing the number of washers next to each picture.** Ask the other children to help with the counting. Place the washers back in the washer box, and then place the two toys in one pan and place washers in the other pan to figure the combined weight of the two toys.

Ask all the children to silently predict what they think the total weight is for the two toys. Say, **Put both toys in one pan and make the pan balance by putting washers in the other pan. What was your prediction? What is the total?** Ask the child to record the total for the two toys on their paper.

Repeat the process and questioning for the other children in the group.



## Extension

Children are seated with their record sheets. Ask a child to state the weight of each of their toys. Write the two weights on the board with an addition symbol. Then say to the whole class, **How do you know what the total will be? Tell us your thinking.** Encourage discussion. Repeat with other children's toy weights results.