6102-B10 Wildco Instructions for Insect Starter Kit

Most items in the kit can be reused and include the following:

1	Insect Net, aerial	# 121-A10
1	Insect Aspirator	# 6011-A10
1	Insect Killing Jar	# 7905-B31
1	Bug Box, small, 1 inch	# 7905-A10
1	Bug Box, large, 1.5 inch	# 7905-A15
100	Glassine Envelopes	# 6009-E10
1	Ruler, clear, 6 inch	# 7900-K60
1	Hand Magnifier	# 78-520
100	Insect Pins, size 1	# 6005-C10
1	Insect Pinning Forceps	# 6049-T20
1	Insect Spreading Board, foam	# 78-508
1	Insect Box (with pinning foam)	# 6001-B10
1	Riker Mount (exhibition case)	# 6010-D20
12	Plastic Storage Vials, 5 dram	# 7912-P50
	Instructions	

Collecting insects can help you learn about beneficial and harmful insects common to your area. Comparison of the organisms can help you learn how various insects have adapted to their environment in such diverse ways. They are the most successful group of animals. Please note that most insects are not endangered species. They have a very short life span and the small number you will collect most likely will not affect the ability of the species to maintain a viable local population.

Insects can be found almost anywhere. Look for them on plants, in water, in soil, flying in the air, in dead trees, in decaying logs, flying around lights at night, under leaves, rocks and logs, even inside a building. It is a good idea to keep a notebook as the insects are collected. You should note the name of the insect (or a description for later identification), the place it was collected and the date. You can use this information later for labeling the insects for display.

Insects are usually delicate and should be handled very gently during collection, killing and storage. Butterflies and moths should be handled very carefully to avoid losing the tiny scales that cover their wings. You should be especially careful if you catch a stinging insect.

Bug Boxes have built-in magnifiers to view live or dead insects as they are found. The small ones have a 4x magnifier in the cover and the large ones have 3x magnification.

The **Insect Aspirator** is used by placing the end of the tubing close to an insect, then giving a quick suck on the metal tube to draw the insect into the vial. (There is a fine screen in front of the metal tube that keeps the insects from being drawn into your mouth.)

Insect Killing Jars are used to quickly kill the insects after they are caught. Each wide-mouthed jar has cotton or absorbent plaster to add a killing agent (not included) such as ethyl acetate (non-acetone fingernail polish remover). Use a non-oily substance. Drop some on the cotton or soak the plaster and pour off any excess. The insects should stay dry. The lid should be kept tightly on the jar after charging and you should not breathe the vapors when adding and removing insects. Try not to put too many insects in the jar at the same time since they could damage each other. Large insects should be placed in the jar alone since they could damage other insects. It may take up to half an hour to euthanize some insects. The killing jars should be wiped out occasionally with a damp tissue, especially after moths or butterflies, to remove the powdery scales from their wings. Make sure the jar is dry before adding new insects.

The **Aerial Insect Net** is lightweight and easy to use to collect flying insects. You can shake bushes or other plants and then collect insects that fly out. The bow of the net can be turned to close the net after collection until the insects can be transferred to a

bug box or killing jar. This can usually be done by inverting the net where the insect is attached and allowing the insect to drop into the jar. The lid is then quickly screwed onto the jar.

Special care should be taken when a stinging insect is collected. Some people will fold over the net above the insect and then place the part of the net containing the insect into the killing jar until the insect becomes unconscious. The net can then be inverted and the insect shaken into the jar to finish the killing process.

The collected insects can be taken back to the lab for identification and storage. Insect collection is a great start for learning how to use taxonomic keys to identify organisms. Depending on whom you ask, the number of insect species could vary from 1.5 million to 30 million. Over a million species have been identified so far. You may be able to identify some of your insects just to the Order level.

A **Clear Ruler** and **Magnifier** are included to help with identification. There are many taxonomic keys and other identification materials available. The Peterson Field Guide Series and the Peterson First Guides are excellent for beginners. There are also many excellent identification keys for beginners available on the Internet. Local museums, nature centers and university entomology departments often have reference collections. They may have an expert available to help identify difficult specimens. These would also be good places to visit on a field trip.

Insects are usually delicate and should be handled very gently. Normally the best tools for handling insect specimens in the lab are the fingers. A gentle touch is necessary. Exceptions are butterflies and moths whose wings can easily lose their delicate scales, stinging insects and very tiny insects. Fine entomological forceps can be used for these delicate tasks. They can be used on legs and antennae, which are usually the sturdiest parts of an insect.

Insect Pinning Forceps have an ideal shape (called a “gooseneck”) to assist in spreading, positioning and pinning insects.

Insect Pins are long, thin, flexible and rustproof. They usually have a tiny pinhead so the insect is easy to see when mounted. Pinned insects are usually displayed in a box with a lid such as a Riker Mount or Insect Box.

Small, sturdy insects are usually pinned by gently holding the insect between your thumb and forefinger and firmly pushing the pin through the top surface, usually through the thorax. Ideally the pin is perpendicular to the insect body and the insect is horizontal to the pinning surface. Insects with long legs or curved abdomens can be pinned through the right side of the body.

Leave enough room at the top of the pin so you can pick it up without touching the insect. Usually all the insects in a collection are pinned at the same height. Small labels are often pinned below the insect with information such as the date collected, collector and location. More than one label is often used to avoid taking up too much space in the box.

Butterflies and Moths are usually dried using an **Insect Spreading Board**. Dragonflies and other insects with large, delicate wings are often preserved this way also:

The foam Insect Spreading Board can be used to arrange butterflies and moths in their natural position or in the best position for identification. The board has many grooves to accommodate the various body sizes of these organisms. The grooves are called “body slots”. The body of the insect is gently placed in a body slot and the wings are spread out for drying. The wings should be level with the sides of the spreading board, with the body hanging in the body slot. Sometimes the body is pinned into place. Each forewing is pulled forward until the bottom edge is perpendicular to the insect body. The hind wings can then be pulled into a good position for viewing. The wings are not usually pinned directly. Strips of paper are used to hold the wings in place and pins are used to hold the paper in place. A good paper to use is the glassine paper found in the envelopes. If you must use pins in the wings, only the tips of the smallest pins should be used. It should take about 2 weeks for a fresh specimen to dry. It can then be transferred to an insect box or Riker mount for display.

The **Insect Box** has a foam pinning board to use for storage of mounted insects. It has a lid to help protect the insects.

The **Riker Mount** can be used to display some of the insects you have collected. The soft batting allows you to place the insects in the best position to be viewed through the glass top. Small labels can be set on the batting below each insect. You can label them with common and scientific names. A larger label in the corner can include information such as collection date, location of collection, collector’s name(s), etc. Pins are not usually needed for a Riker Mount.

Glassine Envelopes are sometimes used to temporarily store newly collected insects in the field. They can also be used for storage of dried insects for a reference collection. They can be labeled with common name, scientific name and other pertinent information, possibly including the reference used to identify the insect. Specimens should be thoroughly dried before placing them in glassine envelopes for permanent storage. The envelopes should be stored loosely in a box to avoid crushing.

Clear Plastic **Storage Vials** can be used to temporarily store killed insects for transport back to the lab. They can be used dry to store large, dried insects. They can also be filled with 70% isopropyl alcohol to store soft-bodied insects and spiders. A drop of glycerin is often added to help prevent dehydration if the alcohol evaporates. Glass vials with evaporation-resistant caps are available for long-term storage (7912-B50).

May we suggest:

6001-T25 Insect Beating Tray: Hold this sheet beneath the vegetation and beat on the leaves to catch the insects which are knocked off. Our strong canvas tray has crossbars that hold the sheet open. Collapses for portability

78-630 Insect Pin Holder: The 12 hole insect pin holder is useful for holding many pin sizes and other small objects. It is made of wood and measures 3 1/2 x 4 x 1 1/2 inches high. The sides and corners are beveled.