



THINKING CAP

INSIDE THE NATIONAL INSTITUTES OF HEALTH'S Clinical Center in Bethesda, a team of doctors, engineers, technicians, and physical therapists have gathered to map the brain activity of a two-year-old subject named Ethan. The goal is to study patterns during development of key motor skills in children—research made possible by the high-tech cap the boy is wearing. Whenever Ethan steps, reaches, or throws, the headgear delivers brain signals to the team's computers. Previously, such information had to be captured via MRI, which requires the person to lie motionless.

Ethan, a healthy volunteer, is one of several children the group plans to bring in each month in order to track their brain development over time. It's too early to predict what benefits might come out of such research, but it could one day lead to new treatments for cerebral palsy and other disorders.

For the assembled experts, this is serious business. Ethan, on the other hand, just seemed to be having fun. "The real challenge is keeping the kids happy," says Katharine Alter, a senior research clinician in rehabilitation medicine at NIH. "Two-and-a-half-year-olds have a lot of opinions about what should happen, what shouldn't happen, what's entertaining, and what's not. It takes intense distraction."

—WILL PEISCHEL

Photograph by LAUREN BULBIN