

FUN WITH WHEELS & LEVERS DAY PROGRAM



BENNETT CENTRE

GRADE 4 SCIENCE
WHEELS & LEVERS

**Please have everyone bring
a second pair of shoes to be
used indoors.**

This day program runs from 9:30-2:30 and includes both indoors and outdoors activities. Students will be given an opportunity for hands on exploration of wheels, levers, pulleys and gears. The following is a list of activities that may be included in the day program. Learner expectations that will be addressed are indicated beside each activity.

Working inside with Lego Dacta the students will:

- SLE 6,7,8 1. Construct models of levers used for a variety of tasks - predict and then experiment with those models testing the amount of work by moving the load, fulcrum and/or effort
- SLE 4 2. Construct simple models using pulleys with different belt arrangements and fixed pulley wheels of the same and different sizes
- SLE 3,4,5 3. Construct models using simple gears, gear systems that change the direction of rotation, drive systems that transfer motion from one shaft to another as well as gear arrangements for gearing up or gearing down
- SLE 3 4. Construct models that combine gears, pulleys and/or wheels and axles (optional)

Working outside students will:

- SLE 3 1. Raise an object with a simple pulley and then with a double pulley (moveable) comparing the effort needed in both trial
- SLE 1,6 2. Move a timber using levers and rollers
- SLE 6,7,8 3. Operate some simple levers e.g. hammer, crowbar
- SLE 6,7,8 4. Raise an adult off the ground using a teeter-totter (first class lever)
- SLE 7 5. Experiment with the placement of weight in a wheelbarrow and how easy or how difficult it is to move the weight depending on its position

***For outside activities students should be dressed appropriately considering the weather conditions. Hats, mitts, snow pants and boots are highly recommended.**

Because students will be working at 5 different stations outdoors, parent helpers at each station would be of assistance. Students should be divided into 5 groups *for outside activities and partners for indoor activities (there are 16 indoor stations – if more than 32 students then 3 at a station). ***If you have booked 2 groups or classes, remember to split each of those groups or classes into 5 groups for outside activities.**

Please have students bring a pencil and wear a name tag. Students will be provided with a student booklet. The Bennett Centre will provide an instructor, materials and equipment.

ALLERGY ALERT REMINDER
The Bennett Centre is fragrance free and peanut free for the safety and comfort of our visitors and staff.