RESTRICTED

VAULT DWELLER'S
SURVIVAL GUIDE

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VDSG VTB-001-13

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ISSUED BY VAULT-TEC DOCUMENTATION DEPARTMENT, JANUARY, 2077

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Section I. WELCOME TO THE VAULT OF THE FUTURE

1

GENERAL

Welcome to Vault-13, the latest in a series of public defense works from Vault-Tec, your contractor of choice when it comes to the best in nuclear shelters. Vault-Tec, America's Final Word in Homes. This document, VTB-001, the Vault Dwellers Survival Guide, is for the events following a world-wide nuclear war. In the case of a limited scale nuclear war, or other world ending catastrophe, please refer to the appropriate documentation (see also page 1—8):

End of World Cause	Document #	Title
Limited Scale Nuclear War	VTB-002	*Vault Dwellers Survival Guide* (abridged version)
Disease	VTD-001	*Coping with Mr. Virus!*
Starvation	VTR-003	*How to Eat Rat*
Flooding	VTF-100	*Flotation Homes & Seaweed*
Meteor	VTM-020B	*How to Dodge Falling Rocks**

*Document not available at this time, will be available the 3rd quarter of 2078.

Don't let what could have happened bother you. We have enough problems to deal with in the here and now.

- overseer

The Vault series of survival shelters are designed from the ground up to provide the best chance for a good life following nuclear armageddon. It is the duty of every American citizen to learn and use the skills necessary for a comfortable Vault life. The best place to start is with a description of your new home.

IMPORTANT VAULT STATISTICS

Vault Number 13
Starting construction date ....August 2063
Ending construction date .....March 2069
Starting Budget $400,000,000,000
Final Budget, with interest ..$645,000,000,000

Total number of occupants ....1,000 (at capacity)
Total duration .....10 years (at capacity)
Number of living quarters .....100 (hot bunking required if at maximum capacity)

Door thickness.....4 yards, steel
Earth coverage.....3,200,000 tons of soil, at 200 feet

Computer control system .....Think machine
Primary power supply .....Geo-thermal
Secondary power supply.....General Atomics Nuclear Power backup systems
Power requirements.....3.98mkw/day
Stores .....Complete construction equipment, hydro-agricultural farms, water purification from underground river, defensive weaponry to equip 10 men, communication, social and entertainment files (for total duration)

NUCLEAR BLAST EFFECTS

Vault-13 is designed to provide protection from the effects of a nuclear blast. To better understand the protection provided, we have included a section from the High Energy Weapons FAQ that explains how a nuclear blast causes damage.

The first thing bomb victims experience is the intense flux of photons from the blast, which releases 70-80% of the bomb's energy. The effects go up to third degree thermal burns and are not a pretty sight. Initial deaths are due to this effect.

The next phenomenon is the supersonic blast front. You see it before you hear it. The pressure front has the effect of blowing away anything in its path.

After the front comes the overpressure phase. It would feel like being underwater a few hundred meters. (At a few thousand meters under the sea, pressurized hulls implode.) The pressure gradually dies off, and there is a negative overpressure phase, with a reversed blast wind. This reversal is due to air rushing back to fill the void left by the explosion.

The air gradually returns to normal atmospheric pressure. At this stage, fires caused by electrical destruction and ignited debris turn the place into a firestorm.

Then come the middle term effects such as keloid formation and retinal blastoma. Genetic or hereditary damage can appear up to forty years after initial irradiation.

ATMOSPHERIC EFFECTS OF BLASTS

The Mushroom Cloud. The heat from fusion and fission instantaneously raises the surrounding air to 10 million degrees C. This superheated air plasma gives off so much light that it looks brighter than the sun, and is visible hundreds of kilometers (km) away. The resultant fireball quickly expands. It is made up of hot air, and hence rises at a rate of a few hundred meters per second. After a minute or so, the fireball has risen to a few kilometers, and has cooled off to the extent that it no longer radiates.

The surrounding cooler air exerts some drag on this rising air, which slows down the outer edges of the cloud. The unimpeded inner portion rises a bit quicker than the outer edges. A vacuum effect occurs when the outer portion occupies the vacuum left by the higher inner portion. The result is a smoke ring.

The inner material gradually expands out into a mushroom cloud, due to convection. If the explosion is on the ground, dirt and radioactive debris get sucked up the stem, which sits below the fireball.

Collisions and ionization of the cloud particles result in lightning bolts flickering to the ground.

Initially, the cloud is orange-red due to a chemical reaction when the air is heated. When the cloud cools to air temperature, the water vapor starts to condense. The cloud turns from red to white.

In the final stages, the cloud can get about 100km across and 40km high, for a megaton class explosion.

If you see the flash, duck and cover!

Electromagnetic Pulse (EMP). A nuclear explosion gives off radiation at all wavelengths of light. Some is in the radio/radar portion of the spectrum - the EMP effect. The EMP effect increases the higher you go into the atmosphere. High altitude explosions can knock out electronics by inducing a current surge in closed circuit metallic objects - electronics, power lines, phone lines, TVs, radios, etc. The damage range can be over 1000km.

OVERVIEW OF IMMEDIATE EFFECTS

The three categories of immediate effects are: blast, thermal radiation (heat), and prompt ionizing or nuclear radiation. Their relative importance varies with the yield of the bomb. At low yields, all three can be significant sources of injury. With an explosive yield of about 2.5 kilotons (kT), the three effects are roughly equal. All are capable of inflicting fatal injuries at a range of 1km.

The fraction of a bomb's yield emitted as thermal radiation, blast, and ionizing radiation is essentially constant for all yields, but the way the different forms of energy interact with air and target vary dramatically.

Air is essentially transparent to thermal radiation. The thermal radiation affects exposed surfaces, producing damage by rapid heating. A bomb that is 100 times larger can produce equal thermal radiation intensities over areas 100 times larger. The area of an (imaginary) sphere centered on the explosion increases with the square of the radius. Thus the destructive radius increases with the square root of the yield (this is the familiar inverse square law of electromagnetic radiation). Actually the rate of increase is somewhat less, partly due to the fact that larger bombs emit heat more slowly which reduces the damage produced by each calorie of heat. It is important to note that the area subjected to damage by thermal radiation increases almost linearly with yield.

Blast effect is a volume effect. The blast wave deposits energy in the material it passes through, including air. When the blast wave passes through solid material, the energy left behind causes damage. When it passes through air it simply grows weaker. The more matter the energy travels through, the smaller the effect. The amount of matter increases with the volume of the imaginary sphere centered on the explosion. Blast effects thus scale with the inverse cube law which relates radius to volume.

The intensity of nuclear radiation decreases with the inverse square law like thermal radiation. However nuclear radiation is also

strongly absorbed by the air it travels through, which causes the intensity to drop off much more rapidly.

These scaling laws show that the effects of thermal radiation grow rapidly with yield (relative to blast), while those of radiation rapidly decline.

In a small nuclear attack (bomb yield approx. 15kT) casualties (including fatalities) would be seen from all three causes. Burns (including those caused by an ensuing fire storm) would be the most prevalent serious injury (two thirds of those who would die the first day would be burn victims), and occur at the greatest range. Blast and burn injuries would be found in 60-70% of all survivors. People close enough to suffer significant radiation illness would be well inside the lethal effects radius for blast and flash burns, as a result only 30% of injured survivors would show radiation illness. Many of those people would be sheltered from burns and blast and thus escape the main effects. Even so, most victims with radiation illness would also have blast injuries or burns as well.

With yields in the range of hundreds of kilotons or greater (typical for strategic warheads) immediate radiation injury becomes insignificant. Dangerous radiation levels only exist so close to the explosion that surviving the blast is impossible. On the other hand, fatal burns can be inflicted well beyond the range of substantial blast damage. A 20 megaton bomb can cause potentially fatal third degree burns at a range of 40km, where the blast can do little more than break windows and cause superficial cuts.

A convenient rule of thumb for estimating the short-term fatalities from all causes due to a nuclear attack is to count everyone inside the 5 psi blast overpressure contour around the hypocenter as a fatality. In reality, substantial numbers of people inside the contour will survive and substantial numbers outside the contour will die, but the assumption is that these two groups will be roughly equal in size and balance out. This completely ignores any possible fallout effects.

OVERVIEW OF DELAYED EFFECTS

Radioactive Contamination. The chief delayed effect is the creation of huge amounts of radioactive material with long lifetimes (half-lifes ranging from days to millennia). The primary source of these products is the debris left from fission reactions. A potentially significant secondary source is neutron capture by non-radioactive isotopes both within the bomb and in the outside environment.

When atoms fission they can split in some 40 different ways, producing a mix of about 80 different isotopes. These isotopes vary widely in stability; some are completely stable while others undergo radioactive decay with half-lifes of fractions of a second. The decaying isotopes may themselves form stable or unstable daughter isotopes. The mixture thus quickly becomes even more complex, some 300 different isotopes of 36 elements have been identified in fission products.

Short-lived isotopes release their decay energy rapidly, creating intense radiation fields that also decline quickly. Long-lived isotopes release energy over long periods of time, creating radiation that is much less intense but more persistent. Fission products thus initially have a very high level of radiation that declines quickly, but as the intensity of radiation drops, so does the rate of decline.

A useful rule-of-thumb is the "rule of sevens". This rule states that for every seven-fold increase in time following a fission detonation (starting at or after 1 hour), the radiation intensity decreases by a factor of 10. Thus after 7 hours, the residual fission radioactivity declines 90%, to one-tenth its level of 1 hour. After 7*7 hours (49 hours, approx. 2 days), the level drops again by 90%. After 7*2 days (2 weeks) it drops a further 90%; and so on for 14 weeks. The rule is accurate to 25% for the first two weeks, and is accurate to a factor of two for the first six months. After 6 months, the rate of decline becomes much more rapid. The rule of sevens corresponds to an approximate t^-1.2 scaling relationship.

These radioactive products are most hazardous when they settle to the ground as "fallout". The rate at which fallout settles depends very strongly on the altitude at which the explosion occurs, and to a lesser extent on the size of the explosion.

If the explosion is a true air-burst (the fireball does not touch the ground), when the vaporized radioactive products cool enough to condense and solidify, they will do so to form microscopic particles. These particles are mostly lifted high into the atmosphere by the rising fireball, although significant amounts are deposited in the lower atmosphere by mixing that occurs due to convective circulation within the fireball. The larger the explosion, the higher and faster the fallout is lofted, and the smaller the proportion that is deposited in the lower atmosphere. For explosions with yields of 100kT or less, the fireball does not rise above the troposphere

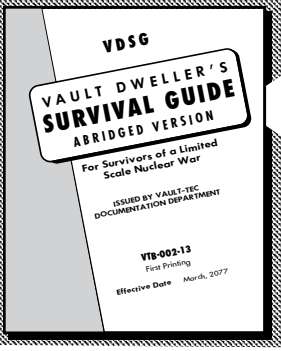
where precipitation occurs. All of this fallout will thus be brought to the ground by weather processes within months at most (usually much faster). In the megaton range, the fireball rises so high that it enters the stratosphere. The stratosphere is dry, and no weather processes exist there to bring fallout down quickly. Small fallout particles will descend over a period of months or years. Such long-delayed fallout has lost most of its hazard by the time it comes down, and will be distributed on a global scale. As yields increase above 100kT, progressively more and more of the total fallout is injected into the stratosphere.

An explosion closer to the ground (close enough for the fireball to touch) sucks large amounts of dirt into the fireball. The dirt usually does not vaporize, and if it does, there is so much of it that it forms large particles. The radioactive isotopes are deposited on soil particles, which can fall quickly to earth. Fallout is deposited over a time span of minutes to days, creating downwind contamination both nearby and thousands of kilometers away. The most intense radiation is created by nearby fallout, because it is more densely deposited, and because short-lived isotopes haven't decayed yet. Weather conditions can affect this considerably of course. In particular, rainfall can "rain out" fallout to create very intense localized concentrations. Both external exposure to penetrating radiation, and internal exposure (ingestion of radioactive material) pose serious health risks.

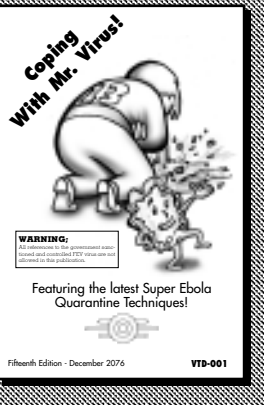
Explosions close to the ground that do not touch it can still generate substantial hazards immediately below the burst point by neutron-activation. Neutrons absorbed by the soil can generate considerable radiation for several hours.

The megaton class weapons have been largely retired, being replaced with much smaller yield warheads. The yield of a modern strategic warhead is, with few exceptions, now typically in the range of 200-750 kT. Recent work with sophisticated climate models has shown that this reduction in yield results in a much larger proportion of the fallout being deposited in the lower atmosphere, and a much faster and more intense deposition of fallout than had been assumed in studies made during the sixties and seventies. The reduction in aggregate strategic arsenal yield that occurred when high yield weapons were retired in favor of more numerous lower yield weapons has actually increased the fallout risk.

ADDITIONAL PUBLICATIONS

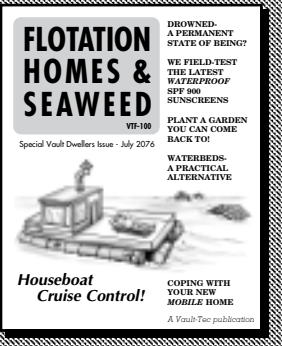


***VDSG* (abridged version)**
A condensed version of the VDSG, containing just the important information you need!



Coping With Mr. Virus!
An extended pamphlet for the whole family! Includes the popular How-To-Burn-Diseased-Bodies section.

How to Eat Rat
Over 101 recipes, from basic meals to a complete set of dishes, all the way from snacks to desserts!



Flotation Homes and Seaweed
A complete survival guide for the ocean bound. More tips, instructions, and plans than you could possibly ever use.

HOW TO DODGE FALLING ROCKS

Available the 3rd quarter of 2078

VTM-020B

Coming Soon!

Section II.
SIMULATION

2

Section III.
VAULT PERSONNEL

3

GENERAL

The key to a successful reintroduction of civilization following a massive scale nuclear war is people. Here at Vault-Tec, we are working to ensure that your fellow man (and woman) is up to the task of bringing America back from the dead.

Characters are people in the game world. A player character represents you in the game world. We will sometimes refer to a player character as personnel. The terms personnel and player character are interchangeable. Other types of characters are called non-player characters (NPCs), so that you won't confuse them with you. NPCs can be other vault dwellers, people from the outside world, or even mutants.

STANDARD PERSONNEL RECORDS

Fallout comes equipped with three pre-made characters, for your use and enjoyment. These personnel are prepared for most conditions in the outside world.

MAX

Figure 3-1: Max Stone
VID 208-197-88-125

"Stone" to his friends, Maxwell is the largest person currently living in the Vault. He is known for his physical strength and stamina. He would make the ideal volunteer due to his tremendous size and strength. It is unfortunate that his intelligence was affected after birth when the labor bot dropped him on his head. He doesn't care that he might have to leave the Vault.

NATALIA

Figure 3-2: Natalia Dubrovhsky
VID 208-206-49-229

Natalia is the grand-child of a Russian diplomat who worked at the Soviet Consulate in Los Angeles. She is a talented acrobat, with excellent coordination and reflexes. She is extremely intelligent and resourceful. Her only difficulty as a young child was understanding personal property laws. Natalia is very interested in leaving the Vault, and curious to explore the outside world.

ALBERT

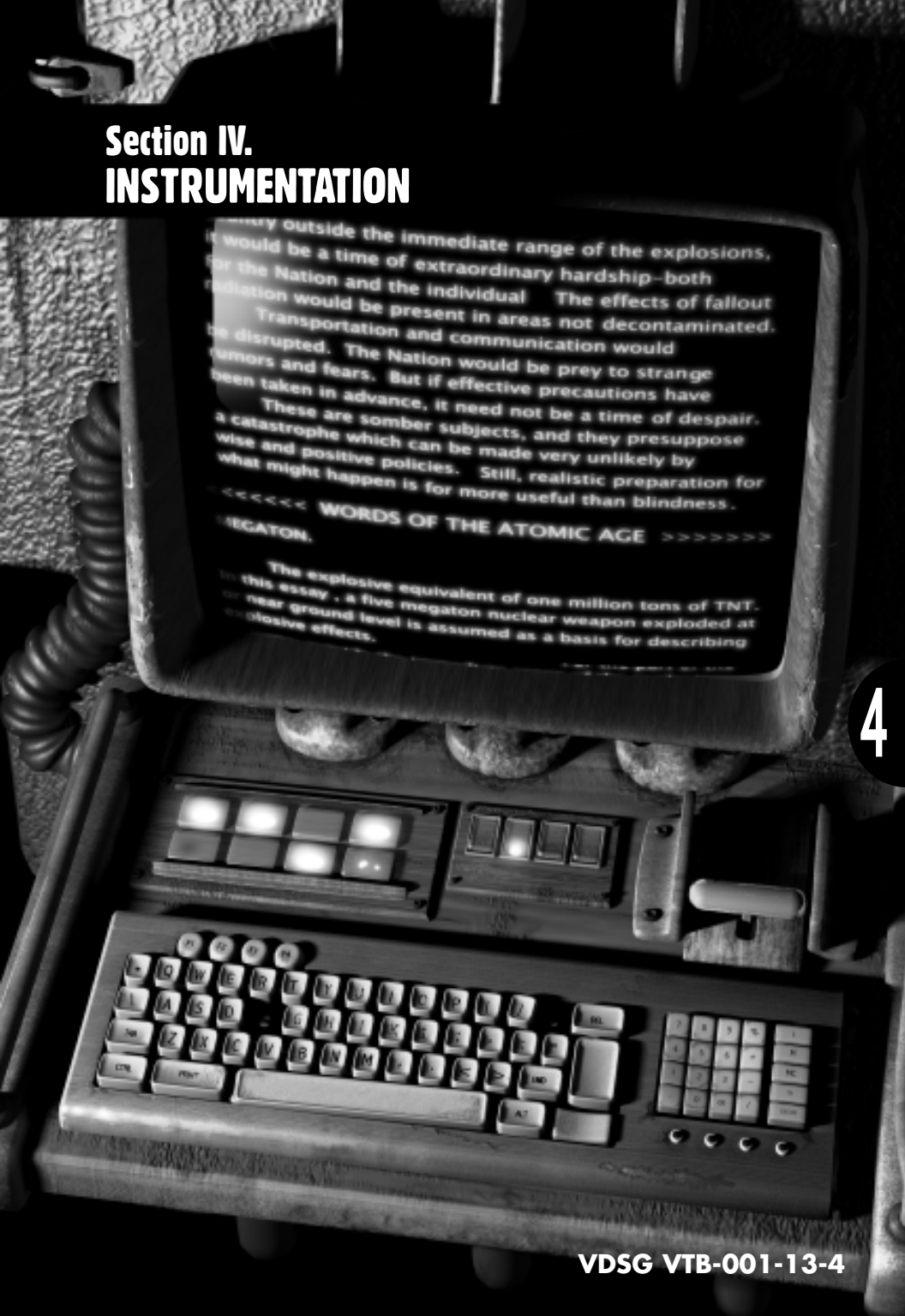
Figure 3-3: Albert Cole
VID 208-206-49-227

Albert is a charismatic leader of a small, vocal minority of the Vault population that is considering life on the outside world. Dedicated to the role of a negotiator, he is often able to communicate efficiently between different parties. His professed occupation is closest to what was once known as a "lawyer." Albert is often able to convince others that his ideas are correct.

We appreciate the fact that you are reading the Vault Dwellers Survival Guide, but would prefer that you use the Fallout interface, so we have implemented a special way of viewing these personnel:

From the character selection screen, select MODIFY. You can now examine these characters in detail, actually changing their statistics. But more importantly, you can view every item in their personnel record using the enclosed information card in the lower right-hand corner.

Section IV.
INSTRUMENTATION



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Section V.
CONFLICT RESOLUTION

5

EQUIPMENT

Vault-13 comes prepared with the latest in survival equipment. The items in your storage containers will last 1,000 people over 10 years in comfortable and modern surroundings. When it is time to leave the Vault, and return to rebuild America, your friends at Vault-Tec have provided you with everything that you will need.

We have ensured that all of your rebuilding [illegible]

Yeah, right. Who wrote this? What budget did they get? We already used most of the equipment on failed attempts to contact an outside civilization. And we've been in here a lot longer than ten years. We have little left to give you, but we will give you what we can.

[illegible] to make sure the equipment is reliable.

A reminder: You can only carry an amount of equipment equal to your carry weight. Anything over that amount must be left behind.

You can get specific information about the items in your inventory by doing an Examine on a item in your inventory list. The information will be displayed in the inventory display window. If you equip armor and weapons, the character information in the display window will give you additional information.

There are six different types of equipment:

Weapons (things that hurt people)
Ammo (things that go in things that hurt people)
Armor (things that help people not get hurt)
Containers (things that hold other things)
Chems (things that you take)
Miscellaneous (things that do other stuff)

All items have the following in common:

Weight (how much things weigh, in pounds). The weight of the item will affect your ability to carry equipment. You can carry a larger amount of lighter items than heavier items. When you examine an item, it will tell you the weight for one instance of that item. If you carry multiple items of the same type, you need to multiply the number of items by the weight to determine the total weight of items in that stack.

Size (how big or small things are). The size of the item will affect how many items a container can hold, and how difficult it will be for someone to steal this item from you. Larger items are more difficult to steal. Generally, items that are heavy, are larger in size. This is not always the case.

Cost (how much things are worth, in money). More valuable items are worth more money. We don't know what kind of monetary system will exist after a nuclear war, but bartering is most likely to exist. In this case, items necessary to survival will probably carry a larger price tag than fancy, expensive, but unnecessary items.

Your bartering skill will adjust the value of an item.

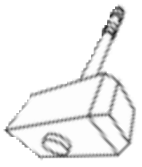
EQUIPMENT LIST

WEAPONS

ICON	DESCRIPTION
	**BRASS KNUCKLES** Brass Knuckles are a melee weapon that use your unarmed skill. They will help in hand-to-hand combat when punching. Besides giving your hand a little more protection, they will increase the amount of damage you do with a punch. And they look cool.
	**CLUB** This police baton will help subdue your opponents. You can swing or thrust it, as you desire. The baton will focus your strength, doing more damage than your own hands. Not much more, but more…
	**PISTOL** This is your basic ranged weapon. The 10mm round packs a goodly punch, and the Colt pistol is a fine example of workmanship and quality. It is a single shot weapon only, meaning that every time you pull the trigger, you will fire one, and only one, round of ammunition. The 6520 has no problem feeding hollowpoint ammunition for small game hunting, or armor piercing rounds for larger, bipedal game.
	**RIFLE** A longer ranged, and more powerful, firearm. The Rangemaster is your basic, solid rifle. It uses the .223 caliber rifle round, a standard for over 110 years. The .223, combined with a 1:10" twist, gives good accuracy at range and solid knockdown capability.

EQUIPMENT LIST

WEAPONS continued

ICON	DESCRIPTION
	**GRENADE** The fragmentation grenade is extremely useful as a defensive weapon. A small, but concentrated, explosive charge connected to a contact fuze will spread over 1,000 metal fragments over a 2.5 meter radius area. The small explosion area means that these grenades can be used at a closer range than ever before, without possible harm to the user.
	**SMG** One of the finest weapons in the world. The H&K MP9 is a solid submachinegun, capable of single or burst mode attacks. The single shot is acceptable, comparable to the 6520 pistol, but the burst mode is spectacular! The MP9 is easy to control, and spews 10mm death like no other firearm in it's size category.
	**KNIFE** Vault-Tec knives are formed from the hardest steel alloys known to man! The knife is a superb tool, capable of performing many mundane tasks, as well as being a good melee weapon. The knife point and edge will act as a force multiplier, increasing the amount of damage your Strength can do. Not as good as a gun, but better than most other small melee weapons. This knife is not balanced or designed for throwing, as some others are.
	**SLEDGEHAMMER** While many would consider a Sledgehammer to be an excellent tool, but a poor self-defense weapon, the latest designs are made with lightweight but extremely strong materials. The sledgehammer is a massive weapon, that in the hands of a strong wielder, can knock foes off their feet.
	**SPEAR** A razor-tipped spear can be thrown for several meters (more depending on your strength), or used in hand-to-hand combat, making this a good balance between ranged and melee weapons. While it is not the best tactical sense to throw your only weapon at your opponent, if you keep a sidearm or other small weapon readily available, the spear can be a good first attack.

EQUIPMENT LIST

AMMO

ICON	DESCRIPTION
	**.223 FMJ** Rifle caliber ammunition. The FMJ stands for Full-Metal Jacket, which describes the bullet that is used in the round of ammo. A FMJ bullet is very tough, and has pretty good penetration without sacrificing good expansion. In other words, it's an average round.
	**10mm AP** The 10mm caliber ammo is designed for pistol or submachinegun size firearms. The AP suffix denotes the round is Armor Piercing. AP rounds have excellent penetration, but poor expansion. They will not be as affected by armor as a normal round, but do less damage after armor to the target.
	**10mm JHP** This is another version of the 10mm, but in JHP or Jacketed Hollow Point. Hollow Point ammunition is designed to expand to as large of a size as possible to translate the most energy to the target. Unfortunately, if the target is wearing armor, most of the energy is splatted against the armor and little of it will actually affect the target.

ARMOR

	**COMBAT ARMOR** Combat Armor is advanced personal armor for the 22nd century police officer or military grunt. This is about the best armor a Vault Dweller is likely to see in their lifetime. Combat Armor is highly effective against most types of damage, is light weight (for it's protective value), and is, unfortunately, not available without a special permit. Interested parties should contact the BADTFL office near them.
	**LEATHER ARMOR** The original Leather Armor was designed for Motorcycle Football and other dangerous contact sports. It is likely that the simple construction techniques required to produce armor of this design will make it a popular choice following a nuclear disaster. It provides moderate protection, and the light construction makes it easier to dodge attacks while worn. Unfortunately, it provides little to no protection against explosions or plasma attacks.

EQUIPMENT LIST

ARMOR continued

ICON	DESCRIPTION
	**LEATHER JACKET** What's the point of wearing armor if you can't look good? The Leather Jacket is a toned down version of Leather Armor, providing minimal protection while not sacrificing any dodging capability. Stylish, too. Unfortunately, poor ventilation and the black leather make this a very hot armor to wear under the scorching desert sun.

CONTAINERS

	**BACKPACK** A backpack will store items for you in one convenient location. Items have two features: size and weight. A backpack will store any number of items that total less than around 40 lbs., and have a combined size that will fit in the backpack. Several really large items (like suits of armor) will not fit in a normal backpack, but lots of small items (like ammo, or grenades) will fit just fine. Why use a backpack? To keep your inventory organized.

CHEMS

	**RADAWAY** If you have been exposed to large amounts of radiation, then use RadAway to remove the radiation from your system. It won't feel good, but better a headache and some stomach problems for a couple of days than the long term effects of nuclear radiation! RadAway takes a little while to work.
	**RAD-X** Rad-X is a preventive medication. Take Rad-X before exposure to radiation, and the total amount of radiation you receive will be reduced. Rad-X bolsters your bodies own Radiation Resistance. The stronger you are to start with, the more effective Rad-X will be.

EQUIPMENT LIST

CHEMS continued

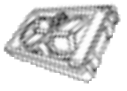
ICON	DESCRIPTION
	**STIMPAK** A stimpak (short for Stimulation Delivery Package) contains many healing chems. A soup of healing medication, if you will. By injecting the Stimpak, you drastically increase your own recuperative functions and restore lost hit points almost instantly.
	**SUPER STIMPAK** The Super Stimpak contains more drastic chems, increasing the healing effect at the cost of eventual damage to the very tissue it heals! A larger cousin to the Stimpak, the Super Stim will heal more damage. It will, however, cause a small amount of hit point loss after a period of time. You should be aware of this function, and prepare for it. But nothing works like a Super Stim when time is short, and danger grave.

MISCELLANEOUS

	**DOCTOR'S BAG** A Doctor's Bag includes all the items necessary to perform most tasks required by the Doctor skill. Using this item will automatically perform the Doctor skill task, but at a higher percentage chance of success (the proper tools help ensure a higher success rate). A Doctor's Bag does not contain unlimited supplies and will eventually run out.
	**DYNAMITE** An explosive. Use the dynamite to set the timer. After the timer expires, the dynamite will explode. Your Traps skill will determine if you set the timer properly. In Fallout, explosives are generally lower powered then you would expect. But don't stand next to a charge of dynamite when it goes off.
	**FIRST AID KIT** Similar in nature to the Doctor's Bag, the first aid kit (FAK) has items for the use of the first aid skill. Using the FAK on a hurt subject will improve the successful chance of using the skill of First Aid. Also, like the Bag, the FAK contains a limited amount of healing items, bandages, and so on. After multiple uses, it will be eliminated.

EQUIPMENT LIST

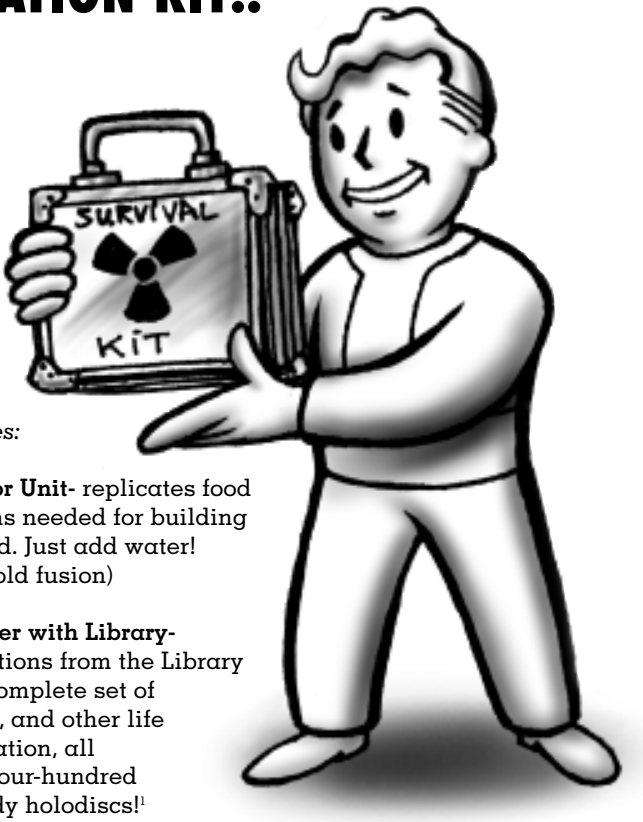
MISCELLANEOUS continued

ICON	DESCRIPTION
	**FLARE** The flare can be used to create a field of light for a period of time. Only really useable during the night, or in darkness conditions, the flare can be a successful tool in exploration. Light makes it easier to see people and things.
	**GEIGER COUNTER** A geiger counter is a device for the measurement of radiation. If you place the counter in one of your active item slots, you will have advance warning about radiation. Actively using the counter will give you important detailed information about your personal radiation count.
	**LOCKPICKS** An unauthorized item for general vault personnel use. Lockpicks are only to be used in emergencies requiring the opening of doors or locked containers when the proper key is unavailable. The proper use of the lockpick item will increase the successful chance of using the Lockpick skill.
	**MOTION SENSOR** When used in conjunction with the PIPBoy 2000 AutoMap feature, the motion sensor will display living and moving critters on the map. The motion sensor must be placed in an active item slot to function correctly. Use the motion sensor to scout the area ahead.
	**THT TAPES (Holotapes)** THT Tapes can store an incredible amount of data, some can hold as much as 256k. The standard tape holds 64k, with the middle model holding an average of 128k (barring any bad inches of tape). THT Tapes are based on Tape Holography technology, storing their information safely for extended periods of time. Use the THT Tape to add it's information to a compatible reader, in your case - the PIPBoy 2000.

Future-Tec, a division of Vault-Tec, presents the following advertisement for your enjoyment!

When the All Clear sounds on your radio, you don't want to be caught without...

THE GARDEN OF EDEN CREATION KIT!!



The kit includes:

Base Replicator Unit- replicates food and basic items needed for building your new world. Just add water! (powered by cold fusion)

Holodisc Reader with Library- includes selections from the Library of Congress, complete set of encyclopedias, and other life saving information, all contained on four-hundred and sixty handy holodiscs![1]

and...

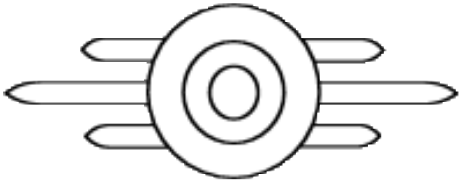
A Miniature Pen Flashlight![2]

4 out of 5 nuclear scientists recommend the Garden of Eden Creation Kit over the other leading survival kits!

[1]A condensed version is available on three handy holodiscs

[2]Not suitable for children under the age of three. A different toy is available for younger children.

APPENDICES



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APPENDIX 6: SURVIVAL RECIPES

Mushroom Clouds
(preheat oven to 200 degrees Fahrenheit)

3-4 egg whites (at room temperature)
1/4 tsp cream of tartar
1 cup superfine sugar*
cocoa
8 oz dark chocolate (bittersweet or semi-sweet)

Beat the eggs and tartar with an electric mixer until soft peaks form. Add the sugar a little at a time while continuing to beat, until all the sugar is in and the mixture is glossy and stiff.

Using a piping bag with a no. 8 tip, pipe out an equal number of caps and stems onto an ungreased non-stick cookie sheet. The caps should be about the diameter of a quarter, and the stems should be about an inch high and the diameter of a soda straw.

Sprinkle cocoa over the caps and stems, and then blow on them to spread out the cocoa more evenly. You may want to do this outside, as cocoa goes everywhere.

Bake for 2 hours at 200 degrees.

Carefully remove the caps and stems from the cookie sheet. With a dull knife, snip the top of each stem so it has a flat top surface.

Melt the chocolate (in a double boiler or microwave). Spread the chocolate on the base of each cap with a butter knife or spatula, and use it to glue a stem in place. Put the assembled mushrooms in the refrigerator for 20 minutes to harden the chocolate, then put them in an airtight container.

Makes 3-4 dozen.

Desert Salad
(Increase or reduce ingredient portions to taste)

1 lb. extra lean ground beef (turkey may be substituted)
1/2 head of iceberg lettuce, cut
3 oz. pinto beans
6 oz. sliced olives
4 oz. cheddar cheese
6 oz. tortilla chips
1 firm tomato
1 16oz. bottle of Catalina dressing
1 avocado (optional)

Brown the meat, drain.

In large bowl, mix lettuce, beans, and olives. Crush chips and add. Cut tomato into small chunks and add to bowl. Shred cheese and add. Slice avocado and add. Add meat. Toss with dressing. Serve.

Makes 4-6 portions.

*superfine sugar is NOT confectioner's sugar or 10X sugar. If you cannot find superfine sugar, it's easy to make. Just put granulated sugar in a blender or food processor, and blend for 1 minute.

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