Orders: (888)-393-5663

Inquiries: 317-745-0443 Fax: 317-745-0249 mail@workshopplus.com



www.workshopplus.com
P.O. Box 425
3055 East Main Street
Danville, IN 46122

#### 46110 – Laboratory Equipment Set For Alpha-Omega Lifepac Grade 8

Item	Quantity	Item Number
3" Nail	4	40826
Alcohol Lamp with Stand (Fuel not included)	1	50708
Bag of Plastic BB's	1	46119-1
Balloons	2	40220
Bar Magnet (Alnico I)	1 Set of 2	46116
Bar of Soap, small	1	40723
Beaker, glass, 250 ml	3	50653
Cotton String, 30 ft.	1	40544-30
Cotton Thread	1	40223
Electrostatic Kit	1	46192
Filter Paper Set	1	51747
Glucose Test Strips, 25 pack	1	46112-25
Graduated Cylinder, plastic, 50 ml	1	50647
Grass Seeds, ½ cup	1	46115-1/2c
Horseshoe Magnet, 3"	1	46117
Index Cards (Set of 50)	1	40341-50
Inflatable Globe	1	40230
Iodine Solution (Lugol's) 30 mL	1	50699
Iron Metal Filings, 30 g	1	50022-1
Large Marbles (Set of 10)	1	40238-lgset
Large Paper Clips	2	40530-lg
Mass Scale	1	50704
Matchbook	1	40276
Measuring Tape	1	40225
Milk of Magnesia, 2 oz.	1	46111
Needle	1	40234
Oblong Foil Baking Tray	3	40641

Paintbrushes	2	40446
Paper Clips, small	2	40530-2
Phenolphthalein Solution, 10 mL	1	51735
Pipet (Eyedropper)	1	50670
Plaster of Paris, ½ cup	1	40246-1/2
Plastic 6" Ruler	1	50413
Plastic Funnel	1	50707
Pulley	1	50531
Razor Blade (single-edge disposable)	1	46114
Red & Blue Litmus Paper	1	50705
Rubber Bands (Thin), 5pk	1	40245
Ruler	1	40333
Safety Goggles	1	50681
Slide Coverslips & Slides (Set of 10ea)	1	50701
Small Block of Wood	2	40829
Spring Scale, 100 g/1 N	1	50570
Stirring Rod, glass, 12"	2	50711
Stopwatch	1	40533
Tea Light Candle	1	40738
Test Tube Rack	1	50561
Test Tubes, small 15x125 mm (Set of 6)	1	50709
Thermometer, Celsius, 12"	2	50630
Thin Cardboard, 8 x 11	2	40282
Toothpicks (10pk)	1	40549-10
Washers (Set of 25)	1	40271-25
Wire Test Tube Holder	1	50600

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46110 – Laboratory Equipment Guide

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## UNIT 1

## For Alpha-Omega Grade 8

#### **Page 15: Measurement Practice**

In Your Kit:	You Provide:
Ruler	A bathroom scale to weigh larger objects.
Graduated cylinder, 50 mL	
Balance: Mass Scale	

#### **Page 4: Determine Volume**

In Your Kit:	You Provide:
Ruler	None
Small block of wood	

## Page 5: Determine Volume of an Irregular Object

In Your Kit:	You Provide:
String	Small rock
Graduated cylinder, 50 mL	Water

## **Page 7: Classify Objects**

In Your Kit:	You Provide:
None	At least 6 different objects that may be found
	nearby (rocks, pencil, eraser, chalk, etc.)

#### **Page 8: Calculate Density**

In Your Kit:	You Provide:
Mass Scale	None
Small block of wood	
Ruler	

## Page 10: Compare Temperature

In Your Kit:	You Provide:
Celsius thermometer	Water
3 Beakers, 250 mL	Labels
Alcohol lamp with stand (may be used in place of	Ice cubes
the stove to heat the beakers)	Stove (optional)
	Fuel for Alcohol Burner (Lamp)

## Page 11: Observe a Chemical Change

In Your Kit:	You Provide:
4 Iron nails	4 Jars
	Vinegar
	Labels
	Ammonia
	Lemon
	Water

## **Page 13: Create Crystals**

In Your Kit:	You Provide:
Cotton string	3 cups Sugar
Paper clip	Water
Beaker, 250 mL	Hot plate or stove
	Spoon
	Pencil

## Page 14: Observe the Properties of a Liquid

In Your Kit:	You Provide:
2 Beakers, 250 mL	None
Large Marbles	
Bag of BB's	

## Page 29: Decompose Sugar

In Your Kit:	You Provide:
Test tube	Sugar
Fire source (alcohol lamp with stand)	
Safety Goggles	
Test tube holder	

## Page 34: Research Chemical Compounds

In Your Kit:	You Provide:
None	Chemistry reference books or access to the
	Internet

## Page 37: Separate a Mixture

In Your Kit:	You Provide:
Mass Scale	Salt
Funnel	Sand
Filter paper	Water
	Measuring cups

## Page 4: Observe a Physical Change

In Your Kit:	You Provide:
Stirring rod	Paper
	Lump of sugar
	Small glass of water
	Soda cracker

## Page 7: Separate a Mixture using a Physical Change

In Your Kit:	You Provide:
Beaker, 250 mL	Sugar
Stirring rod	Dish
	Water
	Teaspoon

#### Page 8: Observe a Change in Phase (Solid to a Liquid)

In Your Kit:	You Provide:
Alcohol lamp and stand	Crushed ice
Safety goggles	Object that can substitute as a ring stand OR a
String	helper to hold the thermometer in place
Beaker, 250 mL	Fuel for Alcohol Burner (Lamp)
Thermometer	
Stopwatch	

## Page 11: Explore Boiling Point and Melting Point

In Your Kit:	You Provide:
2 Beakers, 250 mL	Ice
Alcohol lamp and stand	Cloth or Styrofoam cup
Safety goggles	Water
Stirring rod	Fuel for Alcohol Burner (Lamp)
Thermometer	
Stopwatch	
Mass Scale	

## Page 13: Produce an Exothermic Reaction

In Your Kit:	You Provide:
Plaster of Paris, ½ cup	Water
2 Thermometers	2 Glasses or cups
Stirring rod	Flour

## Page 18: Observe Rapid Oxidation

In Your Kit:	You Provide:
Small candle	Glass
Matches	
Beaker, 250 mL	

## Page 29: Identify Acids and Bases

In Your Kit:	You Provide:
6 Test tubes	Red Cabbage, Knife, Pot, Water, Heat source,
Test tube rack	Small glass jar, Baking soda in water, Crayons or colored markers, Vinegar, Ammonia, Lemon juice, Milk, Spoon

## Page 30: Perform a Litmus Test using Blue Litmus Paper

In Your Kit:	You Provide:
Blue litmus paper	Orange juice, Salt water, Vinegar, Cider, Sugar
	water, Ammonia, Liquid soap, Lemon juice, Baking
	soda in water

## Page 37: Perform a Litmus Test using Phenolphthalein

In Your Kit:	You Provide:
Phenolphthalein	Spoon
Eyedropper	Vinegar
Milk of Magnesia (only use one-third of the	Soapy water
provided amount)	
Beaker, 250 mL	

## Page 37: Perform a Litmus Test using Red Litmus Paper

In Your Kit:	You Provide:
Red litmus paper	Household ammonia, Salt water, Lemon juice,
Beakers, 250 mL	Sugar water, Baking soda in water
Milk of Magnesia (save some for one last	
experiment)	

## Page 38: Write a Secret Message

In Your Kit:	You Provide:
Phenolphthalein	Paper
2 Paintbrushes	Soapy water or ammonia

## Page 43: Mix Acids and Bases

In Your Kit:	You Provide:
Beaker, 250 mL	Water
Milk of Magnesia	Spoon
Phenolphthalein	Vinegar
Eyedropper	

## Page 8: Test Foods for Starch, Sugar, Minerals, Fat, and Protein

In Your Kit:	You Provide:
Glucose Test Strips	Heat source, Cooked egg white, Bits of cheese,
Iodine	Dried milk, Soda cracker, Egg Yolk, Aluminum foil,
Eyedropper	Any fruit, Bits of green or yellow vegetables,
	White bread, Paper towel, Potato slice, Bits of
	various food

## **Page 17: Classify Foods**

In Your Kit:	You Provide:
50 File Cards	Color sections of newspapers or magazines

There are no experiments in this unit.

## **Page 3: Find Magnetic North and South Poles**

In Your Kit:	You Provide:
Inflatable globe	None
Measuring tape	

## Page 5: Create a Compass

In Your Kit:	You Provide:
Bar magnet	Glass
Needle	Water

## Page 7: Create a Magnetic Field

In Your Kit:	You Provide:
2 Bar magnets	Sheet of glass or plastic
Horseshoe magnet	
Iron filings	

## **Page 17: Explore Electrostatics**

In Your Kit:	You Provide:
Electrostatic Friction Set (includes Glass, Rubber,	None
and Plastic Rods, and Pieces of Cloth)	
Balloons	

## Page 34: Construct a Solar Cooker

In Your Kit:	You Provide:
None	Hot dog, Aluminum foil, Cardboard, 2 Nails,
	Scissors, Glue

## Page 16: Construct a Simple Scale

In Your Kit:	You Provide:
2 Pieces of thin cardboard, 8 x 11"	None
Rubber bands	
Paper clips	
25 Washers	

## Page 32: Calculate Manpower

In Your Kit:	You Provide:
Stopwatch	Scale to weigh students
	Tape Measure or yardstick

## **Page 4: Investigate Friction, Part 1**

In Your Kit:	You Provide:
String	Pebbles
	Coins
	Small plastic bag

# UNIT 7

## Page 5: Investigate Friction, Part 2

In Your Kit:	You Provide:
None	All items from the previous investigation
	8 or 10 round sticks (pencils, Tinker Toys, or
	dowels)

## **Page 8: Test Friction-Reducing Materials**

In Your Kit:	You Provide:
2 Blocks of wood	None
Bar of soap	

## Page 11: Operate a Lever

In Your Kit:	You Provide:
Ruler	2 Coins
	Tape

## Page 22: Examine a Wheel and Axle

In Your Kit:	You Provide:
2 ½ meters of string	Pencil sharpener (wall mounted)
	Book

## Page 25: Operate a Pulley

In Your Kit:	You Provide:
Pulley (Use this in place of coat hanger, spool, and	Book
wire cutters)	
String	

## **Page 29: Examine Gears**

In Your Kit:	You Provide:
None	Hand Eggbeater

## Page 25: Create an Inclined Plane

In Your Kit:	You Provide:
Rubber band	Pebbles
Rulers of different lengths	3 or 4 Books

## Page 4: Observe Plant Cells

In Your Kit:	You Provide:
Razor blade	Microscope (Contact Nature's Workshop, Plus! if
Glass slides	you need to purchase a microscope.)
Cover slips	Leaves from 2 unlike plants
	Water

## **Page 6: Observe Transpiration**

In Your Kit:	You Provide:
Beaker, 250 mL	Freshly picked leaves
	Clear plastic bag
	Fastener

## **Page 43: Investigate Erosion**

In Your Kit:	You Provide:
3 Pans	Soil
Grass Seed	Sprinkling can
Ruler	Water

#### **Page 9: Explore Properties of Matter**

In Your Kit:	You Provide:
Beaker, 250 mL	6 unidentified items in a box
Graduated cylinder, 50 mL	Dish to catch water
Magnet	

## **Page 12: Measure Odor Intensity**

In Your Kit:	You Provide:
None	Ammonia

## Page 16: Separate a Mixture

In Your Kit:	You Provide:
Toothpicks	Bottle containing a material prepared by the
	teacher

## Page 17: Examine a Pressure Cooker

In Your Kit:	You Provide:
None	Pressure Cooker

## Page 18: Write a Chemical Equation

In Your Kit:	You Provide:
Iron Filings	Jar

#### Page 26: Observe Heat Transfer

In Your Kit:	You Provide:
Alcohol lamp and stand	Microscope (Contact Nature's Workshop, Plus! if
Safety goggles	you need to purchase a microscope.)
	Leaves from 2 unlike plants
	Water
	Fuel for Alcohol Burner (Lamp)

## Page 30: Model Energy Transfer

In Your Kit:	You Provide:
None	Box of Dominoes

## Page 33: Review Magnetism

In Your Kit:	You Provide:
Bar Magnet	Paper
Iron Filings	Other unmagnetized materials
Block of wood	

## Page 41: Identify Mechanical Advantage

In Your Kit:	You Provide:
String	Board 2- to 3-ft. long
Spring Balance	Piece of metal or similar objects of different
	weights

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#### PRECAUTIONS AND FIRST AID INFORMATION

#### **Iodine Solution:**

Warning: Avoid contact with eyes, skin and clothing.

First Aid Information: After contact with eyes and/or skin, wash immediately with plenty of water. If irritation persists, seek medical attention. Wash contaminated clothing before reusing. If inhaled, allow the victim to rest in a well ventilated area. Do not induce vomiting. Seek immediate medical attention.

#### Phenolphthalein Solution

**Warning:** Hazardous in case of skin or eye contact. Prolonged exposure may result in skin burns and ulcerations.

**First Aid Information:** Flush eyes with plenty of water for at least 15 minutes. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. If swallowed, do not induce vomiting unless directed to do so by medical personnel. If inhaled, remove to fresh air. Get medical aid.

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