

CSI: Child Scientist Investigates!



Young children are keen observers of their surroundings. Describing, collecting, and recording information are important skills (see the Illinois Early Learning and Development Benchmarks 11.A.ECa, 11.A.ECb, 11.A.ECc, 11.A.ECd, and 13.B.ECa). Here are some ways you can draw on preschoolers' natural curiosity to teach them about science and scientific methods.

Start with observation

- **Ask them about their classroom.** Is the width greater than the length? Help them measure using a yardstick or their own feet. Play scavenger hunt games, asking them to find objects of the same color, all square objects, or all objects used for writing. Show them how to weigh these items.
- **Tell them about what you noticed on the way to school.** “Three machines were digging a big hole in the concrete. It smelled like wet dirt. They were so noisy, I covered my ears.” You can introduce correct terms to describe size, shape, color, location, numbers, and activity.
- **Invite the children to take turns describing what they noticed on the way to school.** Did they see any birds, squirrels, dogs, or other animals? Did they pass any schools, gas stations, or fire stations on the way? What sounds did they hear? What odors did they smell? What did they touch?
- **Ask children to share their observations with others during group activities.** Give everyone a chance to listen to bells, whistles, or small, sealed containers of beans or sugar. Ask them to talk about the sounds: loud or soft, high or low, a clang or a whisper? Show them a bug collection or pictures of insects. Can they describe how the insects are alike and different from each other?

Teach children to collect information

- **Provide tools for a science center.** Plastic containers (for collecting specimens), magnifiers, binoculars, magnets, measuring tapes, and balances allow children to study objects in detail. Containers of water allow them to rinse off dirt, see what sinks or floats, and observe how water changes the way some things look.
- **Set up a science table.** Materials can include boxes of buttons, rocks, sand, magnets, blocks, and marbles. If possible, include a rock with a fossil imprint.
- **Provide books, magazines, or materials downloaded from the Internet.** Children can use these resources to find information on topics they are interested in. Read aloud to the children, or let them look at illustrations. Help them take notes about the topic.

Teach preschoolers to record their observations

- **Make observational drawings.** Each child needs a pencil, paper, and a clipboard. Ask the children to look closely at an object that interests them and draw exactly what they see. Let them compare their observations.
- **Learn to make charts and simple graphs to keep track of what they count.** They can also make murals or create models from materials such as clay or wood.
- **Use technology.** Invite them to talk into a tape recorder about what they observe. Later, write down their comments. Help them take pictures using digital or instant cameras.
- **Talk about ways to share observations with friends and family.** Help them create displays of their drawings, notes, photos, models, and graphs for others to see.

 For related Web resources, see “CSI: Child Scientist Investigates!” at <http://illinoisearlylearning.org/tips.htm>.

Any opinions, findings, conclusions, or recommendations expressed in this tip sheet are those of the author(s) and do not necessarily reflect the views of the Illinois State Board of Education.



29 Children's Research Center
University of Illinois at Urbana-Champaign
51 Gerty Dr. • Champaign, IL 61820-7469
Telephone: 217-333-1386 • Fax: 217-244-7732
Toll-free: 877-275-3227
Email: iel@illinois.edu
Internet: <http://illinoisearlylearning.org>

Illinois State
Board of Education