

CORD Applications in Biology/Chemistry Second Edition Equipment List

Equipment	Animal Life Processes	Air and Other Gases	Community of Life	Continuity of Life	Disease and Wellness	Microorganisms	Nutrition	Natural Resources	Plant Growth and Reproduction	Synthetic Materials	Water	Waste and Waste Management
(apple, banana, pear, avocado)							1					
Alternative Cleaners and Pest Control Substances. Handout												1
impact cards								1				
wildlife management cards								1				
0.001-M hydrochloric acid (HCl)					1							
0.02% iron (III) nitrate solution (Fe(NO ₃) ₃)												1
0.05-N sodium thiosulfate (Na ₂ S ₂ O ₃) solution										1		
0.1 N hydrochloric acid (HCl)		1									1	
0.1 N sodium hydroxide (NaOH)		1			1						1	
0.1% 2, 6-dichlorophenol indophenol (DCPIP)							1					
0.1% glucose solution, 50 ml								1				
0.1% tetrazolium solution									1			
0.1-M HCl (hydrochloric acid)			1									1
0.1-M NaOH (sodium hydroxide)			1									1
0.1-M potassium thiocyanate (KSCN)												1
0.1-M sodium hydroxide (NaOH) solution			1									
0.25-M adipoyl chloride										1		
0.5-M hexamethylenediamine in 0.5-M NaOH										1		
0.5-M hydrochloric acid (HCl)					1							1
1 liter of 15% sodium chloride (NaCl) solution											1	
1% neutral red solution						1						
1% sodium hydroxide, 0.1 M							1					
1% starch solution									1			
1.0-ml graduated pipette						1	1	1				
10% bitters or vanilla extract solution	1											
10% bleach solutions				1		1						1
10% potassium iodide (KI) solution										1		
100 ml of 0.5 M ferric						1						
100 ml of 10% sodium chloride (NaCl) solution											1	
100 ml of 5% sodium chloride (NaCl) solution											1	
1000-ml beaker		1									1	
100-ml beaker				1			1					
100-ml flask.				1		3						

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500 ml beaker			1									
100-ml graduated cylinder				1	1			3	1	1	1	
100-mm test tubes											1	
10-cc syringe							1			1	1	
10-ml graduated cylinder	1						1		1	2		
10-ml pipettes				1						1		
10-mm drill bit			1									
125-ml flask.	2						1					1
14-ml test tubes with stoppers												3
150 ml beakers			2									
15% Sarkosyl solution				1								
18-mm × 150-mm test tube										1		
1-inch × 3-inch piece of aluminum (Al) foil										1		
1-inch × 3-inch piece of copper (Cu) foil										1		
1-liter storage bottles											1	
1-M HCl (hydrochloric acid)												1
1-ml pipettes (sterile)				1								
2 cups fresh fruit (strawberries, raspberries, cherries, peaches)						1						
250-ml beakers		1		1		2	1	2	2	1	1	4
250-ml disposal flask					1							
250-ml Erlenmeyer flasks		3		1	3				1	3		1
250-ml flask					1							
28-ml test tube												1
2-inch × 4-inch label cards								1				
3% sodium chloride (NaCl) solution										1		
3.5 N hydrochloric acid (HCl)										1		
3-inch piece of magnesium (Mg) ribbon												
4 × 3 spot plates					1							
4% aqueous solution of 99-100% hydrolyzed polyvinyl alcohol										1		
4% solution of borax (Na ₂ B ₄ O ₇ · 10H ₂ O)										1		
4.5 g Na ₂ SO ₄ · 10H ₂ O			1									
400-ml beaker						1			3	1	1	1
4-oz paper cups (unwaxed)										1		
5 M sodium chloride (NaCl)				1								
5% salt solution	1											
5% sugar solution	1											
5% vinegar solution	1											
5.5 g MgCl ₂ · 6H ₂ O			2									

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50- or 100-ml burette and stand, or 10-ml serological pipette with green pump dropper							1					1
50- μ l micropipette, adjustable (optional)						1						
500 mg calcium hydroxide								1				
500-ml Erlenmeyer flask	1	2									1	
500 ml graduated cylinder			1									
500-ml plastic graduated cylinder										1		
50-ml graduated cylinder			1			1	1		1	1	1	1
5 m graduated pipette				1								
5-gallon bucket filled with tap water			1									
5-gram samples of copper						2						
600 ml beaker	1						1	1	1	2	4	1
70-100% isopropanol				1								
95% ethanol				1								
a fresh plant								1				
a sample bottle								1			1	
A sample of seawater has a specific gravity of 1.0080 at 20°C. Use the handouts provided by your teacher to correct the specific gravity to 15°C. Then use the 15°C specific gravity to determine the salinity of the seawater.			1									
a sheet with the outline of a face				1								
acetate sheet				1		1						
acetone										1		
acid rain								1				
adding machine tape					1							
adhesive yellow label				1								
adjustable micropipettes (optional)				1								
adrenaline (optional)					1							
agarose gel with wells in gel bed				1								
agarose in flask				1		1						
AIDS-test simulation kit					1							
air stones			1									
alanine					1							
alcohol (ethanol)					1				1			
alcohol thermometer	2											
alcohol wipes					1							
algal stock culture						1						
Alka-Seltzer					1							

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altimeter (optional)		1										
alum										1		
aluminum foil, heavy duty	1	1		1		1	1		1			
ammonia, household,					1							
aniline solution, 18 mM (inhibitor)	1											
aniline solution, 3 mM (inhibitor)	1											
aniline solution, 9 mM (inhibitor)	1											
antacid tablets (calcium carbonate)												1
antibiotic dispensers						1						
antibiotic handout						1						
antifreeze solutions in pint bottles from Lab 3											1	
aprons					1	1						
aquarium pump, vibrator type, with gang valve			1									
aquatic plant (Elodea)		1										
art supplies					1							
article reprints			1									
artificial urine, 4 types, in 500-ml flasks				1								
ascorbic acid							1					
ash from heavy-metal paper												1
aspirator		1						1				
aspirin					1							
audiograms	1											
autoclave						1						
awl			1									
baby foods (optional) (e.g. apple, banana, vegetable, pineapple, chicken, beef)							1					
background and storage envelope for moths				1								
background and storage envelopes for squares				1								
bacterial broth culture in screw-cap tubes						1						
bacterial culture in broth tubes or contaminated water												1
bacterial culture in tryptic soy broth screw-cap tube (from Lab 1)						1						
bacterial nutrient solution												1
bags						1						1
ball bearing									1			
balloons, round and long, latex		1										

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bell jar with outlet fitting and rubber		1										
bench clamp										1		
Benedict's solution							1					
bicycle pump or air compressor		1										
binoculars			1									
BioBloxä Ames Test kit, which includes					1							
biome map			1									
birdseed, 5 lb								1				
Biuret test reagent							1					
black cans								2				
blank discs						1						
blank strip from newspaper												1
bleach					1							1
blender									1			
blindfold	1						1	4				
block or bar magnet										1		
blood-pressure cuff					1							
blotting paper					1	1						
boiling chips							1			6	1	
boiling water bath	1											
bottle cap										1		
bottle of mineral oil										1		
bottled gas (unknown)		1										
bowls or cups, small							1					
box of padlock keys	1											
boxes of poker chips, labeled "1" and "2," each containing red chips and white chips				2								
brine shrimp eggs			1									
bromothymol blue					1	1						
brown paper							1					
bucket for mineral oil										1		
bucket or container for finished compost												1
buffer, 1 solution	1											
Bunsen burner					1	1			1			1
cabbage.						1						
CaCl ₂ anhydrous			1									
calcium buffer												1
calcium chloride granules	1	1										
calcium hydroxide (Ca(OH) ₂)												1
calcium indicator												1

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calculator with a log function											1	1
calorie chart.							1					
calorimeter kit								1				
Candle								1				
canned heat								1				
cans of another color								2				
capillary tube with attached meterstick		1										
carbonic acid solution (pH 5.7)								1				
cardboard								1				
cardboard cylinder			1									
cardboard screen (same size as checkerboard)								1				
cartons of whole milk (different sell-by dates)							1					
cartons of whole, low-fat, and skim milk (same dairy, same sell-by date)							1					
cell models you built in Activity 1-3						1						
ceramic fiber pad								1				
cereals							1					
chamber buffer				1								
checkerboard—covered with clear contact paper								1				
chemical disinfectants						1						
childhood immunization records						1						
chromatography paper					1				1			
chromatography tubes					1							
cinnamon, ground									1			
citrus fruit (lemon, lime, orange)							1		1			
clean pan								1				
clear half-pint bottle and cap									1			
clear plastic bag									1			
clear plastic box										1		
clear plastic cups										2		
clear plastic wrap or sheeting								1				
clipboard			1									
Clock, watch or stopwatch capable of displaying seconds					1	1				1		
cloth												1
cloth gloves				1								
cloth rags									1			

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cloth sling		1										
cloth square assigned by teacher	1											
clothespin					1	1						
cloves, ground									1			
CO ₂ gas cartridge		1										
CO ₂ cylinder		1										
cobalt chloride strips		1										
coffee					1							1
coffee can			1									
coffee filter				1								
coffee stirrer straws (optional)				1								
coins			1	2								
color standard or colorimeter						1			1			
colored cubes (» 250)			1									
colored tap water		1										1
compass	1											
compost starter culture (same as septic tank cleaner)						1						
compressed air		1										
container cover, plastic, transparent							1					
container such as 5-gallon plastic tub or foam cooler with lid												1
containers											2	
containers of powdered milk (reconstituted)							1					
containers, 2 liter			1									
containers, plastic							1					
containers, small, with lids							1					
control buffer				1								
copies of the article, "What's Happening Down Home on the Farm?"									1			
copies of the handout How Genes Make Protein						1						
copies of the picnic story, "Case of the Unwelcome Guest"					1							
copper wire										1		
copper wire leads with alligator clips on each end										2		
Cotinine test kit		1										
cotton	1								1			
cotton plugs		2					1					1

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cotton wipes						1						
cotton, not absorbent								1				
cotton-tipped applicators, sterile						1						
coverslips	1					1			1			
cross sections cut from different areas of the same log									3			
crushed limestone (CaCO ₃)								1				
crystal violet stain					1	1						
cucumber						1						
culture species (saltwater species preferred: fish, lobster)			1									
cutouts of the letters T, G, A, and C						1						
cutting board				1			1		1			
cylinder, 100 ml graduated	1											
DC power supply						1						
denatured alcohol	1											
dental cast of a child's primary teeth.	1											
dental cast of someone's permanent set of teeth	1											
dental floss				1								
depression-well slide			1		1						1	
description cards of frog, fish or starfish development				1								
desiccator		1						1				
destaining solution (decolorizer)						1						
detergent				1								1
developing solution (butanol/acetic acid)					1							
dialysis tubing				1			1				4	
dichlorophenol indophenol (DCPIP), 0.03%							1					
diesel fuel or kerosene												1
diet pill					1							
different colors of modeling clay.	1											
digital volt meter with a 2-volt full-scale setting										1		
dilute sulfuric acid solution (pH 3.0-3.5)								1				
diluted methylene blue stain				1								
disinfectant					1	1	1					
disposal container						1						
disposal jar, with chlorine					1							
dissecting microscope									1			

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dissecting needles			1									
dissolved-oxygen test kit		1									1	
DNA plasmids				1								
DNA visualization system				1		1						
DNS solution	1											
double boiler or saucepan						1						
double-sided tape		1		1								
drawings and photomicrographs of meiosis (each at a different phase of the process).				1								
drill with 1/16" drill bit												1
drinking straw	1	1										
droppers	1	2			1	1	1	1	1		6	1
dropping bottle, 50 ml with dropper									1			
dropping pipette, 1 to 2 ml, with rubber bulb				1								
drying oven					1			1				1
drying tube		1						1				
dye											1	
E. coli cells				1								
E. coli lyphocells™ (experimental and control)				1								
earplugs	1				1							
EDTA buffer				1								
egg cultures from Day 1			1									
egg, hard boiled, in shell							1					
eggshells						1						
eight bottles with identifiable scents		1										
electric blender				1		1						
electronic thermometer	1											
electrophoresis buffer				1		1						
element cards						1						
Elodea			1			3						
encapsulant												1
enzyme solution							1					
Erlenmeyer flask, 1000 ml			1		1							
ethanol, 95%					1	1						
ethanol-acetone solution					1							
fact sheet												1
felt-tip pen		1										
ferric nitrate solution					1							
fertilizer label and instructions									1			

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fertilizer solution						1						
fiberglass repair kit										1		
file card										1		
filter disks					1							
filter funnels												2
filter gravel			1									
filter paper		1	1			1			1			2
fine-mesh wire screen												1
fingernail polish, clear (top coat)	1											
finished gel on gel bed				1		1						
fishing line						1						
flat file										1		
flat of seedlings from a monohybrid cross									1			
flour						1						
flower												1
food coloring										1		
food for preservation						1						
food or feed label							1					
food source			1									
food/feed samples							1					
foods you identified as containing acids in Activity 4-1											1	
foodstuffs							1					
forceps			1		1	1	1	4	1			1
forms												1
four seeds, such as corn or bean.									1			
freezer bags						1						
fresh bread							1					
fresh fruit or vegetable							1					
freshly boiled distilled water											1	
Fruit Fresh™							1					
funnel, large									1	1	1	1
funnel, small plastic or glass										1	1	1
garden spade.			1									
garlic press							1					
gas cartridge with adapter		1										
gas lighter						1						
gas-collecting bottles with covers		1										
gas-generating bottle with hydrogen peroxide		1										

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gel electrophoresis chamber w/comb and gel bed				1								
gel scoop				1								
Glass tube 1 m long and about 25 mm in diameter		1										
glass tubing								1	1			
glass-marking pen						1						
gloves, latex	1	1	1	1	1	1	1		1	1	1	1
glucose solution				1		1						
glucose test strips							1					
glycine					1				1			
goggles		1	1	1	1	1	1		1	1	1	1
gooseneck lamp with 100-watt bulb								1				
graduated pipettes and pump	4								1			
Gram's iodine solution					1							
granular activated charcoal								1				
graph paper		1	1	1		1		1				
grater, fine									1			
gravel												1
grease pencil				1								
green gumdrops											1	
guides to the identification of grasses and weeds			1									
hair brush soap	1											
hair dryer					1							1
hair samples A, B, and C, with roots	1											
hand cultivator												1
hand magnifying glass (or stereomicroscope if one is available)		1							1	1		
hand towels		1										
hand vacuum pump		1										
handout that shows the traits				1								
handout "Sexual Facts or Sexual Myth?"	1											
handout containing information about three common types of food-contaminating bacteria and tips for the safe handling of food					1							
handout describing the test.						1						
handout for soil ribbon test								1				
handout of different cultivated ecosystems			1									

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handout of DNA sequences for insulin				1				0				
handout of Figure 4-3			1									
handout of Figure 4-4			1									
handout of survivorship curves for two human populations			1									
handout on the preparation of the growth medium for culturing E. coli bacteria				1								
handout showing the average growth curve for a baby	1											
handout that explains how to transfer microorganisms from a pure culture using aseptic technique						1						
handout with outline of the human head and	1											
handout with the vapor pressure of water at different temperatures.	1											
handout with two sequences of DNA bases				1								
hardness reagent												1
hardness testing apparatus										1		
hardness-testing chemicals												1
HCl, 1 molar									1			
health questionnaire					1							
heat conduction kit										1		
heat source						1						
heated nail for punching air holes in bottles (by candle heat)						1						
heat-resistant gloves									1		1	
holding chamber (petri-dish bottom)			1									
horizontal gel electrophoresis chamber with comb and bed						1						
hose clamp		1										
hot gloves											1	
hot pads				1		1	1	1		1		1
hot plate	1	1		1		1		1	1	1	1	1
Household Hazardous Waste Wheel												1
hydrochloric acid (HCl), 1 M									1			
hydrochloric acid (HCl), pH = 2												1
hydrometer (range 1.00-1.03, units 0.002)					1							
hydrometer, 1.00-1.12 with 0.01 units	1		1						1		1	
hydroponic nutrient mixture											1	
ice bath				1		1						

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ice bucket				1								
ice chest or cooler full of ice							1					
ice cream freezer, hand turned or electric						1						
ice cream salt						1						
ice, 1 pound		1				1					1	
immersion oil					1	1						
incubator or oven, 118°F (48°C)						1						
incubator	1			1	1	2	1		1		1	1
index cards with word descriptions of human development				1								
index cards, 5" x 7"			1						1			
indicator solution	1											
indicator solution that can react with carbon dioxide		1										
infected plants									1			
inoculating loop				1	1	1						1
instruction handouts				1		1						
invertase solution	1											
iodine solution						1						
jar of pickles or sauerkraut.						1						
jars		1				2						
karyotypes				1								
kitchen food safety quiz.							1					
knife						1	1	1				1
knife, paring							1					
known cloth samples, 4" x 12" (cotton, wool, polyester, and cotton/polyester)									4			
lab aprons	1	1	1		1	1		1	1	1	1	1
label on a bag of commercial fertilizer								1	1			
label or package from snack food (candy bar wrapper, pickle jar, potato chip bag, and so on).							1					
labeled boxes.												1
labels		1				1	1		1			
large balloon		1										
large container								1				
large fork									1			
large plastic box with lid								1				
large plastic funnel				1				1				
large rubber band	1											

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large watch glass										1		
lead solution					1							
lens									1			
lens cleaner					1							
lens paper					1							
light microscope	1				1							
light source.	1	1	1			1						
lighted background				1								
lint-free rag										1		
liquid hand soap				1								
liquid nitrogen										1		
liquid waste container					1							
liquids										1		
list of hypothermia symptoms	1											
list of nine men and nine women, all twenty-three years old				1								
litmus paper											1	
live mealworm larvae (10)							1					
long glass rod (18")								1				
low-nitrogen solution						1						
L-tubing, glass (3 long and 3 short)		1										
Lugol's solution				1			1					
Luria broth medium (sterile)				1								
machinist's rule										1		
magazines or other sources of pictures of animals								1				
magnesium ribbon										1		
magnetic stirrer/hot plate					1							
magnifying glass			1							1		
mammal and bird field guides			1									
manila folder									1			
marking pencils			1		1	1				1	1	
marking pens			1	1	1	1		1	1	1		
masking tape		1			1	1	1					
matches		1				1		1	1			
materials											1	
materials for modeling animal digestive track such as modeling clay, play dough, silly putty, and slime.							1					

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materials to be decomposed (paper, plastic, plant matter, food scraps, and so on)						1						
materials to build a model of the DNA molecule				1								
materials to build a simple model of an animal cell				1								
measuring cup						1						
measuring spoons						1						
measuring tape, cloth		1										
meat tenderizer				1								
medical dictionary, encyclopedia, or access to the World Wide Web					1							
mercury solution					1							
metal samples										1		
metal tongs										1		
methyl cellulose			1									
methylene blue stain				1		1						1
metric ruler or meterstick		1					1	1		1	1	
metric ruler, 15 cm		1	1		1		1					
MgCl ₂ ·6H ₂ O			1									
microcapillary pipette					1							
micrometer										1		
micropipette, automatic (optional)				1								
microscope slides with coverslips	1	1	1	1	1	1			1			
microscope, w/400X or oil immersion lens		1	1	1	1	1	1		1			1
microwave with thermometer				1		1	1					
mild salt solution											1	
milk: whole, skim, powdered, or lactaid						1						
mineral oil bath										1		
mineral oil or unscented baby oil		1							1			
mist bottle								1				
mixing bowl						1						
mixture, 50% acetone and 50% water by volume										1		
model of the human digestive system							1					
model of the human heart										1		
models of bone or actual animal bones										1		
moisture meter									1			
mortar and pestle								1	1			

CORD Applications in Biology/Chemistry Second Edition Equipment List

Equipment	Animal Life Processes	Air and Other Gases	Community of Life	Continuity of Life	Disease and Wellness	Microorganisms	Nutrition	Natural Resources	Plant Growth and Reproduction	Synthetic Materials	Water	Waste and Waste Management
mounting medium compound light microscope,	1											
MSDS database												1
mustard, ketchup, dirt, oil, and so on												1
NaCl (sodium chloride) crystals			1							1		
NaOH, 1 molar									1			
nasal spray					1							
needle					1							
newspapers					1	1		1		1		1
ninhydrin					1							
nonfatty food wastes												1
noniodized salt				1								
nontoxic herbicide									1			
nutrition chart					1							
nutrition guide	1											
nutrition table					1							
nylon (net) bags								1				
nylon net or screening						1						
oil of cloves, 10 ml		1										
old pair of clear eyeglasses	1											
one hundred marbles										1		
one disk of steel										1		
one disk of stone										1		
one disk of the superconductor YBa ₂ Cu ₃ O ₇										1		
one or more metal objects (screws, nails, clocks, pens, tools, and so on) to class with you.										1		
one pint bottles												6
one-liter Dewar flask with dry ice/isopropanol slush												1
one-quart jars with lids	2											
opaque contact paper					1							
organic material						1						
overhead projector				1								
owl pellets			1									
package or cake of yeast						1						
packet of seeds									1			
padlock	1											
paint filters												2
paintbrush										1		

CORD Applications in Biology/Chemistry Second Edition Equipment List

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pair of dice								1				
pair of pliers	1									2		
pair of tuning forks of the same size and weight.	1											
pan						1						
pancreatic enzyme solution							1					
paper clips									5			
paper drinking cups, 6 oz	9						1	4				
paper models				1								
paper samples (newsprint, bond, sieve, and glossy) 10-g samples									1			
paper tags and pins												1
paper towels		1	1	1	1	1	1	1	1	1	1	1
paraffin								1				
parafilm				1								
Pasteur pipette with bulb					1			1				
pencil, No. 2 lead			1		1				1			1
pencil-beam flashlight			1									
penny									1			
periodic table										1		
perlite or vermiculite, 1 quart											1	
permanent marker or washable marker				1		1						
petri dishes with nauplius larvae (from Lab 3)			1									
petri plate containing a stock culture of a microorganism on its growth medium						1						
petri plates containing hard agar					2							
petri plates with nutrient agar			1	1	4	1		1	1	6		
petroleum jelly	1					1		1				
pH meter	1	1	1		1		1	1			1	1
pH paper	1	1	1		1	1	1	1			1	1
phenol red					1							
phenolphthalein							1					
photographs or drawings of a dividing cell				1								
pictures of normal human embryonic and fetal development				1								
pictures white blood cells.					1							
piece of blackboard chalk										1		
piece of circuit board material										1		
piece of cloth			1									

CORD Applications in Biology/Chemistry Second Edition Equipment List

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pinch clamp								1				
pipe cleaners				1						1		
pipe cleaners in 2 colors and 4 different lengths				16								
pipette pumps or bulbs				1			1		1	1		1
pipette, 1 ml, or syringe with no needle					1							
pipette, 10-ml						1	1					1
pitchers							1					
placard per student with species name			1									
plain nonfat yogurt						1						
plain yogurt or yogurt culture						1						
plant mist sprayer								2	1			
plant that is in flower.									1			
plant trays						1		4				
plants or seed			1									
plastic bag	1				1							
plastic containers												1
plastic containers, 6-8 oz							1					
plastic cups			1									1
plastic dish					1							
plastic drink bottles (20-oz to 1-liter size)						2						
plastic drink bottles (2-liter size)		1	1			3			5			1
plastic knife				1								
plastic plates self-sealing plastic bags							1					
plastic sheet or large garbage bag												1
plastic spoons							1					
plastic syringe, 10 cc, without needle, with weighing tray attached to plunger, or Boyle's Law apparatus		1										
plastic teaspoons								4				
plastic tee								1				
plastic tubing, ID = 3/16"			1									
plastic wedge or toothpick									1			
plastic wrap		1		1			1		1			
pneumatic trough		1										
pointer				1						1		
poker chips or checkers (at least 25 each of two colors)								1				
polyethylene glycol		1										
Popsicle stick,						1						

CORD Applications in Biology/Chemistry Second Edition Equipment List

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potassium iodide					1							
potato cores			1									
pots each containing a bean seedling									2			
potting medium (sand, vermiculite, perlite, potting soil)									1			
potting soil								1				
potting trays									1			
power supply				1								
practice gel in metal tray				1								
practice gel-loading solution				1		1						
practice gels, in buffer				1		1						
prepared slides of food-borne microorganisms.							1					
prepared slides of microorganisms						1						
prepared slides of the protozoan that causes malaria						1						
preserving or rearing solution				1			1					
pressure cooker						1						
propylene glycol solutions from Lab 3											1	
protease solution				1								
quart jars with lids						1					4	
radiation bulb	1											
radish seeds									1			
rainwater or carbonic acid								1				1
razor blades, single edge						1	1		1			
Reader's Guide to Periodical Literature or access to the World Wide Web.		1				1		1				
ready-to-stain blood smear kit					1							
recipe for sauerkraut						1					1	
rectangular pan 9 inches by 12 inches by 2 inches									1			
red gum drops											1	
red paper	1											
refrigerator with freezer						1	1				1	
ring stand								1	1	1	1	
ripe banana				1								
RNAse solution				1								
rock samples								1				
room-temperature water bath	1											
rooting hormone									1			

CORD Applications in Biology/Chemistry Second Edition Equipment List

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rooting medium									1			
rubber bands	4	1				3			1	1		
rubber dams or masking tape for gel bed				1		1						
rubber gloves							1	1				
rubber hose								1				
rubber stamps with different inks												4
rubber stopper, 1 hole									2			
rubber stoppers, #4	5											
rubber stoppers, 1 hole								1				
rubber stoppers, solid					1					1		
rubber tubing		4						1	1			
ruler	1			1		1			1	1		1
safety goggles	1							1	1	1		
safranin					1							
safranin stain						1						
salt		1				1	1					1
salt solution (3%)											1	
sample of soil from a field, garden, or other area where bare soil is available									1			
samples of three types of soil particles and mixtures of the three.								1				
sampling hoops, such as embroidery hoops or hula hoops			1									
sampling pipette			1									
sand								1				
sandpaper										1		
scalpel or single-edge razor blade									1			
scissors	1	1	1	1		1	1	1	1	1		1
scoop or scraping tool						1		1				
Scotch tape			1									
screw-cap tubes with nutrient broth					1	1						
sealant		1										
sealer gaskets (washers)								2				
sea-salt mix			1									
Secchi disk attached on a line											1	
seed descriptions for foreign seed									1			
seed or plant catalog						1						
seed-bag labels, blank									1			
seeds									1			
seeds dried in the cold.						1						

CORD Applications in Biology/Chemistry Second Edition Equipment List

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seeds stored wet at room temperature						1						
self-sealing bag							1		1			
Selleger stain												1
set of molecule cards								1				
set of moths of nine different wing patterns				1								
set of photomicrographs or drawings of a cell				1								
set of satellite photographs (or slide reproductions) taken at established time intervals			1									
set of squares of seven different sizes				1								
set of tubes of DNA cut with restriction enzymes						1						
several bags	1											
sharp knife									1			
sheets of paper		1	1									1
shoe box	1		1									
shrimp net			1									
shrimpery (1-liter plastic or glass container with lid)			1									
silica gel		1										1
simulated urine samples	1											
sleeping pill					1							
slides and coverslips												1
slides of cells undergoing mitosis.				1								
sling psychrometer	1	1										
small artist's brush							1					
small bean plants												2
small bottles with stoppers												2
small bowl			1									
small cotton plugs (2)								2				
small jar or bottle with cap to keep aftershave (optional)									1			
small paper cups							1					
small plastic bowls												2
small plastic cups												1
small plastic funnel								1				
small plastic spoon												1
small pot									1			
small samples of different woods.									1			

CORD Applications in Biology/Chemistry Second Edition Equipment List

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small washer										1		
smoked cigarette "butt"					1							
soaked seeds (bean, corn, cantaloupe)									1			
sock								1				
sodium bicarbonate					1							
sodium carbonate		1										
sodium chloride			1							1		
sodium hydroxide (0.1 M)					1							
sodium hydroxide (NaOH), 1 M									1			
sodium silicate												1
soft fresh plant leaves or flower petals									1			
soil			1			1			1			1
soil samples, 100 g								1	3			
soil thermometer									1			
soil-moisture indicator			1									
soil-test kits			1					1				
solution A							1					
solution B							1					
solution labeled "simulated YBa ₂ Cu ₃ O _{7-d} solution 0.1 g/10 ml"										1		
sonograms of human fetus (optional)				1								
soybean seed or seedlings or soybeans or other small white beans, 8 oz								1			1	
spatula or spoon		1	1		1			1			1	1
sphagnum moss									1			
splints					1							
sponge, 2-cm block, and paper clip							1					
spoons or forks, plastic						1	1					
spray bottle or plastic bottle with sprinkler holes												1
spray bottles									2			
spring scale (0 to 18 oz)										1		
spring scale, 5000 g									1			1
squeeze bottle filled with tap water			1		1							
squeeze bulb, rubber		1						1				
stain rack					1	1						
staining tray				1	1	1						
stamp pads with different inks												4
starch solution				1			1					
state map			1									

CORD Applications in Biology/Chemistry Second Edition Equipment List

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steel wool		1								1		
stepladder		1										
stereomicroscope with 10X objective		1								1		
stereoscope with 20X objective and transparent ruler marked			1	1								
sterile swabs	1				1	1						
sterile water												1
stethoscope					1							
stiff paper			1									
stir bar					1							
stirring rod		1	1	1		1	1	1	3	2	2	1
stock plants									1			
stock solutions									1			
stomach enzyme solution							1					
stoppers						3						
stopwatch	1							1		1	1	
stove							1					
straw thermos				1								
straws					1	2						
straws of bull semen on ice				1								
straws of semen, frozen in liquid nitrogen				1								
string				1		2	1		1	1	1	
student handout				1								
Styrofoam [®] or plastic cups												1
sucrose (table sugar) crystals	1		1			1	1			1	1	
support stand with ring and clamp												1
support stand with test-tube clamp		1						1				
surfactant (diluted food coloring)									1			
table of height-weight guidelines	1											
table salt										1		
tablespoon												1
tall glass cylinder (such										1		
tape	1					1	1		1			
tape recorder		1										
tea					1							1
technical dictionary or encyclopedia										1		
test strips for glucose				1				1				
test substance					1							
test tubes, 10 ml	5						1		4			
test tubes, 100 ml, w/caps		1					4					

CORD Applications in Biology/Chemistry Second Edition Equipment List

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test tubes, 14 or 18 ml, with caps					1	1		1	1			
test tubes, 5 ml									24			
test tubes, approximately 30 ml	2											
test tubes.				1		3						
test-tube clamp								1			1	
test-tube racks 12 hole and 6 hole	1			1		1	1	1	1	1		
the game "Water Play.								1				
thermometer clamp										1		
Thermometer, -20 to 120°C	3	1	1	1	1	1	1	6		1	2	
thermometer, high-range (to 150°C, or 270°F)											1	
thread			1		1							
three-scale aneroid barometer		1										
timer (for minutes)								1				1
timer (for seconds)	1			1	1			1	1		1	
tissue					1							
tobacco extract					1							
tongs, metal, or tweezers							1		1		1	
toothpick	1				1						1	
toothpicks of different colors			1									
topsoil sample						1						
towel	1											
transfer pipette with microtip				1		1						
transparencies of a cell in mitosis				1								
transparent plastic bag								1				
triple beam balance or electronic balance		1	1	1		1	1	1	1	1	1	1
tRNA and amino acid cards.						1						
tubes containing DNA samples ready for electrophoresis				1								
tweezers, plastic or metal				1				1	1	1		
twist ties									1			
two white cans								2				
Tygon tubing (16 inches)								1				
Tylenol					1							
unburned heavy-metal paper												1
ungalvanized nail												1
unglazed building bricks, not > 4 cm thick, or unfinished clay tiles										1		
universal indicator (w/reference chart)					1							
unknown cloth sample, 4" x 12"									1			

CORD Applications in Biology/Chemistry Second Edition Equipment List

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unsalted crackers							1					
untreated seed									1			
urine dipsticks	1				1							
urinometer	1											
vacuum desiccator		1										
vacuum flasks, 250 ml									2			
vanilla extract						1						
various types of cosmetics (waterproof and regular)											1	
vial of indicator bacteria					1							
vial tray				1								
vials containing DNA samples				1								
vials of agar overlay					2							
vials of preserved or living frog, fish, or starfish eggs				1								
vinegar											1	
viscosity tubes										1		
visuals of skeletons			1									
vitamin C solution, 1 mg/ml							1					
vitamin C tablet					1							
washbottle										1		1
waste container					1							
waste jar	1											
watch glass								1				
watch or clock with second hand	1	1						1				1
water	1	1	1	1	1	1	1	1	1	1	1	1
water bath (45°C, or 113°F)				1								
water bath, 37°C (98°F)		1		1		1	1					
water bath, 65°C (149°F)				1		1	1					
Water Habitat Survey Form											1	
water, tap	1		1			1	1	1	1			1
water-filtering apparatus with water softener												1
watering can								1	1			
water-sampling bottles with tight-fitting stoppers		1										2
water-soluble pen										1		
water-test kits			1									
water.											1	
wax paper										1	1	
wax pencil		1	1		1		1	1	1	1	1	1

CORD Applications in Biology/Chemistry Second Edition Equipment List

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weed-control cards									1			
weighing paper												1
weighing tray (filter paper folded)							1					
weighted line		1										
weights, 100 g		1								5		
weights, 50 g		1								5		
white and black cloth squares	1											
white paper	1						1			1		1
wide-range pH paper											1	
wire basket										1		
wire screen supports	2											
wire screens, 4" x 4"									2			
wooden splint		1								1		
woody stem from a tree or shrub									1			
worms (<i>Eisenia foetida</i>)												1
X-acto knife									1			
yeast culture from the vial						1						
yellow pages of your phone directory												1