

Consumables List

Consumables	Sources	Approximate cost	Suggestions for use	Special notes	Checklist
Adhesive Tape	Stationers Supermarkets Budget retail stores	12mm x 66mm, \$195 per roll Pkt of 4 rolls 15mm x 10m \$2.95	Construction Microscope slides Collecting cells and fingerprints	Adhesive dries out on old stock.	
Alum [Aluminium potassium sulfate, $\text{AlK}(\text{SO}_4)_2$]	Pharmacists Scientific suppliers	\$12.45 per 500g	Crystal growing	Poisonous in large quantities	
Aluminium foil [Al]	Supermarkets	\$1.99 - \$3 per roll	Covering containers Electricity		
Ammonia solution [NH_3 , (aqueous)] (cloudy ammonia)	Supermarkets Scientific suppliers	\$1.95 per 750mL \$31 per 2.5L	An alkaline (base) solution Gas diffusion	Poison - irritating gas DO NOT mix with bleach because chlorine gas is produced (refer to Safety and Science, page 47).	
Baking soda [Sodium bicarbonate, NaHCO_3]	Supermarkets Scientific suppliers	\$1.22 per 210g	Dissolving - temporary and permanent change	Alkaline solution It reacts with acids to produce carbon dioxide (CO_2) gas.	
Balloons	Supermarkets Budget retail stores	\$6.99 pkt 100 \$1.95 pkt 25	Action/reaction for hovercraft (rockets) To model expanding universe theory		
Bamboo skewers	Supermarkets	\$2.75 pkt 100	Use as axles.		

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Benedict's solution	Scientific suppliers Secondary schools	\$31.00 per 500mL	Testing for the presence of simple sugars	Use container of hot water as source of heat. Solution contains copper sulfate (refer to Safety and Science, pages 48 and 61).	
Bleach (contains sodium hypochlorite, NaHClO)	Supermarkets	\$1.29 per 750mL	For whitening paper and cleaning	Poison - irritating gas DO NOT mix with acids or ammonia because chlorine gas is produced (refer to Safety and Science, page 47).	
Blu-tack	Supermarkets	\$2.89 pkt			
Borax [Sodium borate, Na₃BO₄]	Scientific suppliers	\$9.35 per 500g	Making slime	Refer to page 66 of Making Better Sense of the Material World for handling.	
Bottles, PET (soft drink bottles)	Plastics retailers Educational suppliers		Making rockets Funnels	Use only a fine-toothed saw for cutting PET bottles, NOT a craft knife.	
Bulbs, Garden	Garden centres		Growing		
Bulbs, Light	Electrical suppliers	99c - \$1.50	Electrical circuits		
Cabbage (red)	Supermarkets		Red cabbage juice is an acid-base indicator.	Other plants such as impatiens, hibiscus, or beetroot also provide coloured extracts that can be used as acid-base indicators.	
Calcium chloride [Ca(Cl)₂]	Scientific suppliers	\$21.78 per 500g	Moisture absorbent		

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Candles	Supermarkets Craft shops Budget retail stores	\$2.99 per 6 (large)	Properties of matter Change of state Energy conversion Composition of air	Birthday candles are often appropriate. Do not use candles for heating.	
Cardboard tubes	Homes		Modelling Sound activities Light activities		
Cellophane	Stationers		Colours Light		
Chalk	Supermarkets Budget retail stores	39c per 12 white sticks			
Chocolate chippies	Supermarkets	\$1.79 pkt	Mining activity (how to mine the chips from the bedrock) Fair test (comparing chips in different brands)		
Cling film	Supermarkets	\$3.99 per 45mL \$1.69 per 15mL	Covering		
Citric acid	Supermarkets	\$2.23 per 100g	An acid Making sherbet		
Clay	Educational suppliers	\$25 per 10 kg	An alternative to plasticine for modelling and construction Investigating properties		

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Cobalt (II) Chloride Co(Cl ₂)	Pharmacists Scientific suppliers	\$28.50 per 100g	Crystal gardens Coal gardens Soak paper in solution, dry, and use as a humidity (water) indicator	Refer to Safety and Science, page 62.	
Coloured sweets and inks			Chromatography	Darker colours give better results.	
Copper sulfate [CuSO ₄]	Scientific suppliers Garden centres Fertiliser works	\$22.00 per 2kg \$8 per kg	Crystal growing	Poison (1 tsp can kill a small child). Keep in locked cupboard. Refer to <i>Safety and Science</i> , pages 48, 61, and 62.	
Cordial powders	Supermarkets		Dissolving Fair testing (speed of dissolving; effect of temperature)		
Cornflour	Supermarkets	80c pkt	Mixtures Dissolving - temporary and permanent change Making oobleck (see pages 64 - 65 of <i>Making Better Sense of the Material World</i> for recipes).		
Cotton buds	Supermarkets	\$1.26 pkt 100	Taste testing	Ensure that each bud is used by only one child.	
Crayons	Stationers Budget retail stores		Temporary and permanent change		

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Detergent	Supermarkets Scientific suppliers	\$2.50	Cleaning Making bubbles		
Epsom salts [Magnesium sulfate, MgSO ₄]	Garden suppliers Scientific suppliers	\$4 per kg \$17 per 500g	Growing crystals	Bitter tasting Poisonous in large quantities Powerful laxative	
Fabric samples	Fabric shops Homes		Sorting activities Investigating properties Electrostatics		
Felt pens	Budget retail stores Stationers Supermarkets	\$2 - \$6	Chromatography	Water-based pens are most convenient for chromatography.	
Filter paper (economy grade)	Scientific suppliers	\$6.15 pkt 100	Chromatography Separation Making indicator paper	Alternatively, use paper towels or coffee filters.	
Flour	Supermarkets	\$2.10 per 1.5kg	Dissolving - temporary and permanent change Mixtures		
Food colouring	Supermarkets	\$1.35 per 28mL	Surface tension Making oobleck and slime		
Gelatine or jelly crystals	Supermarkets	\$3 per 125g	Making jellies (fair testing)		
Gloves (latex, disposable)	Scientific suppliers Medical suppliers Supermarkets	\$13.60 per 100	For protection		

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Glucose [C ₆ H ₁₂ O ₆]	Supermarkets Pharmacists Scientific suppliers	\$3.55 per 450g	Dissolving - temporary and permanent change Demonstrating Benedict's test		
Glue (PVA - poly vinyl acetate)	Supermarkets Hardware stores Budget retail stores	\$2.95 per 100mL	Making slime Fair testing Constructions		
Golden syrup	Supermarkets	\$2.35 per kg	Making hokey-pokey Dissolving - temporary and permanent change Mixtures		
Glycerine (glycerol)	Pharmacists Scientific suppliers Stock and station agents	\$13.20 per 500mL	Making bubbles Fair testing		
Ice	Service stations Liquor wholesalers	\$2.5 per bag	Cooling States of matter Temporary and permanent change		
Iceblock sticks	Supermarkets	\$1.70 pkt 50	Stirring Mixing Constructions		

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Iodine (I₂) Crystals	Pharmacists Scientific suppliers	\$24.20 per 100g	States of matter	Iodine is poisonous and stains. Stains can be removed if they are immediately treated with sodium thiosulphate solution. Refer to <i>Safety and Science</i> , pages 49, 51, and 58. Iodine solution can be made by dissolving iodine crystals in methylated spirits.	
Iron (II) ammonium sulfate [Ferrous ammonium sulfate, Fe(NH₄)₂(SO₄)₂]	Scientific suppliers	\$13.90 per 250g	Growing crystals, crystal gardens, and coal flowers	Refer to <i>Safety and Science</i> , page 62.	
Iron (II) sulfate [FeSO₄]	Scientific suppliers Garden centres	\$15.30 per 500g \$3 per 500g	Growing crystals, crystal gardens, and coal flowers	Refer to <i>Safety and Science</i> , page 62.	
Iron filings [Fe]	Scientific suppliers	\$10 per 500g	Demonstrating magnetic fields	Keep dry, or else they will rust.	
Labels	Stationers	\$1.50 pkt 200			
Lemon juice (citric acid)	Supermarkets	\$1.70 per 250mL	Acid Invisible writing Taste testing (sour taste)		
Lime water	Scientific suppliers Secondary school	\$2.75 per 750mL	Testing for carbon dioxide		
Litmus paper (neutral)	Scientific suppliers	\$4.40 for 100 strips	Acid-base indicator		
Manganese sulfate [MnSO₄]	Scientific suppliers	\$15.50 per 250g	Growing crystals, crystal gardens, and coal flowers	Refer to <i>Safety and Science</i> , page 62.	

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Marble chips [Calcium Carbonate CaCO ₃]	Scientific suppliers Stonemasons	\$15.50 per 500g	Rock types Making carbon dioxide (add acid)	Fossils can be seen in many marble panels in buildings.	
Marshmallows	Supermarkets	\$2.99 per 400g			
Matches	Supermarkets	\$1.32 pkt 50 (extra long)			
Methylated spirits	Supermarkets Scientific suppliers Service stations	\$4.28 per L \$14 per 2L	Dissolving - temporary and permanent change Chromatography	Poisonous and flammable Store in a locked cupboard. Seek medical advice if swallowed. Refer to Safety and Science, page 46.	
Milk cartons	Home	Free	Paper: plant pots, storage Plastic: funnels, jugs, storage	Make sure these are well washed.	
Newsprint	Stationers Budget retail stores Printing works		Display Brainstorming Protective covering		
Oil Vegetable	Supermarkets	\$5.92 per 2L	Dissolving - temporary and permanent change		
Machine	Service stations	\$2.47 per 500mL	Friction activities		
Paper (coloured)	Stationers Budget retail stores		Construction Posters Displays		
Paper clips	Stationers Budget retail stores	75c - \$1 pkt 100	Electrical circuits Measuring mass Magnetism Model making		

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Paper towels	Supermarkets	\$3.40 (twin set)	Filtering Chromatography Cleaning up Fair testing		
Peanuts	Supermarkets Health shops	\$1.79 per 500g	Burning	Raw peanuts (unshelled) can be successfully used to grow plants.	
Pins or safety pins	Fabric shops		Construction		
Plaster [Calcium sulfate, CaSO ₄] (plaster of Paris)	Paint shops Hardware shops	\$12.30 per 20kg	Modelling and constructions Making fossils	Gib-stopping compound could be used instead.	
Plastic containers and bags	Homes		Plastics units Storage Construction Investigating Packaging Fair testing Raising seedlings	Zip-lock plastic bags are an excellent way of displaying items such as birds' nests and fungi, which may be hazardous to some children. Chemical reactions can also be carried out inside the zip-lock plastic bags.	
Plasticine	Toyshops	\$2.95 pkt	Modelling		
Popcorn	Supermarkets		Fair test (comparing different methods of heating) Soak kernels for different periods of time to show seed structure.		
Potting mix	Garden suppliers Supermarkets		Raising seeds and growing plants Fair testing	Different types and brands of potting mix have different compositions.	

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Raisins	Supermarkets Health shops	\$2.34 per 400g	Reversible change by soaking in water and then drying	Raisins are dried grapes.	
Rubber bands	Stationers Budget retail stores	\$1.20 pkt 100	Construction Forces Lego Technic Fair testing		
Salt [Sodium chloride, NaCl]	Supermarkets Scientific suppliers		Dissolving - temporary and permanent change Growing crystals, crystal gardens, and coal flowers	Table salt contains additives that may affect its properties. Ensure that plain salt is purchased.	
Non-iodised		\$1.58 per 2kg			
Rock salt		\$1.25 per 500g			
Sand	Garden suppliers Hardware stores Beaches Rivers		Modelling Observing under microscope Showing sound vibrations	Sands from different locations are excellent for observation and comparison.	
Sandpaper	Hardware shops		Friction activities		
Seeds (Broad bean, cress, mustard, etc.)	Garden suppliers Supermarkets	\$2 pkt	Growing Broad beans are useful for demonstrating the structure of seeds.	Most seeds sold for planting are coated with fungicide. Either ensure that children wash their hands after handling, or wash seeds well before using them in seed structure investigations.	
Shells	Beaches Homes		Animal study Classification and grouping Adaptation Study of environment or habitat		

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Soap	Supermarkets Pharmacists	70c per cake	Reducing friction Personal hygiene		
Sodium carbonate [Washing soda, $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$]	Scientific suppliers Supermarkets	\$18.65 per 500g \$2.69 per kg	Dissolving - temporary and permanent change Growing crystals, crystal gardens, and coal flowers		
Sodium silicate [Na_2SiO_3] (water glass)	Scientific suppliers	\$17.80 per L	Crystal gardens	Egg preserver Sodium silicate is used as the solution in which to grow crystal gardens.	
Spaghetti, dried	Supermarkets Health shops	\$1.50 per 400g	Temporary and permanent change		
Starch	Scientific suppliers	\$17.05 per 500g	Dissolving - temporary and permanent change		
Steel wool cleaning pads	Supermarkets Paint shops	\$2.50 pkt 10	Temporary and permanent change Individual strands can be used as fuses in electrical circuits	Use non-soapy rather than soapy pads.	
Straws	Supermarkets Catering wholesalers	\$1.27 pkt 50	Construction Bubbling carbon dioxide Making pipettes		
String/cotton	Fabric shops Supermarkets	Polystring: \$2.40 per 150m Jute: \$1.84 per 65 m	Crystal growing Construction		

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Sugar [C ₁₂ H ₂₂ O ₁₁]	Supermarkets	\$3.88 per 3kg \$2.01 per 1.5kg	Dissolving Crystal growing Temporary and permanent change Sorting Fair testing	A range of sugars (coffee crystals, cubes, white, brown, raw, castor, icing) can be used.	
Talc (climber's talc)	Sports shops	\$15.95 per 500g	Fingerprinting		
Tape, masking	Stationery shops Budget retail stores Paint shops	\$1.90 per 20m roll	Construction Fair tests Marking out floor areas	Adhesive dries out on old stock; store in plastic bags.	
Tartaric acid	Supermarkets Scientific suppliers	\$3.40 per 100g	Acid		
Tissue paper	Newsagents Supermarkets Educational suppliers	\$1 per 5 sheets	Hot air balloons Kites Modelling		
Toothpicks	Supermarkets	95c pkt 50	Construction		
Universal indicator solution paper	Scientific suppliers	\$56.00 per 500mL \$14.10 for 10 packs of 20 leaves in a booklet	Acid-base indicator	Universal indicator give a range of colours indicating different pH.	
Vinegar [acetic acid CH ₃ COOH] (white)	Supermarkets	\$5.22 per 2L \$2.25 per 750mL	Acid Making carbon dioxide (add to a carbonate, e.g., marble)	Vinegar contains acetic acid. White vinegar is preferable to malt. Refer to Safety and Science, page 61.	
Wallpaper paste	Supermarkets Paint and hardware shops	\$5.99 - makes 8L	Constructions		
Wax, paraffin	Supermarkets	\$2.29 per 100g tin	States of matter Temporary and permanent change	Beeswax can also be used.	

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Yeast	Supermarkets	Active yeast: \$3.55 per 150g Dried yeast: \$3.60 per 130g	Fair testing between dried and compressed yeast	Yeast has a finite shelf-life.	