What an amazing project! How proud we were to contemplate the results and to present them to the visitors. It’s a project that got my students actively involved from the beginning given its inclusionary nature. To work with robots immediately got their attention. To work with aïbo was tempting too. The assembling and programming of the robots posed a real challenge and appeared to entail the kind of problem solving typically reserved for technology experts only. Those with less affinity in technology had the opportunity to be involved in the construction of a city making the project meaningful to all. To know that our city would then be presented in a public space as prestigious as the Science Center of Montreal really helped maintain the motivation over time. We could not just bail out either, we had an obligation to the organizers of the project to deliver, which got us through the last weeks during which stress mounted and lack of time became a challenge. It gave us the energy and creativity to keep going and not to let go, despite challenges they experienced. The project became authentic and meaningful to those that invested in it, while demanding much academic rigor. The project also supported the solicitation of experts outside of school and offered youth and their teachers with the opportunity to develop relationships with educators of the science center.
Robotics has gained much momentum as an educational tool according to some researchers (Rusk et al., 2008). A growing number of schools and youth programs have turned to robotics as a means to offer youth with designing and programming opportunities in the context of open-ended projects that focus on a theme. Research suggests that a focus on a theme (e.g., construction of a city with robots), rather given then a challenge (e.g., construction of robot that can transport a bucket of water without spilling it), is particularly promising in that it leads to higher levels of engagement and creativity given its double-focus on problem finding and problem solving. The multi-disciplinary quality of robotics can also support the exploration of algebra and trigonometry, design and innovation, electronics and programming, forces and laws of motion, to name some possibilities.