

## Grade 8 Nelson Science & Technology Perspectives 2009

Based on a classroom of 30 students

Item #	Description	Quantity Needed	Price
<i>*** All Science Education Investigations assume that the students and the teacher have adequate eye protection, aprons, and gloves when needed combined with common sense during the activity</i>			
573991-016	Safety Glasses - black frames	30	\$3.10
577927-016	Safety Goggles (chemical & splash )	30	\$3.70
571076-016	Disposable Lab Aprons, pkg of 100	1	\$34.45
1016978-016	Nitrile Gloves - non latex, box 100 Small	1	\$11.50

### Activity 1.3 Examining Physical Systems

531263-016	Microscope 4x, 10x, 40x objective, LED, CSA	6	\$269.00
060-0600-016	Flashlight - 2D cell batteries	6	\$3.95
	Scissors	Local	
	Nutcraker	Local	
	Wind-Up Toys	Local	
	Hammer & Board with Nails	Local	
	Salad Tongs	Local	
	Adjustable Wrench	Local	
	Hair Dryer	Local	
	Musical Instrument - various	Local	
	Stapler	Local	

### Investigation 2.4 Mechanical Advantage & Pulleys

574286-016	Spring Scale - 2.5N, Blue	10	\$5.40
574289-016	Spring Scale - 5N, Green	10	\$5.40
574130-016	Spring Scale - 10N	10	\$5.40
574292-016	Spring Scale - 20N	5	\$5.40
574133-016	Spring Scale - 30N	5	\$5.40
573782-016	Single Pulley - nylon wheel with aluminum yoke	30	\$2.65
573785-016	Double Pulley - nylon wheels with aluminum yoke	30	\$4.10
573788-016	Triple Pulley - nylon wheels with aluminum yoke	30	\$5.50
595401-016	Brass Mass Set - Hooked	2	\$90.00
581199-016	String - pulley cord 150 feet, 45lb white nylon	2	\$5.95
531885-016	Pulleys as Simple Machines Complete Kit	2	\$104.95
	Metre Stick	Local	

### Investigation 2.6 Less Work or Easier Work? Investigating Levers

574286-016	Spring Scale - 2.5N, Blue	10	\$5.40
574289-016	Spring Scale - 5N, Green	10	\$5.40
574130-016	Spring Scale - 10N	10	\$5.40
574292-016	Spring Scale - 20N	5	\$5.40
574133-016	Spring Scale - 30N	5	\$5.40
595401-016	Brass Mass Set - Hooked	2	\$90.00
581199-016	String - pulley cord 150 feet, 45lb white nylon	2	\$5.95
532034-016	Triangular Prisms -set of 3 right angles	4	\$13.00
576408-016	New York Balance - demo for lever laws	1	\$85.50
	Masking Tape	Local	

Paper Clips	Local
Scissors	Local
Metre Stick	Local
Wooden pieces - rulers	Local

### Investigation 3.4 Examining Efficiency

573782-016	Single Pulley - nylon wheel with aluminum yoke	30	\$2.65
573785-016	Double Pulley - nylon wheels with aluminum yoke	30	\$4.10
573788-016	Triple Pulley - nylon wheels with aluminum yoke	30	\$5.50
595401-016	Brass Mass Set - Hooked	2	\$90.00
581199-016	String - pulley cord 150 feet, 45lb white nylon	2	\$5.95
531885-016	Pulleys as Simple Machines Complete Kit	2	\$104.95
574286-016	Spring Scale - 2.5N, Blue	10	\$5.40
574289-016	Spring Scale - 5N, Green	10	\$5.40
574130-016	Spring Scale - 10N	10	\$5.40
574292-016	Spring Scale - 20N	5	\$5.40
574133-016	Spring Scale - 30N	5	\$5.40
	Rulers	Local	

### Activity 3.5 Solve a Technological Problem - Hang On!

573782-016	Single Pulley - nylon wheel with aluminum yoke	30	\$2.65
573785-016	Double Pulley - nylon wheels with aluminum yoke	30	\$4.10
573788-016	Triple Pulley - nylon wheels with aluminum yoke	30	\$5.50
595401-016	Brass Mass Set - Hooked	2	\$90.00
581199-016	String - pulley cord 150 feet, 45lb white nylon	2	\$5.95
531885-016	Pulleys as Simple Machines Complete Kit	2	\$104.95
574286-016	Spring Scale - 2.5N, Blue	10	\$5.40
574289-016	Spring Scale - 5N, Green	10	\$5.40
574130-016	Spring Scale - 10N	10	\$5.40
574292-016	Spring Scale - 20N	5	\$5.40
574133-016	Spring Scale - 30N	5	\$5.40
560977-016	Bulk Gears bag of 300 , 30,40,20 tooth gears	1	\$77.00
190-9291-016	Syringe 10cc package of 6	3	\$5.20
190-9280-016	Syringe 10cc package of 6	3	\$9.40
190-9270-016	Syringe 30cc package of 6	3	\$11.50
564319-016	Vinyl Tubing 3/16ID x 50; roll	2	\$18.00
214731-016	Sandpaper Assortment 10cm pieces, pack of 6	2	\$3.95
247872-016	Easy Cutter precision tool	1	\$22.45
	Glue Gun - low temperature	Local	
	Hand Drill	Local	
	Hand Saw	Local	
	Mitre Box	Local	

### Activity 4.4 Exploring the Microscope

531263-016	Microscope 4x, 10x, 40x objective, LED, CSA	8	\$269.00
529624-016	100mL Beaker Pyrex Vista case of 12	2	\$31.80
569918-016	Plastic Slides -- box of 144	1	\$9.95
569912-016	Cover Slips 18x18mm vinyl unbreakable box 100	1	\$3.50
583149-016	Forceps - student grade, medium point	15	\$1.70
H1280944-016	Lugols Solution ( Iodine ) 100mL	1	\$7.95
1294734-016	Eyedroppers - bottle & dropper box of 12	1	\$17.00
	Water	Local	
	Onions	Local	
	Scissors	Local	
	Newspaper	Local	

**Activity 4.6 Comparing Plant and Animal Cells**

531263-016	Microscope 4x, 10x, 40x objective, LED, CSA	8	\$269.00
566843-016	Elodea Prepared Slide - plant	8	\$5.75
566117-016	Epithelium Prepared Slide - animal	8	\$5.20

**Investigation 5.4 Modelling and Observing Diffusion**

569918-016	Plastic Slides -- box of 144	1	\$9.95
569912-016	Cover Slips 18x18mm vinyl unbreakable box 100	1	\$3.50
1294734-016	Eyedroppers - bottle & dropper box of 12	2	\$17.00
529626-016	250mL Beaker Pyrex Vista case of 12	2	\$27.45
581199-016	String - pulley cord 150 feet, 45lb white nylon	2	\$5.95
531710-016	25mL Graduated Cylinder - Pyrex Vista case of 12	1	\$68.00
1278596-016	Starch Solution 1% EZ Prep - makes 1L	1	\$3.15
576696-016	Dialysis tubing 16mm x 25' roll	1	\$25.85
594306-016	Funnel - Plastic Utility style 4 oz capacity	15	\$1.60

Water	Local
Sandwich Bags	Local
Scissors	Local

**Investigation 5.5 Modelling and Observing Osmosis**

529626-016	250mL Beaker Pyrex Vista case of 12	2	\$27.45
581199-016	String - pulley cord 150 feet, 45lb white nylon	2	\$5.95
531710-016	25mL Graduated Cylinder - Pyrex Vista case of 12	1	\$68.00
594306-016	Funnel - Plastic Utility style 4 oz capacity	15	\$1.60
576696-016	Dialysis tubing 16mm x 25' roll	1	\$25.85
1017513-016	Triple Beam balance - Frey 610g	3	\$85.00
581208-016	Wash Bottles 250 mL package of 12	2	\$5.25
576230-016	Sucrose 1000g lab grade crystals	1	\$8.95

Water	Local
Sandwich Bags	Local
Scissors	Local

**Activity 6.3 Examining Unicellular Organisms**

531263-016	Microscope 4x, 10x, 40x objective, LED, CSA	8	\$269.00
569918-016	Plastic Slides -- box of 144	1	\$9.95
569912-016	Cover Slips 18x18mm vinyl unbreakable box 100	1	\$3.50
1294734-016	Eyedroppers - bottle & dropper box of 12	2	\$17.00
529626-016	250mL Beaker Pyrex Vista case of 12	2	\$27.45
568013-016	Glycerine Solution 10% Lab Grade 500mL	1	\$12.95
	Paramecium Live Culture		
581416-016	Prepared Slide Set - Invertebrates basic set of 12	2	\$90.00

**Activity 7.4 Comparing Flow Rate**

521715-016	100mL Graduated Cylinder Pyrex box 12	1	\$97.00
529626-016	250mL Beaker Pyrex Vista case of 12	2	\$27.45
529624-016	100mL Beaker Pyrex Vista case of 12	2	\$31.80
201-9653-016	Stopwatch - Mychron set of 6 with storage case	1	\$35.65
576239-016	Retort Stand with Ring Clamp	8	\$28.70
594306-016	Funnel - Plastic Utility style 4 oz capacity	15	\$1.60
077221-016	Wax Pencil - box of 12 Black	1	\$11.95
589353-016	Weighing papers 10cm x 10cm pkg 500	1	\$8.75
214731-016	Sandpaper Assortment 10cm pieces, pack of 6	2	\$3.95

Local Liquids - Syrup, oils, ketchup, sauces etc.	Local
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Water	Local
Wooden Board and Block ( textbook / rulers )	Local

### Investigation 7.5 Warming Things Up

521715-016	100mL Graduated Cylinder Pyrex box 12	1	\$97.00
529626-016	250mL Beaker Pyrex Vista case of 12	2	\$27.45
529624-016	100mL Beaker Pyrex Vista case of 12	2	\$31.80
201-9653-016	Stopwatch - Mychron set of 6 with storage case	1	\$35.65
576239-016	Retort Stand with Ring Clamp	8	\$28.70
594306-016	Funnel - Plastic Utility style 4 oz capacity	15	\$1.60
077221-016	Wax Pencil - box of 12 Black	1	\$11.95
589353-016	Weighing papers 10cm x 10cm pkg 500	1	\$8.75
214731-016	Sandpaper Assortment 10cm pieces, pack of 6	2	\$3.95
1017386-016	Thermometer - white back, red spirit	15	\$4.95
190-9291-016	Syringe 10cc package of 6	3	\$5.20
190-9280-016	Syringe 10cc package of 6	3	\$9.40
190-9270-016	Syringe 30cc package of 6	3	\$11.50
	Local Liquids - Syrup, oils, ketchup, sauces etc.	Local	
	Water	Local	
	Wooden Board and Block ( textbook / rulers )	Local	

### Activity 8.2 Comparing Mass and Volume

521715-016	100mL Graduated Cylinder Pyrex box 12	1	\$97.00
1017513-016	Triple Beam balance - Frey 610g	3	\$85.00
529626-016	250mL Beaker Pyrex Vista case of 12	2	\$27.45
	Corn Syrup	Local	
	40 Pennies	Local	
	Water	Local	

### Activity 8.4 Measuring Density: Making a Hydrometer

583896-016	Hydrometer	1	\$33.20
077221-016	Wax Pencil - box of 12 Black	1	\$11.95
521715-016	100mL Graduated Cylinder Pyrex box 12	1	\$97.00
086004-016	Modelling Clay 1LB box	2	\$2.15
576242-016	Food Colouring 4 colours 50mL each	2	\$6.95
	Corn Syrup	Local	
	Liquid Detergent	Local	
	Vegetable Oil	Local	
	Water	Local	

### Investigation 9.2 Investigating Fluids in Closed Systems

190-9291-016	Syringe 10cc package of 6	3	\$5.20
190-9280-016	Syringe 10cc package of 6	3	\$9.40
190-9270-016	Syringe 30cc package of 6	3	\$11.50
564319-016	Vinyl Tubing 3/16ID x 50; roll	2	\$18.00
077221-016	Wax Pencil - box of 12 Black	1	\$11.95
	Water	Local	

### Activity 9.3 Putting Fluids to Work

190-9291-016	Syringe 10cc package of 6	3	\$5.20
190-9280-016	Syringe 10cc package of 6	3	\$9.40
190-9270-016	Syringe 30cc package of 6	3	\$11.50
564319-016	Vinyl Tubing 3/16ID x 50; roll	2	\$18.00
077221-016	Wax Pencil - box of 12 Black	1	\$11.95

574286-016	Spring Scale - 2.5N, Blue	10	\$5.40
574289-016	Spring Scale - 5N, Green	10	\$5.40
574130-016	Spring Scale - 10N	10	\$5.40
574292-016	Spring Scale - 20N	5	\$5.40
574133-016	Spring Scale - 30N	5	\$5.40

### Solve a Technical Problem - 9.6 Solving Problems with Hydraulics and Pneumatics

190-9291-016	Syringe 10cc package of 6	3	\$5.20
190-9280-016	Syringe 10cc package of 6	3	\$9.40
190-9270-016	Syringe 30cc package of 6	3	\$11.50
564319-016	Vinyl Tubing 3/16ID x 50; roll	2	\$18.00
077221-016	Wax Pencil - box of 12 Black	1	\$11.95
214731-016	Sandpaper Assortment 10cm pieces, pack of 6	2	\$3.95
247872-016	Easy Cutter precision tool	1	\$22.45
	Paper Gussets	Local	
	Glue Gun - low temperature	Local	
	Hand Drill	Local	
	Hand Saw	Local	
	Mitre Box	Local	
	Scrap materials	Local	
	Wooden Dowels	Local	
	Popsicle Sticks	Local	
	T-Valve for Syringes/ tubing	Local	

### Activity 10.1 Personal Water Use

201-9653-016	Stopwatch - Mychron set of 6 with storage case	1	\$35.65
594606-016	1000mL Beaker, plastic , graduated	6	\$5.80
	Water	Local	

### Solve a Technological Problem 10.6 A Water Filtration Device

57429-016	Retort Stand with 3 & 4" rings ( complete set )	6	\$28.70
564856-016	Clamps - right angle	6	\$2.50
529659-016	Erlenmeyer Flask 125mL box of 12	1	\$38.50
594306-016	Funnel - Plastic Utility style 4 oz capacity	15	\$1.60
599004-016	Filter Paper - 7cm box of 100	1	\$4.45
580276-016	Sieves - Set of 5 plastic and metal mesh	3	\$36.00
	Empty 2L pop bottles	Local	
	Samples of local Stream / Pond Water	Local	
	Cotton pieces, Wool scraps, denim pieces etc..	Local	

### Activity 11.6 Water Testing

531710-016	25mL Graduated Cylinder - Pyrex Vista case of 12	1	\$68.00
594306-016	Funnel - Plastic Utility style 4 oz capacity	15	\$1.60
1017386-016	Thermometer - white back, red spirit	15	\$4.95
587052-016	pH test strips package of 100	1	\$9.95
529717-016	Water Testing Kit ( Urban Water Testing )	1	\$41.00
529409-016	Conductivity Apparatus - LED audible	2	\$29.50
529686-016	Test Tubes - package of 50 16x150mm	1	\$21.30



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