Changelog:
Sub-perks in general are discounted if the master perk is.
Added MineFactory Reloaded (sub-perk of Lore of Alex)
Added Public Multiplayer Server (perk-linked drawback for Multiplayer Server)
Reworked Universal Electricity; as it's technically a series of mods, you can now buy its various components separately.
Added Applied Energistics (sub-perk of Universal Electricity)
Added Hardcore Questing Mode (item)
Folded the bow and the unbreakable enchantment into Diamond Tools, now renamed 'Tool Pack', since no one really wants to spend CP on ordinary, breakable Diamond Tools.
Also added some new enchantments for the Tool Pack.
Cut prices on Nuke and Beacon; they're powerful, but you can actually build both of these yourself.
Increased the point value of Wither, since not only is it more dangerous than the Ender Dragon, it'll also wreck your base pretty consistently. Also added quick notes about the boss drops under the relevant drawbacks.
Added the obligatory boilerplate future section, with a special bonus for those who want to stay here forever.
Expanded Appendix some more; the tech side in general should be pretty well explained now, if you want details.

Minecraft Jumpchain 0.6, Reloaded Edition

Background:
Everyone who enters this world is, to some degree, a Drop-In, since Minecraft worlds are generated anew for each one who enters them. Still, a background will give you some knowledge of the nature of the world, which will help you survive, and give a basis to your powers.
Drop-In (0): You come to this world with no special knowledge. Powers that manipulate the artificial nature of the world come easier to you.
Miner (50): You feel very comfortable with this world, and gain an instinctive understanding of the creatures within, and the progression inherent in mining for resources.
Mage (50): The magic of this world makes sense to you, and you'll more easily be able to use both the native magics, and the magics imported from 'mods'.
Builder (50): The crafting system of this world makes sense to you, and you'll be able to figure out recipes through trial-and-error, even more complicated ones from 'mods'.

Everyone starts with:
Bonus Chest: a chest containing a set of Wooden Tools (Axe, Hoe, Pickaxe, Shovel, Sword), five Apples, and five loaves of Bread is found near your spawn point, ringed by four Torches. It'll help you get started in this world, and can hold an awful lot of items.

Hardcore: You will not respawn after death, and starvation can kill you. Monsters can spawn in any dark place, and will seek you out if you are nearby. Zombies can break down your doors, and Creepers blow through your walls, though they won't attack if they can't detect you. If you sleep in a well-lit place, you should be safe...

Biome: (You may pay 50 CP to select the biome of your choice.)
1: Cold Taiga: A snowy land, full of wolves and short brushes. Cold, and fairly boring; probably the least favourite starting location, though it's less hazardous than some.
2: Desert: A barren, sandy land. An excellent source of sand and cacti, and the lack of obstructions makes it easy to spot monsters at night. Ancient ruins and temples may be found here, if you look hard enough, though food and water will be hard to come by.
3: Extreme Hills: A mountainous land, full of rocks, cliffs, and caves. Good for exploring, but a hard place to start building. Combat here is complicated by the many ledges, but most of your enemies will also be trapped by the cliffs.
4: Black Forest: A dense, temperate forest, with a thick canopy. The pervasive gloom can be dangerous; monsters will appear from the shadows, even during the day. An interesting place to get started, you'll need to find shelter fast!
5: Mushroom Island: A small island covered in tasty fungal growth. The only place in the world where no monsters will ever spawn, you are alone except for the strange fungal cows. Leaving may be difficult, since there is no wood here with which to build a boat.
6: The Nether: An endless hellscape full of lava and demons. Extremely deadly, but full of priceless resources; glowstone, soul sand, netherrack, and nether wart can only be found here. A portal to the overworld is bound to exist in a nearby demonic fortress, should you desire escape.
7: Savanna Village: You start near a village on the savanna. The locals are friendly; though they speak no intelligible language, they'll eagerly trade with you for resources (showing you simple pictograms of their desired trades), and they'll be willing to let you stay in one of the empty houses for free. Careful, though; zombies will attack this place regularly, attacking the villagers and their Iron Golem defenders. If you don't aid in the defence, the village can easily become a ghost town.
8: Free Choice: Pick any biome that exists in Minecraft; you spawn there.

Perks: (Note that perk-linked drawbacks do not count against the drawback limit, though they won’t give you more points than you needed to purchase their linked traits. Also, any perk or item that is discounted to a given class also discounts its sub-perks or enchantments.)

Rei’s Minimap (100, Free Drop-In): At will, you can summon up a purely mental map of your surroundings, which will be entirely accurate, though it won’t show you anywhere you’ve never been before. The map can be resized at will, appearing either as a ‘heads-up display’, or a full-sized vision-filling map. The map also can be configured to show you the current

location of any nearby creatures, including whether they are friendly or hostile, though it won't be able to determine the intentions of intelligent beings.

Strength of Steve (100, Free Miner): You are mighty, and can punch down trees with your bare hands! Given even the simplest of hand tools, you'll be able to dig through sand and gravel like water, and mine long tunnels through solid stone in minutes, and it'll only get easier with better tools.

Crafting Table (100, Free Builder): You can easily assemble a few planks into a crafting table, upon which you can nigh-instantly produce almost anything, so long as you have all the parts and know the recipe. Items larger than a $1m^3$ cube, or which are not designed to be worn on your person or carried in your hand, may require more advanced crafting techniques, but you'll still find it easier to make the parts for it. Complex items usually require a bunch of sub-parts, and figuring out all the recipes for them can be difficult.
-Iron Chests (100, requires Crafting Table): You can use your crafting table to produce a series of space-folding chests out of common materials, each of which can hold vastly more than their mere volume implies. A simple $1m^3$ wooden chest can hold the same amount as 27 inventory slots, an iron chest has 54 slots, a gold chest has 81 slots, and a diamond chest has 108 slots. Unfortunately, this space-folding 'technology' is a little finicky; the chests cannot be moved while full short of breaking them open, which spills out their contents in an enormous mess.
-Not Enough Items, Recipe Mode (200, requires Crafting Table): You can, at will, summon a menu listing every possible item, and all the recipes necessary to transform one item into another. Convenient search functions within this menu will allow you to sort by the items you have available, allowing you to easily determine what you can make from the things you have, or what parts you need to make a thing that you already have. Not everything will have a recipe, but you'll know how to make anything that isn't unique.
--Not Enough Items, Cheat Mode (1000, requires NEI, Recipe Mode): Once per month, you can use the recipe menu to instead duplicate any single item you possess. The new item is indistinguishable from the first, and has all the same powers. The one/month limit applies even if you grant this power to a companion; only the first attempted duplication in any given month will succeed.

Lore of Alex (100, Free Mage): You know the mystic secrets of this world, and can easily assemble a portal to the Nether, given a supply of Obsidian. Should you acquire the necessary hellish reagents there, you'll be able to brew a number of useful magical potions. Additionally, whenever you kill something, glowing orbs will emerge from the corpse, which will float towards you if you are close enough; with enough of these (and a diamond-studded Enchanting Table), you'll be able to enchant items with a variety of simple magical powers. It is notable that all these effects work generally in this world, and anyone can learn them here; you just know it all from the start, and will be able to apply these effects with confidence in other worlds, or to things not normally found in this world. For instance, you'll be able to judge

the enchantment capacity of arbitrary items with a glance, and that amount will be greater for you than it might be for other magi.
-Nether Eye (50, Requires Lore of Alex): You'll be able to craft Nether Eyes from Ender Pearls and Magma Cream, which will allow you to easily locate Nether Fortresses, when you visit the Nether. You'll also have a pretty solid grasp of Overworld/Nether geometry, thus allowing you to 'safely' use Nether Portals as 'shortcuts' between distant parts of the overworld. Additionally, Nether Portals will work in non-Minecraft worlds, guaranteeing you access to Nether-only resources like Glowstone and Nether Wart. Caution: use of Nether Portals in universes which contain actual hell dimensions may send you there instead.
-MineFactory Reloaded (600, Requires Lore of Alex, Buildcraft, and IndustrialCraft): Your understanding of magic is complete. To you, magic is engineering, and can be automated and reproduced on an Industrial scale... at a considerable cost in life, as this sort of magi-tech runs not merely on Electricity, but also on the life Essence extracted from the bodies of the dying. This liquid Essence permits the manufacture of potions and enchanted items on an automated assembly line, or the breakdown of enchanted items into Essence and component materials. This can even extend to potions and enchanted items from other universes, provided you have mastered the relevant techniques, and have enough of the required raw materials to make automation worthwhile.

Multiplayer Server (200, Discount Drop-In): You came here with some friends, didn't you? This world normally works the same way for everyone that's here, so any perks you take here apply equally to all of your companions.
-Multiplayer Bonus Chests (100, Requires Multiplayer Server): Your companions all get their own Bonus Chests, which contain their own personal copies of any items you take here.
-Public Multiplayer Server (Drawback +300): You are not alone; other people will regularly show up in this world. They don't have your best interests at heart, and will entertain themselves with such 'hilarious' pranks as blowing up your house, pouring lava into your bedroom, or simply stealing all the torches you placed, letting monsters spawn in 'safe' areas. They might also steal any items you leave lying around, and may manage to sneak into your Warehouse if you're in the habit of leaving Warehouse portals open. If you have the appropriate equipment present, they may also entertain themselves by reconfiguring your sorting system to destroy all the items it handles, throwing Tainted items into your Cauldron to poison the surrounding area, or siphoning the coolant from your nuclear reactor to cause a rather dramatic disaster. They benefit from all the local perks your Companions do, respawn as Companions do, and don't seem to mind dying repeatedly.

Inventory of Steve (200, Discount Miner): At will, you can make any loose items you touch vanish into your inventory screen, a 4x9 grid of spaces, each of which can include up to 64 of most items (tools and armour don't stack; rare, complicated, or expensive items only stack to 16). Three foot cubes of ordinary earth and stone count as single items. Any item stored in your inventory will not encumber you in any way, and any item in the bottom row of your inventory can be summoned to hand at a thought (replacing whatever you already had in your hands with the new item, if applicable). You can view the contents of your inventory as a

purely mental image at will, and rearrange it by gesturing at the illusory display before you. Be careful where you do this, though; the illusory image takes up most of your visual field, and may conceal the approach of monsters. If you like, you can keep just the bottom row of your inventory visible as a 'heads-up display'.
-Inventory Tweaks (100): Rearranging your inventory no longer requires gestures; you can rearrange it in any way you desire with a mere thought, including summoning any desired item to your hand, in only the time it takes to think the change. You still may need to look at the screen to figure out how you'd like to rearrange things, but you can resize the image or render it semi-transparent at will, thus preventing it from obscuring your view.

Soul Shards (200, Discount Mage): You know the dark arts needed to create a Soul Shard, which will eagerly devour the souls of those you slay. With enough of the souls of a given kind of creature, you'll be able to set up a Monster Spawner, which can release these souls as an endless wave of hostile creatures, ready to be slain and harvested (or perhaps unleashed upon your enemies). Alternatively, you might employ the Soul Forge to use these souls to create sinister Corrupted Iron, used to create foul equipment empowered by those you've slain.

Buildcraft (200, Discount Builder): You aren't limited to building things yourself; given some basic supplies and some redstone, you can use a system of gears and tubes to automate your crafting tables, create an item-sorting system, and build massive automated quarries capable of stripping the land of all resources down to the bedrock. It'll take a bit to get started, but once you're up and running, you'll be sure to have all the resources you need.
-Railcraft (100, requires Buildcraft): Instead of the crude minecart tracks you were able to make before, you are now able to make properly sturdy rails, able to bear the weight of full steam-powered trains that can pull a variety of useful carts. Using a system of tracks and automatic loader/unloaders, you can automate the delivery of resources and liquids from one place to another, or deploy 'rail-gun' systems to launch explosive-filled carts at your enemies! You can even create trains which automatically build their own tracks, or which dig tunnels for you. You'll also be able to make massive steam boilers, with which you can power your Buildcraft devices far more efficiently... given a non-trivial setup process.

Hack/Mine (400, Discount Drop-In): Somehow, the world in general seems to work a lot like an RPG. Monsters seem to scale in power the further you get from your starting location, and make their homes in vast dungeons whose entrances are scattered across the world. Items dropped by enemies or found in dungeons almost always have one or more magical effects, positive or negative. Additionally, the experience orbs dropped by monsters can actually make you stronger, as you 'level up', increasing your basic attributes and giving you access to a variety of different special abilities, depending on the 'character class' you pick (Warrior, Ranger, or Mage). Not incidentally, this makes the world a lot more dangerous; this power has a definite price!
-Horribly, Horribly Cursed Ring of Some Kinda Egyptian Curse or Sumpthin' (Drawback: +300): Wait, there are ring slots? Apparently so... and you're stuck wearing a cursed one that

somehow takes up both of them! It also halves all your stats, both physical and mental, including your movement and attack speed, and it's completely unremovable. Should you cut off your finger, it'll just appear somewhere else on your body. On the plus side, you'll be able to remove it after the jump, perhaps to curse someone else with...

Stamina of Steve (400, Discount Miner): You can keep working for days on end, without need for water or sleep; no amount of ordinary physical exertion will ever wear you out. Indeed, you no longer need drink, except to benefit from certain magical potions, and no longer need sleep, except to heal your wounds or hide from monsters. Only your hunger still drives you, but that's easily enough to sate; you can eat anything edible in seconds. Performing unusually strenuous activities, like sprinting full-out for hours, will make you hungrier, but unless you're actually starving to death, it won't stop you.

Thaumcraft (400, Discount Mage): You are a powerful mage, and can break items down into their pure Aspects, then reweave those Aspects into more useful forms. With time and research, you'll be able to transmute items into other items, create powerful magical items, imbue wands with spells both useful and deadly, and create golem servitors to carry out your whims. Beware, though; Thaumaturgy is a delicate art, and any mistakes can Taint the land, twisting the land to evil and all creatures within it into deadly and malicious forms. The Thaumonomicon, a magical book you'll create early on in your research, will help you get started, and give hints as to what to do next.
-Tainted World (Drawback, +100): It seems that some mage was already here; a vast Tainted land is visible from your starting location, and the Taint is slowly spreading. You could outrun it easily enough, but you'll continue to encounter patches of Taint throughout the world. Unless you prioritize researching the magical methods needed to contain and purify Tainted lands, you won't be able to settle in one place for long.

IndustrialCraft (400, Discount Builder): Working your way up from simple machines, you are able to build a vast array of advanced machinery, from the humble ore-grinding Macerator, to the futuristic Mass Fabricator. In time, you'll be able to build automated factory complexes, supply all your power needs with nuclear energy, protect yourself with nigh-impervious Quantum Armour, teleport between bases with ease, and terraform vast areas to suit your whims.
-Gregtech (Drawback: +200, requires IndustrialCraft): The recipes for all your technological items are a lot more complicated; you'll need to gather large quantities of rare and specific ores and perform semi-realistic chemical reactions in order to properly make things. Getting your operations properly set up will now take a lot longer, and you might not be able to get at the high-end technology during your jump at all. On the plus end, this how crafting usually works in more realistic worlds, so you'll at least have some experience with those sorts of requirements before you have to try using your Minecraft factories to build non-Minecraft gadgets.

MystCraft (600, Discount Drop-In): With a bit of paper, leather, and ink, you can create Linking and Descriptive Books, which allow you to travel between worlds... within some limits. No Linking Book will be able to return you to any world but your current jump, so long as your chain continues. Furthermore, without a genuine understanding of the nature of dimensions, any new world you create with a Descriptive Book will be another Minecraft-type world, cursed to Decay into nothingness over the course of a week or so. This can be a handy way to gather resources without disrupting a 'real' world, or a good place to experiment with dangerous things, but nothing more... at least for now. Be sure to keep your Linking Books handy and your Descriptive Books safe; should you lose your Linking Book, you will be trapped within a doomed world, and should the Descriptive Book that defines a world be destroyed while you are in it, you will be destroyed alongside it. Careful searching of these worlds may turn up hints of forgotten lore that you can use to improve your skills, but the rotten fragments of paper you find in these decaying libraries will raise more questions than they answer.

Heart of Steve (600, Discount Miner): You no longer have any truly vulnerable locations; instead, you seem to run on a hit point system, measured by a row of 10 hearts that you can always picture in your mind. No injury you take will inconvenience or hinder you in any way until you run out of hearts, at which point you will immediately drop dead. You are completely immune to such nuisances as bruises, bleeding, broken bones, and severed limbs, though the damage such effects would normally inflict will still damage your HP, so you might die from getting shot in the foot repeatedly. Also, this does nothing to protect you from status effects; poisons will still affect you normally, and magic that could inflict worse conditions on you will also be able to do so. Fortunately, your general toughness and protection are taken into account when damage is dealt to you, so any attack that wouldn't inflict at least half a heart worth of damage is rounded down to zero, and has no effect.
-Zelda Hearts (200, Requires Heart of Steve): As Heart of Steve, but you start with only 3 Hearts. Fortunately, your hearts now track injuries by the quarter-heart instead of the half-heart, and each quarter-heart will be just as effective as your old half-hearts once were. Throughout the world, and in all future jumps, you will find Heart Pieces hidden in dungeons and similarly dangerous locations, or on the bodies of 'boss'-type enemies. Combining four of these Heart Pieces will form a Heart Container, which you can use to permanently grant yourself an additional Heart (and incidentally refill all of your hearts). Hearts continue to stack until you have 40. There is no benefit to Heart Containers beyond that... though they can still be used to fully heal you, or anyone else for that matter. (Note: If you take HQM, the quests it provides can give Heart Pieces as rewards, and many do.)

Equivalent Exchange (600, Discount Mage): You are a powerful Alchemist, able to infuse a Diamond with the power of Redstone and Glowstone to make a Philosopher's Stone. With such a stone in hand, you'll be able to create a Transmutation Tablet, allowing you to instantly convert matter from one form to another, possibly even converting ordinary dirt to valuable Diamonds... or even compressing the Diamonds further into Dark Matter or Red Matter. Combining your transmutation skills with these exotic and vastly expensive forms of matter,

you'll be able to produce Alchemical Chests with incredible volume, indestructible equipment with immense power, energy collector systems to generate additional resources from nothingness, and potentially become nearly immortal, burning vast quantities of resources instead of taking wounds. Your powers are all incredibly expensive to use, and you won't be able to max them out in your time here (especially if you don't have any advantages in harvesting resources!), but the raw potential of this path exceeds all others.

Universal Electricity (200, Discount Builder): Your technical prowess extends to sophisticated electronic equipment. It'll take a considerable amount of setup, as you accumulate resources and bring your factories online, but this level of tech is needed to support the most advanced and powerful of operations. The UE Core includes Mekanism, Electricity Expanded, and ComputerCraft, and enables a number of other submods that grant incredible technological power.
-Applied Energistics (200, Requires Universal Electricity): AE is the ultimate storage solution; instead of storing your items physically in various configurations of folded space or pocket dimensions, you can store them digitally, in specially-designed matter-energy storage drives. This is particularly expensive, and the systems do require a constant supply of energy to maintain the stored items, but the convenience of having all your items instantly sorted and delivered by an automated system is undeniable.
-Atomic Science (200, Requires Universal Electricity): UE systems are voracious consumers of energy, so you'll need a real source of power to keep up with the demand. With Atomic Science, you can build massive Fission and Fusion reactors to keep all your energy needs supplied... and then go on to build massive particle accelerators to produce Antimatter and Strange Matter to push your technological horizons still further (or to usher in the apocalypse with world-crackingly powerful weaponry).
-ICBM (200, Requires Universal Energy): Allows you to build a series of missiles, from short-range hand-held rockets to massive ICBMs with practically unlimited range. Each can accept a wide variety of custom payloads, effectively anything you can fit into the missile design; more than enough to deliver exactly the right weapon to the right target.
-MFFS (200, Requires Universal Energy): The Modular ForceField System gives you the tech to build forcefield generators. The forcefields it can produce are exceptionally powerful and customizable; the ultimate defence for any given location, at a correspondingly huge cost.
-Modular Powersuits (200, Requires Universal Energy): Modular Powersuits gives you the tech to build fully customizable power armour. Explicitly designed to be compatible with almost anything you want to integrate with it, this provides an excellent framework on which to add all the tech you want to your personal protection.

Items:
Resource Pack (25, One Free for Miner): Your Bonus Chest contains a stack of Logs, a stack of Cobblestone, a stack of Bread, a stack of Iron, a stack of Gold, and a stack of Coal; basic resources which will greatly obviate the tedium of the initial mining phase, and allow you to

construct a basic shelter immediately. You'll still need to go hunting for diamonds, of course. Can be taken multiple times for additional supplies.

Hardcore Questing Mode (100, Discount Drop-In): You have a magical book of 'Hardcore Quests', which details a series of optional quests. Many of the earlier ones are tutorial-type quests, designed to give you some familiarity with the oddities of your current world (especially including the functionality of your 'mods'); these come with detailed instructions on what exactly you need to do to accomplish a given thing. The first quest instructs you on how to build the "Quest Delivery System", a magical chest into which you can place quest items, and out of which you receive quest rewards. Quest rewards are generally commensurate with the difficulty of a given quest; none of it's anything you couldn't get on your own in the world, but it's always nice to have, especially if you were going to need to do the things the book asks you to do anyways. When specific items are requested, you are generally provided with something more valuable than the item that was asked for. In future jumps, the book won't be able to offer quite as much guidance, but it will continue to offer quests and rewards in every world you visit. If nothing else, performing these quests regularly is sure to get you out and doing interesting things!

Tool Pack (100, Discount Miner [all enchantments also discount Miner]): You start with a set of Diamond Tools, a Bow, a Fishing Rod, and a complete suit of Diamond Armour, which essentially starts you off at the traditional Minecraft endgame. These tools and armour all have the 'Unbreaking' enchantment, preventing them from wearing out over time. Unlike the conventional enchantment, these diamond tools will last forever, and will be immune to any effect that would destroy them.
-Aqua Affinity (50, requires Tool Pack): Your diamond helmet also has the 'Respiration' and 'Aqua Affinity' enchantments, allowing you to breathe and work underwater without penalty. Unlike the conventional enchantment, this helmet will allow you to breathe underwater indefinitely.
-Bane of Arthropods (50, requires Tool Pack): Your sword is the nemesis of all arthropod-kind. Any ordinary spiders, scorpions, crabs, and insects can be slain merely by waving the blade in their direction, and the giant spiders that infest this world will immediately perish at the blade's touch. Even monstrous world-threatening arthropods have reason to fear this blade, though it may not be enough to slay them in a single blow.
-Efficiency (50, requires Tool Pack): Your axe, shovel, and pick work significantly faster, allowing you to get more done, in less time, with less effort. Your fishing rod has the similar 'Lure' enchantment, which makes fish more likely to bite.
-Fortune (100, requires Tool Pack): Your axe, shovel, and pick are 'lucky', and sometimes harvest more resources from a given resource source than might otherwise be available. Your sword and bow have the similar 'Looting' enchantment, which causes slain monsters to drop more and better items than they otherwise might. Your fishing rod has the similar 'Luck of the Sea' enchantment, which occasionally causes you to fish treasure out of the sea, including magical items!

-Fire Aspect (100, requires Tool Pack): Your sword (and bow) is permanently on fire, and will burn any enemies it cuts (or shoots). The meat from anything killed by these weapons will be perfectly cooked, safe to eat, and delicious. This works even if the target is a zombie, or otherwise has a body normally dangerous to eat.
-Thorns (150, requires Tool Pack): Each piece of your diamond armour has the 'Thorns' enchantment, causing it to reflect a quarter of incoming damage back at melee attackers. Unlike the conventional enchantment, the use of this enchantment will not damage your armour, whether or not you took Unbreaking.
-Infinity (100, requires Tool Pack): Your bow has the 'Infinity' enchantment, allowing it to duplicate any arrow you fire with it, leaving the original in your quiver. The duplicate is partially unreal, and will vanish a minute after being fired. Unlike the conventional enchantment, this will allow you to duplicate arrows with exceptional or magical properties.
-Knockback (100, requires Tool Pack): Your sword has the 'Knockback' enchantment, straightforwardly causing it to knock back any targets it hits, especially if you swing while charging at an enemy. Your bow has the similar 'Punch' enchantment, which works at range. Anything of approximately human mass will be sent flying; heavier targets will be less affected.

Endless Bag of Redstone (100, Discount Builder): You get a small bag which inexplicably contains a full stack of Redstone. It refills once a week. Handy for experiments with Redstone Wiring.

Endless Bag of Glowstone (100, Discount Drop-In): You get a small bag which inexplicably contains a full stack of Glowstone Dust. It refills once a week. Handy for lighting up your surroundings, keeping the monsters at bay.

Endless Bag of Ender Pearls (200, Discount Drop-In): You get a small bag which inexplicably contains a full stack of Ender Pearls (which is unfortunately only 16, not 64). It refills once a week. Remember: if you throw an Ender Pearl, you teleport to wherever it fell, but the damage from the effect is enough to halfway kill an unprotected mortal. Fortunately, any sort of protection, including ordinary metal armour, is enough to reduce this somewhat.

Endless Bag of Nether Wart (200, Discount Mage): You get a small bag which inexplicably contains a full stack of Nether Wart. It refills once a week. The crucial ingredient in all Minecraft potions, brew it with water and any of a vast array of ingredients to create a magical potion. Also comes with a Brewing Stand.

Monster Spawner (200, Discount Drop-In): Have you ever thought that there just weren't enough horrible monsters in the world? Does the lack of endless waves of flesh-devouring Zombies seem to take all the fun out of life? Well, worry no more; with this Monster Spawner, you'll be able to summon up hordes of enemies to fight whenever you like! A handy dial on the side allows you to choose between any non-boss monster that appears in your version of Minecraft, and a switch allows the monster spawning functionality to be turned on or off.

Monsters spawned in this way will be entirely uncontrolled, and do not possess souls. If defeated, they may drop any loot they would normally spawn with, along with the normal XP orbs. Monsters only spawn in darkness, so the Monster Spawner will not actually do anything unless it is activated in a dark place where monsters can safely spawn.

Compact Solar Array (300, Discount Builder): A $1m^3$ cube, that unfolds into a small solar array. A small dial on the side allows you to adjust the voltage... which seems to go a lot higher than an ordinary solar panel should be able to provide. So long as this is placed in plain view of the sun, it'll provide a powerful and steady power output, allowing you to get your factory complex off the ground a lot sooner. It's also useful anytime else you'd like to power a small town with a device that'll fit in the back of a truck.

Golem Guard (300, Discount Mage): A tough iron golem, wearing a tiny top hat. It is mighty, and capable of limited self-repair, but it is not truly intelligent. It can obey some simple commands, and will fearlessly interpose itself between you and any attackers, or protect an area you specify against all threats. Should it be destroyed, you will be able to salvage the core and rebuild it, given a supply of Iron.

Evertide Amulet (300, Discount Mage): One of the more powerful results of the alchemist's art, the Evertide Amulet protects you from drowning, and makes you a better swimmer. You will also be able to create vast quantities of water, shoot watery blasts at people, or freeze water in your vicinity. Unlike the Alchemical version, this one merely needs a short cooldown between uses, instead of consuming resources.

Volcanite Amulet (400, Discount Mage): One of the more powerful results of the alchemist's art, the Volcanite Amulet makes you immune to lava, and lets you shoot lava bolts at things, or create vast and deadly fields of lava. Unlike the Alchemical version, this one merely needs a short cooldown between uses, instead of consuming resources.

Mining Laser (400, Discount Builder): A cutting edge Industrial mining laser. Good for 160 ordinary shots with a full battery, allowing you to quickly drill massive holes through solid rock with ease! If a weapon is needed more than a tool, the power can be dialed up further, allowing 40 high-intensity disintegration blasts instead. Unlike the production model, this one is self-recharging, and will replenish a quarter of its battery over the course of a day if left unused.

Nuke (400, discount Builder): For when you absolutely, positively, need to destroy everything for miles around. It's a 3 foot cube that weighs a ton; plan accordingly. This one is distinguished from the ones you can produce with Industrial Craft or Universal Electricity by the addition of a configurable timer, which lets you plan your escape after you set it off, though it remains fully compatible with UE's missile designs or IC's radio detonators. One use, but you'll get another one in your Warehouse after each jump.

Beacon (400, discount Drop-In): A pulsating Nether Star, ripped from the heart of the Wither, encased in glass and mounted on an Obsidian base, this is a potent magical item... potentially. If mounted on 3x3x1 m^3 platform of solid Diamond, it will shoot a massive beam of light into the air, which will grant you (and anyone you see as an ally) a powerful and customizable buff! You can add additional tiers of platforms below the first to strengthen the effect; the second tier must be 5x5x1 m^3, the third 9x9x1 m^3, and so on. If the pyramid contains at least four tiers, you will be able to select two buffs at once! The beam of light is activated when you sacrifice a Diamond to the Beacon, which also allows you to specify which buff is applied. The effect has a short range, only affecting those who remain within 20 meters of the Beacon. The radius of the Beacon effect doubles for each tier added beyond the first, though the strength of the buff does not increase beyond the fifth tier. This version comes with nine diamond blocks, allowing you to craft the first tier of the pyramid yourself, but you'll have the opportunity to make your own if you choose to fight the Wither.
(Beacon Sidebar?)
-The buffs available are Speed, Haste, Jump, Resistance, Strength, and Regeneration.
-The Speed buff adds 10 m/s to your running speed each level.
-The Haste buff lets you perform any routine physical task (mining, typing, chopping vegetables, etc...) 50% faster each level. It will not increase your combat ability directly, though it will help you reload faster.
-The Jump buff adds 2 m to your maximum jump height each level.
-The Resistance buff is unlocked at level 2, and causes you to take 5% less damage from all sources each level. This stacks multiplicatively; the (default) second level of the buff will cause you to take 90.25% damage, and so on.
-The Strength buff is unlocked at level 3; this increased strength allows you to lift an additional 100 kg per level, and adds proportional force to your melee attacks.
-The Regeneration buff is unlocked at level 4; it restores half a heart every 30 seconds at level 4, and half a heart every 15 seconds at level 5. If you do not have the Heart of Steve, it instead provides enough Regeneration to fully heal any wounds you've taken in a day / 12 hours.

Drawbacks (max 600, all 'spawn' drawbacks are mutually incompatible).

+50: Non-Premium Account: You (and anyone else you've brought with you) will spend the jump as a 'generic' tanned male figure, wearing a light blue shirt and dark blue pants, which seem to be part of your body.

+50: Chunk Loading: It seems that time doesn't pass normally in this world; if you're not in an area to observe things happening, no time passes while you are away. This can make farming a frustrating experience, and can be significantly worse for your factories. Odd things sometimes happen at the boundaries between 'loaded' and 'unloaded' areas of the world, especially when automated systems are involved; in rare cases, this can even lead to terrible disasters. Fortunately, you can build expensive 'chunk anchoring' devices to prevent this

from happening. Unfortunately, the more of these you deploy, the slower time seems to pass. This ‘lag’ effect doesn’t really make time pass any slower; it just seems to slow down.

+100: Blocky Graphics: The Minecraft world is normally fairly cubic, but if you take this, you will be, too. You (and anyone who came with you, or who you encounter in the world) will become a simple pixelated figure with a cubic head, a block body, and jointless square limbs without fingers or toes. This won’t seem to hinder you in any way, but you won’t be able to get up to any lewdness during your time here, as you’ll entirely lack the equipment for it.

+100: Scary Noises: Throughout your time here, you’ll be haunted by the noises of monsters. Even when you think yourself safe, you can never quite be sure whether that zombie groan you hear is from a zombie right behind you, or in a hidden cavern somewhere in the area that you haven’t managed to find yet. The constant cries of monsters will make it hard to sleep.

+100: Unlit Torches: Torches do not burn forever; they will burn out after a time. Zombies and skeletons will actively attempt to put your torches out, so you’ll need more advanced lighting systems to keep the darkness at bay.

+200: Herobrine: Occasionally, you’ll spot another person in the distance staring directly at you. He’s a mostly ‘generic’ male figure as mentioned above, but with dead white eyes and a beard. He’ll disappear if you approach, but you’ll run into him again and again during your time here. You’ll occasionally find cryptic structures and messages across the world, entirely unlike any of the rest of what you can find here, obviously artificial. Sometimes, you’ll even find things in your base messed with. It seems to be harmless, but a feeling of paranoid dread will slowly increase as the incidents continue...

+200: Far Lands: You spawn in a strange, distant land. The terrain around you is twisted into dangerous cliffs and warped chasms. It’s nearly impossible to go anywhere without tunneling through miles of earth, or building bridges across the gaps. The constant darkness of the chasms also means monsters will spawn at all times.

+200: Skyblock: You spawn on a tiny island of floating dirt, with nothing but your bonus chest and a tree. The chest also contains some buckets full of lava and water, and a diagram explaining how to combine them into a source of infinite stone. Using that, you’ll be able to expand your island, and perhaps reach more distant ones, and the chests present in those islands, which will in turn expand your capabilities further... though you’ll always be pretty starved for resources. Careful; there is no bottom to this world, and the slightest misstep can send you falling to your doom amidst an infinite void. Note that the island’s biome still works normally; Cold Taiga gives you a snowy island, Desert gives you a sandy island (and a cactus in place of a tree), Extreme Hills gives you a rocky island that's half-cliff, and Black Forest gives you an island covered in trees. Mushroom Island gives you an island covered in Mycelium and Giant Mushrooms, which is also a safer place to build a base, because of the local biome spawning effect. The Nether gives you a partly-on-fire island of Netherrack

floating far above an infinite sea of lava, and you'll need to figure out how to get from there to the distantly-visible Demonic Fortress if you want to really accomplish anything. Remember: Water instantly evaporates in the Nether, so the infinite cobble trick doesn't work here. With the village, your island is within sight of a village (which is on an unusually-huge island), so you'll be able to build a bridge to it with a day or so of work.

+300: Mo' Creatures: The world contains a lot more creatures, including flying Flame Wraiths, ferocious and nigh-invincible Werewolves, block-hurling Golems, and house-crushing Ogres... to say nothing of more mundane perils, like Sharks and Crocodiles. The world is a much more dangerous place, on the whole. God help you if you also took Base Defense.
+0: Mo' Creatures, Peaceful Fauna Edition: This gives you Mo' Creatures, but without the hostile monsters, leaving only harmless animals. Mostly harmless, at least; Sharks and other predatory animals are still present, though they aren't anywhere near as dangerous as the actual monsters Mo' Creatures introduces.

+300: Base Defence: You spawn next to a Companion Cube, covered in little hearts. The hearts beat in time with your heartbeat; if the cube is destroyed, you'll die. You can carry the cube with you, but it'll cause monsters to spawn at double the normal rate. Whether or not you're carrying it, all nearby monsters will know where it is, and will attempt to move towards it and destroy it. Making the cube completely inaccessible is unwise; if there is no path by which Zombies can somehow access the cube, Endermen will join in the attack, teleporting past all your defences. Mazes, locked doors, deathtraps, and automated defences are totally acceptable, of course.

+600: The End: You spawn in The End, without a portal to the Overworld. It's a bleak starless void with no natural resources whatsoever, only a vast floating island of featureless stone, and an army of shadowy horrors. Your only possible escape is to kill the Ender Dragon, a nigh-impossible task; the beast passes through all the matter native to its world without a trace, disintegrates everything you brought with you at a touch, and will often emerge from the ground without warning. It is massively tough and strong, and if you manage to hurt it, it'll escape to heal from one of the Ender Crystals scattered around the world. There are dozens of them, miles apart, secure atop high obsidian pillars; you'll need to destroy them all to truly vanquish the beast. Until you do, you'll be under constant attack by limitless hordes of shadowy, teleporting Endermen. If you attempt to sleep, your bed will explode beneath you. (As a bonus, you'll have the opportunity to claim the Ender Dragon's egg after you finally kill it. It won't hatch without an Ender Dragon to incubate it, but you might be able to extract some secrets from it, if you can get past the 'teleports away whenever touched' thing.)

+1000: Wither: A Wither spawns in the world shortly after you do; it immediately becomes aggressive towards you and tracks you unceasingly. It is a flying, three-headed monster that fires a continuous barrage of flaming skulls, and it is immune to all ranged attacks. It will hover at extreme range, firing continually from a distance, and will quickly move to maximize distance if approached. Half of its attacks glow with black fire, travel at incredible speed, and

inflict damage which is incurable until the Wither is defeated. The other half glow with blue fire and travel relatively slowly, but home in on your location and disintegrate everything within a 30-foot radius when they detonate (invariably making a huge mess of your base). The Wither immediately heals for any damage it does to any living thing, and will casually slaughter groups of random monsters if threatened. The sun cannot rise so long as the Wither exists, ensuring that plenty of monsters are constantly around. If you somehow manage to kill the Wither, another one spawns during the next new moon. (As a bonus, you'll be able to make your own Beacons from the drops you get off all these Withers.)

Future:
Minecraft-specific physics quirks only applies here, but all your other perks and tech that you bought here will still work more or less like it does here. All drawbacks are revoked, though you'll still have access to stuff like GregTech recipes, in the event that you find it situationally useful to employ the more complex processes for whatever reason.

Game Over: Perhaps you died, or maybe you're just tired of jumping. Either way, you wake up back on Earth, just as you left it, keeping everything you've earned so far.
Creative Mode: Maybe you like it here, and want to stay forever? It's your own personal world, after all; why not become the god of it? If you stay here, that's exactly what happens; you'll become immortal, and gain the ability to summon arbitrary items into existence just by thinking of them. You'll also be able to fly, and teleport to any part of this world at will. You'll disappear back on Earth, and stay here forever, in a world of your own design.
Adventure Mode: You're not done with your quest just yet. You move on to the next jump.

Appendices (Caution: Words)

Crafting Table:
-Torches can be made from a stick and a lump of (char)coal. They seem to burn forever, and without any risk of setting fires.
-With some Cobblestone, you can build a Furnace, which can be fueled with anything burnable, and can smelt ordinary ore, albeit slowly and somewhat inefficiently. It can also burn Logs down to Charcoal, which can be used as fuel, or to make torches.
-With Diamond, Obsidian, and a Book, you can build an Enchanting Table. An Enchanting Table can draw upon your stored XP to imbue items with permanent magical effects... somewhat randomly, unless you learn the magical language the book uses to describe the available enchantments.
-The available enchantments are mostly fairly generic; Protection from various specific sorts of damage, increased damage against specific types of foe, tools that work more quickly or are more durable, and the like. Most enchantments come in multiple levels, and higher-level enchantments require more power to add to an item.

-Different items and materials are more enchantable than others, a value known as ‘enchantment capacity’. Generally speaking, items made with native Minecraft materials are more enchantable than non-Minecraft materials (a Minecraft-style Iron Sword will hold more magic than a traditionally-forged Katana); ‘magical’ materials are more enchantable than non-magical materials (Gold is more enchantable than Iron, and LotR’s Mithril is more enchantable than Star Trek’s Duranium); and simpler items are more enchantable than complex technological items (a sword of any kind is more enchantable than a gun of any kind).
-Enchantment capacity is a theoretical level, and is limited by both your available XP, and the presence or absence of nearby books. An enchanting table which is not near filled bookshelves is relatively useless.
-For less-random application of enchantments, Books may be enchanted instead. Combining an enchanted Book with any item consumes the Book to bestow the enchantment on the item, if said enchantment would fit within the enchantment capacity of the item.
-With a good deal of Iron, you can build an Anvil. Anvils can repair items quickly, at a small cost in XP and some of the material used to craft it; sacrificing a similar item negates the XP cost.
-The Anvil can also be used to transfer enchantments from one item to another, provided that the items are similar enough for the enchantments to transfer (two pieces of armour, two melee weapons, two tools, etc...). This costs an amount of XP based on the power of the enchantment being transferred, and will not imbue an item with more power than its enchantment capacity.

Monsters:
-Monsters can spawn anywhere that it’s dark. The only natural light comes from the sun, so monsters normally spawn only during the night, or underground. Torches can be spread to counteract this; they normally never burn out.
-Spiders are man-sized, and can be seen even during the day. They are somewhat tough, can climb walls, have a poisonous bite, and can leap a surprising distance when attacking. Under natural sunlight, they will not attack unless provoked, but they become hostile in darkness.
-Zombies and Skeletons spawn quite commonly. They’re fairly weak, but have a bit of intelligence, which lets them fight using tools (either those they spawn with, or those they find). Zombies can eventually get past doors, either by battering them down or by accidentally opening them; anyone killed by a Zombie becomes another Zombie (seldom a problem, except in Villages). Skeletons always spawn with bows, and will attack from long range; they sometimes ride giant spiders into battle. Both Zombies and Skeletons burn under natural sunlight.
-Creepers spawn only in darkness, but are otherwise unaffected by sunlight. They are very hostile, and will charge after any non-monsters they see, detonating themselves with a powerful explosion. Creepers attract lightning, and will become MUCH faster and more powerful if hit by lightning or otherwise electrified.

-Endermen spawn in the darkness, and will teleport around quickly. They can pick up most common sorts of terrain as blocks, and will move it around for unfathomable reasons. They are not hostile unless you look at them; at which point they attack in a violent rage. They are exceedingly dangerous, as they can teleport out of the way of many attacks, only to continue their attack from another angle.

Buildcraft:
-Buildcraft tech is relatively straightforward, revolving around Engines, Gates, Pipes, and Pumps.
-Engines produce pneumatic Power. Power is used to run all Buildcraft tech, including Pipes.
-The Redstone Engine is the most basic engine, and will run indefinitely on the limitless Redstone current provided by any Switch or Redstone Torch. It produces almost no Power, however, and so is only useful for things which require minimal Power, such as Wooden Pipes.
-The Stirling Engine is a more powerful engine which runs like a Furnace; any solid item which can be burned in a Furnace can be burned in the Stirling Engine for Power. The Stirling Engine may overheat and explode if it's power output is not being used.
-The Combustion Engine is an advanced engine which only accepts liquid fuel. It overheats quickly, and needs to be cooled with water to keep it from exploding. You could keep it supplied by running back and forth with buckets, but the only realistic way to handle its appetite is with a complex system of Pipes to keep it constantly supplied with Fuel and Water.
-Pipes are made of glass and a basic material, and are used for transporting items, fluids, and power from place to place. Ordinary pipes can only transport items, but they can be waterproofed to allow them to instead transport liquids, including Lava; similarly, the addition of redstone converts ordinary Pipes to handle pneumatic Power.
-Each type of Pipe segment has a unique function, based on its non-glass material. Wooden pipes require power, and are used for automatically unloading items (or fluid/power) from a container. Stone pipes are the standard pipe, allowing continuous passage of items at a slow rate. Gold pipes act as accelerators, dramatically speeding the passage of its contents. Diamond pipes act as sorters, and can be setup to transfer items into different pipe systems based on simple instructions. Obsidian pipes, when powered, suck up loose items into the pipe network. Void pipes, made from redstone and ink, act as matter disintegrators, and irrevocably destroy anything that enters them, an effective disposal system.
-Pipe-based item transfer systems, including Quarries and Fillers, won't work very efficiently without space-folding chests. Any form of item compression you do have access to will work just fine here, fortunately.
-Pipe-based Power conduits are a far more efficient way of Powering your devices than using a vast array of Engines, but they are slightly inefficient. Gold Conductive Pipes remove most of this inefficiency, though they are comparatively expensive.
-Gates can be configured to instruct Pipes (or attached devices) to behave in specific ways, including simple sorting tasks, in response to built-in or redstone-provided signals. They work as simple logic signals, and can be controlled by redstone wiring, which can be laid along your Pipes for convenience.

-Pumps are devices which probe downwards to extract liquids into a Pipe system, especially Water, Lava, and Oil. The analogous Mining Well does the same with bulk matter, allowing for a hole of arbitrary depth to be dug quickly. Of particular interest is the Quarry, which is built along similar lines, and will excavate a wide area instead of a narrow hole. All Pump-type systems require considerable Power to run; Quarries use so much power that they are infamous for overheating-related industrial accidents.
-The Filler works like a Quarry in reverse; instead of harvesting all resources in an area, it instead fills an empty area with whatever material you supply it with, or produces a simple shape, like a vast hollow room. The related Builder is even more advanced; after scanning an area to generate a template, it can be set to reproduce that template's shape... to the precision of 1m3 cubes of matter, of course.
-If you took Crafting Table, Automated Crafting Tables can be built by adding gears to an ordinary crafting table. To begin mass production, simply supply it with all the ingredients for an item to specify the pattern, and it will continue to produce as much of that item as is possible... provided you supply it with a continuous stream of power and ingredients (through Pipes). Through the clever use of Pipes, Automated Crafting Tables can be linked in series, to mass produce any item that you could craft yourself... provided that there's no magic involved in the crafting process.
-Buildcraft adds Oil to your universe; it can be found pooled throughout the overworld. Oil requires a Pump to extract, and likely an extensive Pipe to return it to your base, and will only burn at minimal efficiency before being processed, but refined Fuel is one of the most efficient energy sources in the game, and the best way to run your Combustion Engines.

Railcraft:
-Beyond mere trains, Railcraft is all about spending large quantities of resources on immense structures that make your other industrial processes more efficient.
-A wide variety of specialized track segments exist. Beyond your basic switches and junctions, a there are specialties like Powered Tracks that speed up trains passing over them, One-Way Tracks that only permit movement in a single direction, Elevator Tracks that allow Trains to be hauled up and down cliffs, and Launch Tracks that send individual carts flying through the air at high speed.
-Individual Carts can be easily linked together with a simple Crowbar, forming a Train. A Steam Locomotive may be employed to let the Train move on its own, but redstone power allows for trains to be moved without an on-board power source.
-A few specialized Carts exist; from the basic 'Minecart, but carrying a Chest/Crafting Table/Battery/TNT', to Tank Carts which can be filled with various liquids, to the mighty Tunnel Bore, a self-powered cart that digs automatically with its massive drill, and lays its own Track beneath it as it goes, provided it has sufficient supplies onboard. Any cart with storage can be automated to transfer its contents in useful ways, given access to appropriate cart loading machines.
-Trains themselves add a lot of interesting possibilities for automation, but nothing that you couldn't otherwise do with Pipes. That said, Trains certainly look a lot cooler than Pipes, and Pipes can't move people around. Also, a Tunnel Bore moves horizontally under its own

power, while a Quarry is fixed in place and needs to be rebuilt elsewhere after it completes its cycle.
-Ordinary wood is insufficient to bear the weight of trains. Before you can turn wood into proper Rail Ties, you'll need to treat it with Creosote Oil, a byproduct of the Coke Oven.
-Rails can be made by hand (as in, with a Crafting Table), but it is far more efficient to make them in a Rolling Machine, a Power-hungry device that converts various metals and treated Rail Ties into stacks of Track. Steel Ingots and Rail Ties make stacks of Track very efficiently.
-With a large quantity of Brick and Sand, you'll be able to construct a Coke Oven, a 9' cube capable of burning coal into more-efficient Coke. The process also produces useful Creosote Oil, which can itself be burned, if you've no better use for it.
-With a large quantity of Nether Brick and Soul Sand, you'll be able to construct a Blast Furnace, a 3x3x4 monster capable of smelting Iron into Steel, which makes far more effective tools and armour than even Diamond... though it lacks enchantment potential, making Diamond the better choice for a powerful mage.
-With a large quantity of Steel, you'll be able to produce a massive Steam Boiler, which can accept enormous quantities of Water and fuel (solid or liquid, depending on the design) to output enormous quantities of dangerous, high-pressure Steam. When connected properly to appropriate Steam Engines, this is the most powerful and efficient source of Power possible, though any damage to the workings can have catastrophic effects.
-If you are also using IndustrialCraft, you'll be able to produce Steam Turbines, which are also the most efficient source of Electricity... particularly if you hook up your IndustrialCraft Nuclear Reactor to your Steam Boiler in place of a conventional firebox. You'll also be able to build Electric Locomotives, which can be more efficient than needing to have your Trains haul coal everywhere.
-Railcraft adds Sulfur and Saltpeter ore to your universe, allowing you to more efficiently craft gunpowder and TNT.

IndustrialCraft:
-Industrial technology relies upon Electricity, ordinary electrical power. Of course, many machines run at dangerously high Industrial voltages, and need more than ordinary consumer grade wall-socket power.
-Electricity is stored in batteries, either small portable ones not unlike the ones you're already familiar with, large and bulky BatBoxes, or high-tech Multi-Functional Storage Units.
-Higher-density methods of energy storage and generation output high-voltage current, which can damage or destroy unprepared devices. The most common sort of Industrial accident involves accidentally overcharging a device, which will quickly lead to overheating and explosions. Transformers are required to convert electricity between voltage levels.
-Electricity is transmitted through Cables, which can be made out of a variety of metals; more robust cables are needed to transmit higher-voltage electrical current. It is not strictly required, but Cables are somewhat less efficient and enormously more hazardous if not properly insulated with a coating of Rubber. Uninsulated Cables carrying a high voltage make a decent electric fence.

-Rubber can be extracted from rubber trees simply by tapping an appropriate spot. This produces a Sticky Resin, which is boiled down to produce useable Rubber; an Extractor can accomplish the task more efficiently, or even extract usable Rubber from the wood of rubber trees. Beyond mere insulation, Rubber can be used to craft the Hazmat Suit... relatively weak armour that nonetheless offers considerable protection against electricity, falls, fire, lava, radiation, and drowning.
-The basic Industrial generator works much like a conventional Minecraft Furnace; any item that can be burned for heat can instead be burned to generate Electricity.
-Generators may be refitted to run indefinitely on Solar, Hydroelectric, or Wind power... or somewhat less 'indefinitely' on 'Geothermal' power, which taps the heat of raw lava.
-If you are using Buildcraft, you will also be able to build Semifluid Generators, which can burn any liquid fuel.
-Nuclear reactors are particularly complicated... not so much in their external structure, as in the complex internals involved in the precise arrangement of fuel rods, cooling cells, heat vents, heat exchangers, neutron reflectors, and reactor plating. This allows a great deal of customizability, allowing you to optimize your reactor's efficiency, run a 'breeder' system to re-use expended nuclear fuel (or produce weaponizable plutonium). That said, it's a tricky system to balance, and if you do it wrong, you're likely to kill yourself and everyone around you in a massive explosion, and taint the world with deadly radiation. There is a precise art to reactor design, and doing it wrong has fatal consequences.
-The Electrical Furnace is a slightly more efficient smelting system that runs on electricity instead of fire. A more advanced version is the Induction Furnace, which is exceedingly efficient... if it's allowed to run continuously for an extended period of time, smelting two stacks of ore at a time.
-The Macerator is a grinding machine, mostly useful for processing ore. It grinds raw ore into Dust, which can be smelted twice as efficiently as unprocessed ore; it can also grind Bones to Bonemeal, Cobblestone to Sand, Gravel to Flint, and so on.
-The Compressor is a crushing machine, powerful enough to convert Coal to Diamonds (given considerable power, multiple stages, and a lot of coal). It allows for the creation of advanced alloys, as well as the compressed biomass needed to produce BioFuel. Most importantly, it can compress a mixture of diamond and redstone dust into the Energy Crystals used in 'futuristic' high-density power supplies, and form the Carbon Plates that make up the structure of Nano Armor.
-The Extractor is a boiling machine which is mostly used to process raw Resin into useful Rubber. It also allows the processing of Biomass into BioFuel, or the distillation of Water for use in creating reactor Coolant.
-The Recycler is a powerful garbage-processing machine, which quickly destroys unwanted items, producing small amounts of Scrap from their remains. Scrap can be burnt semi-efficiently, compiled into Scrap Boxes containing random items, or used to efficiently run a Mass Fabricator.
-The Canning Machine can perform a number of functions; as a food processor, it cans arbitrary foods to preserve them. Other uses include processing distilled Water into Coolant, and transferring arbitrary liquids into and out of Tin Cans.

-When mining, industrialists tend to prefer Drills over Pickaxes; Drills are faster, and will run out of power instead of breaking. Unfortunately, Drills do run through power pretty quickly, so a bit of infrastructure is needed before this is a really efficient method of mining.
-Similarly, industrialists prefer a Chainsaw over an Axe, when cutting down trees; these also work well against Zombies.
-The Mining Laser is a more advanced mining tool, focusing beams of coherent light through a powerful Energy Crystal. The power use is quite high, but it's otherwise everything you could want in a personal mining tool.
-Nano Armour is an advanced armour set made from finely-woven carbon. It uses nanotube-like structures reinforced by forcefields to block most damage. This is energy-intensive, however, and the suit loses most of its protective qualities when its battery is empty.
-Quantum Armour is the most advanced armour around, and a full suit of it can theoretically block 100% of all incoming damage... so long as the internal power holds out. Unlike conventional armour, the Quantum Armour works more like a personal shield generator; it blocks basically everything when the field is powered, but incoming damage will quickly drain the power, and can leave the wearer vulnerable, struggling under the weight of the de-powered suit. The suit itself otherwise functions like power armour, constantly providing considerable strength and movement enhancement, as well as advanced life support functionality.
-Quantum-level tech can also be used to build teleporters. These are expensive and immobile structures, but they will let you move between bases quickly and easily, provided both locations have plenty of electricity to spare.
-Scaffolds can be quickly and easily assembled from planks and sticks. They are a remarkably efficient building structure, though they are slightly unstable. Scaffolds will automatically stack themselves if laid down properly, allowing you to build an enormous tower of them while standing on the ground, which can then be climbed much like a ladder... although the entire tower will quickly crumble if the base is disturbed. Construction Foam (made from a mixture of water, redstone, clay, and coal dust) can be injected into Scaffolds using a CF Sprayer, and will quickly spread throughout the structure, replacing the fragile wooden framework with a more permanent concrete-like structure.
-IndustrialCraft adds many resources to your universe. Most notably, Copper and Rubber are vital for electrical power transmission, Tin and Lead are useful for making batteries, and Uranium is the basis of nuclear power.
-IndustrialCraft also adds a number of different Crops to your universe, allowing you to have a diet more varied than bread, meat, and apples. This also allows you to grow your own coffee, or brew your own beer.

GregTech:
-Don't even get me started on GregTech. If morbidly curious, Wikis are available. To summarize; dozens of different resource types, which need to be processed to get the materials to make the parts to make the tools to make the parts to make the machines you need to process the resources to make the next set of parts. If something was useful and

able to be constructed in a single step, there's at least two or three subparts needed now. It doesn't really give you any capabilities you didn't already have with IndustrialCraft, it just adds a ton of complexity and extra hoops to jump through.
-GregTech is somehow 'compatible' with all the mods you are using, and will complicate any advanced crafting, including magical crafting. A Philosopher's Stone, for instance, will require the combination of a Diamond with Mercury and Endstone Dust, rather than mere Redstone and Glowstone, and the Transmutation Tablet that enables any practical alchemy must be made from Osmium and Iridium Plates (note that neither Osmium nor Iridium spawn within your world; they must be made using a Mass Fabricator).
-Do note that most non-Minecraft crafting will work like this, so it may help to get used to working with Bauxite and Antimony and Tungsten before you try to set up a factory that makes Phasers or something.

Universal Electricity:
-Universal Electricity is generally a 'high tech' series of mods. Each are individually small and focused, doing one specific thing rather than a wide variety of things. On the whole, they are rather 'higher powered' than BuildCraft or IndustrialCraft, though they lack the latter's versatility.
-UE tech relies on Energy, measured in kilojoules (kJ), and stored in batteries.
-Note that the Electricity Units on which Industrial technology is based are mutually incompatible with the kJ of Energy on which Universal Electricity is based. If you take both, you'll need to rely on your own ingenuity to cobble together an adapter, or else waste resources on maintaining a duplicate power system.
-Mekanism is the UE equivalent of the basic IC resource-processing functions, as well as the basic BuildCraft liquid storage and item transport functions. It can do a lot of the same things, in terms of 'tools to make tools' functionality, but is in general much more finicky and enormously more expensive when doing them, requiring a lot more work to progress through the tech tree. Playing IC with GregTech is significantly easier and cheaper than relying on Mekanism for your resource processing, and the cost-effectiveness and customizability of Buildcraft-style pipe systems vastly outstrips Mekanism's own expensive offerings. On the plus side, it is specifically more efficient than IC in terms of Ore Processing, able to produce 5 ingots from a single chunk of ore... after a *13-machine* factory process that consumes a number of other resources and immense quantities of energy.
-There's a bit of a "Chicken-and-Egg" problem with Universal Electricity; the basic Coal Generator, the simplest power source, requires Steel to build, but the only source of Steel is Mekanism's Metallurgic Infuser... which requires Energy to function. Fortunately, all UE machines can consume Redstone directly as if it was batteries. Unfortunately, this is enormously inefficient, and will burn through entire stacks of Redstone while performing minor tasks. The alternative involves using Mekanism's Heat Generator, which requires Osmium for its core (a rare metal which will take nontrivial searching to procure!)
-Electric Expansion adds IC-like wiring, battery, and transformer functions. It is notable for offering superconducting metal, which is made from a mix of gold, silver, and Ender Pearls. Its Wire Mill also allows the production of wiring for significantly cheaper than by hand.

Incidentally, EE doesn't use Rubber; if you'd like to insulate your wiring, you'll need to wrap the wires in Leather.
-ComputerCraft provides for a simple computer to redstone wiring interface, allowing you to automate your operations with actual Lua programming. These computers can recognize any input signals that your machinery can generate, though you'll need to write code to manage them yourself; they can also output arbitrary signals, and much of your machinery is equipped to recognize and respond to certain types of signals. Important uses for this includes managing your reactor setups to prevent disastrous overheating, or automating time-critical tasks like missile defence systems.
-ComputerCraft also allows you to build Turtles; armoured and self-mobile computers that can be equipped with Diamond Tools and sent out into the world to automatically perform whatever tasks you can program them to do, from mining to item transportation to combat. Note that, aside from their durability, Turtles make rather poor combatants, since they are slow, unintelligent, and have minimal sensory ability; they can handle monsters in a mob farm easily enough, but are likely to do poorly in more complex situations, barring significant upgrades and expert programming.
-Applied Energistics lets you build a Matter-Energy network to store all your surplus items in a digital energy format, in which they are easily accessible via a computerized menu system. This is sort of like if you could efficiently use Pokeballs for storage purposes; the contents of the system are more than just data, since each item actually does come from a real thing, but once digitized, they can be transmitted long distances with the efficiency of data. Additionally, simple adapters can be used to virtually supply the requirements for any device that requires a material input, without the need for physical items bouncing back and forth; anything needed by any factory device can be simply instantiated when needed, and the product sent back into the system. You can even use wireless signals to beam your items to you remotely, completely obviating the need to physically access the storage system (although the range on the wireless transmitters involved leaves something to be desired). Note that ME networks require a constant power supply to remain in operation. Backup power units are available to ensure the integrity of your item-data in the event of a power failure, but a prolonged loss of power will eventually result in the loss of some of your stored items. Fortunately, the system is capable of going to a 'low power' mode when not active; in this state, items cannot be added or retrieved, but the maintenance costs are much reduced in this state.
-Atomic Science provides the serious power generation needed to keep up with Mekanism's serious power requirements. In comparison to IndustrialCraft, its nuclear reactors are simple but enormous structures, instead of compact structures with a lot of complex internal parts. As a consequence, they're less customizable. They're also less-well shielded; you can walk right up to an IC reactor and monkey with the wiring without risk; you won't be harmed by radiation unless you literally hold the fuel rod with your bare hands. Atomic Science power stations, on the other hand, are deathtraps unless you're wearing full hazmat gear; they assume that you're going to build a layer or two of shielding outside the main structure of the reactor, and will be fully protected if you need to enter or modify it. On the plus side, the massive structures scale better; if you want more power, you can simply embiggen your

power station, adding turbines and reactor cores as needed, instead of hitting a hard limit and needing to build a new one.
-Atomic Science also allows for Fusion Reactors; immense and even more expensive structures. They run on Deuterium, which must be extracted from water; an energy-intensive process. They also require a large series of Electromagnets to function (or, at least, to function correctly; without sending deadly clouds of superheated plasma to vaporize everything in the vicinity), and an energy-intensive 'kick-start' from another power station to begin operations.
-Electromagnets can also be used to build a particle accelerator; an enormous, vastly expensive, and excessively powerhungry structure that can slowly produce Antimatter and Strange Matter. Antimatter can nominally be used as a power source, given the correct power station setup, and Strange Matter is in fact quite useful as an absurdly more expensive alternative to IC-style matter fabrication. That said, these are inefficient processes, and the marginal utility provided by them pales in comparison with their use as excessively potent weapons; the former directly, and the latter as a precursor to Red Matter.
-ICBM allows you to build missiles, both short and long range. You can use them in anything from gigantic missiles with practically unlimited range, to a man-portable rocket launcher, depending on the type of missile you're using. The missiles themselves are highly customizable, and can accept a vast array of payloads, including conventional explosives, storms of flaming arrows, poisonous gasses, sonic weapons... or the high-end super-dangerous stuff like Nukes, Antimatter, or Red Matter. Note that the more advanced payloads can only be used in larger and more expensive missiles. You need to make the payloads yourself using other methods, but if you have, say, zombie plague on hand, ICBM will let you deliver it in an aerosolized format. The weakness of the system is the guidance methods; the built-in targeting is pretty terrible, and really wants someone on-site using a laser designator to ensure a precise hit. The missile controls are fully able to accept computer input, though, so you can probably program a better system yourself.
-ICBM incidentally offers a variety of other 'base defence' options, including auto-turrets, anti-ballistic missiles, base camouflage, and spike traps; these can be used to make your launch station a hard target to neutralize with missiles, and a harder target to assault on the ground.
-MFFS does forcefields. That's all, but the size, shape, and permeability of the resulting forcefields are extremely customizable. You can design a forcefield that keeps everyone out unless they have an appropriate access card on their person, one that has an arbitrary visual appearance (from fully transparent to camouflage-patterned), or one that disintegrates all matter that attempts to pass the field instead of simply keeping things out. Of course, the more things you want your forcefield to do, the most expensive it'll be to run it, and forcefields consume completely ridiculous amounts of energy at the best of times (much less when they're under heavy attack, especially if anti-forcefield weaponry is employed). Also, bear in mind that forcefield technology is based on the artificial element Forcicium, which can only be found in this world, extracted from rare deposits of 'Monazit Ore'. You can produce more with matter fabrication technology, but that's enormously expensive... and in addition to being made of Forcicium crystals, MFFS systems require a continual supply of Forcicium in order to

remain in operation. On the plus side, so long as your energy and resources hold out, anything protected by your forcefields will be pretty much invulnerable to attack.
-Modular Powersuits provides fairly conventional power armour. As armour, it's quite serviceable on its own, but the advantage it provides it its customizability; it's specifically designed to integrate extra tools and technology into it to add additional features and abilities. Note that the more stuff you add to these suits, the heavier they'll be; this can quickly make jetpack-style systems cost-prohibitive, and will add more stress to the basic servos that let you move around in the armour at all. Similarly, the more tech you have active and running, the faster the suit will consume energy... you can add more batteries and energy storage modules, but that's also more weight, that will add additional operating costs to the machine. Picking your toolset is not unlike rocket science; you want a good fuel-to-weight ration that still leaves you with enough power and payload to do what you want with it.
-Modular Powersuits are quite compatible with most tech you might want to integrate into power armour. Specific things that it brings to the table in terms of armour tech include: a 'Power Tool' gauntlet that can integrate the functionality of other arbitrary tools, from a simple pickaxe to a high-energy plasma cannon; micro-teleportation systems (expensive!); flight systems; life support systems; personal shielding; and predator-style active camouflage systems.

Minefactory Reloaded:
-This is a magi-tech mod. The resulting machines look, for the most part, like ordinary factory machines, but much of the stuff has organic components like eyes and brains, so there's clearly something sinister going on here!
-Much of the tech involves Liquids (that you need to handle with Buildcraft) and is powered by Electricity (that you nominally need to supply with IndustrialCraft). Many machines will require/produce multiple types of liquid, which need to be pumped out separately.
-The parts of the tech that involve physical items can use Conveyor Belts instead of Pipes. Conveyor Belts use Electricity instead of Power, and are managed by Routers. Conveyor Belts are not particularly advantageous as an alternative to Pipes, except for the fact that the Enchantment Router is more suited to handling Books than other sorting system are. Also, Conveyor Belts are 'sticky', and will ensnare creatures that step onto them; this can cause them to be fed into machines attached to the Conveyor Belt... perhaps intentionally.
-The most important liquid is Essence, a thick slurry which the Essence Grinder produces when creatures die in front of it. In addition to these deaths, it needs an ample supply of Water and Electricity to produce Essence, so you'll need a complex Pipe system to route liquids in and out.
-Liquid Essence is a physical form of magical power which is exceptionally amenable to Industrialized magic. It is used in all the 'magical' processes this mod provides. Once used by any process, depleted Essence becomes Slime, another Liquid, which must be pumped out of any machine that uses Essence, lest it accumulate and leak out. Slime is hazardous, since it's sort of alive; its natural form is that of a horrible gelatinous goo monster that hungers for life and magic. It can be kept contained in pipes and tanks, but the only safe way to

dispose of Slime is to dilute it with water and filter the resulting mixture through gravel and clay, producing an incredibly toxic (but inert) Sludge, another Liquid... but one which can be ‘safely’ dumped anywhere you don’t mind polluting with deadly poisons, or boiled to (somewhat more ‘safely’) release the rest of the contaminants into the air. DO NOT attempt to convert Slime monsters back into Essence. This is absolutely guaranteed to result in a horrible catastrophe.

-The Auto-Enchanter uses Essence and Electricity to add magical Enchantments to input items. It may fail disastrously if the input item is already magical, or if the added enchantment would exceed the Enchantment capacity of the item... but while conventional enchantment is a hard-capped “You can’t do that”, this is merely a soft-capped “That probably won’t work, and it produces terrible byproducts whether or not it works, and it might result in a magical disaster”.

-In order to use the Auto-Enchanter, you’ll need to have the Enchantment in question already in a form that it can recognize, though, which involves ‘Books’ covered in magical runes (which are more akin to bound stacks of punchcards than to conventional books). A notable part of the magic involved is present in these Books, and they are consumed in the process. However, if the machine is provided with a supply of blank Books, it can produce two identical Books out of the one it uses. Books for the conventional Minecraft enchantments can be manually produced by a scholar of Minecraft enchantment at a traditional Enchanting Table. Books for other enchantments will require the Auto-Disenchanter.

-The Auto-Disenchanter uses Essence and Electricity to tear apart input items, creating Books from the result. It then outputs the broken remnants of the input item, which may be recycled for their raw materials. The Books produced by the Auto-Disenchanter will contain a copy of the magical properties of the input item in a ‘machine-readable’ form. Books produced in this way can almost certainly be safely applied to items identical to the pre-existing input item; no guarantees about anything else. Still, if it works at all in any given case, it’s very likely to keep working in Industrially-similar cases, allowing for ‘safe’ mass production of arbitrary enchantments if implemented correctly. The Auto-Disenchanter may or may not be able to harvest unique magical artifacts, and the resulting Book is very likely to be unusable. It may also have trouble with items containing many different enchantments, or with enchantments based on multiple different magical systems. Use caution in experimenting with such processes!

-The Auto-Brewer uses Essence and Electricity to brew Potions. It doesn’t even need all that much Essence to do the job, provided that it’s a standard Minecraft potion, though it will need all the ingredients on hand. The internal configuration is somewhat flexible, and it can be adapted for more complex recipes than Minecraft potions involve, although this will cost additional Essence (especially for recipes which involve stuff like Potterverse stirring patterns, which can normally only be performed by a Wizard). Even so, once the machine has been properly set up to produce a given potion, it can easily and automatically manage all the tedious parts of that process.

-In terms of actually killing monsters to get the Essence, the standard solution is the Slaughterhouse, an automated machine covered in nasty blades which grinds any living thing

that comes too close into semi-liquid Meat Paste, a process which in no way interferes with the production of Essence.
-The resultant Meat Paste is technically edible, but can be processed in a Meat Packer into somewhat more edible Meat Blocks, which are not unlike Spam. Incidentally, the Meat Packer can also run on Slime; a combination of Meat and Slime, properly cooked, is mostly inert. Meat Blocks produced in this way are rather unsafe, since they rot back into Slime if not kept frozen. If eaten, there is a slight risk (increasing as the meat approaches it's 'best-before' date) of the eater being eaten from within by the Slime; a gruesome and painful death, if not quickly treated, and one that results in a small-but-dangerous monster roaming loose. If this fails to occur (as should be the case about 99% of the time if safety directions are followed), there is no obvious immediate negative effect, but the long-term health consequences of eating Slime-derived meat are unknown. It's probably really unhealthy, though.
-Alternatively, Meat Paste and Essence can be fed into an Auto-Spawner, which can be configured to automatically produce creatures. This is a lossy process (it takes more Meat and Essence to produce a creature than that creature will produce when slain), but potentially quite customizable; all it needs is a genetic sample, and it will automatically produce as many clones as you can afford. Clones thus produced are not quite mindless, having appropriate instincts for their form, but no memories or personality. If the base creature is normally feral or monstrous, so is the clone.
-Alternatively, Meat Paste or other biomass can be alchemically converted into BioFuel, which can be efficiently burned to keep your electrical needs supplied. This costs Essence, but not all that much.
-Note that Meat Paste produced from the undead is a biohazard; Zombies are particularly notable as being 'not food' (Skeletons don't have any meat, and are simply ground into Bonemeal, which is a useful fertilizer). The resultant paste contains the Zombie plague, which contaminates whatever supply it is mixed with. Processed correctly, this might be used as a precursor for a zombification 'cure'... or simply weaponized, like an especially-dangerous poison.
-The Lava Fabricator can conjure large quantities of Lava outright (at a significant cost in Essence and Electricity), perfect for use in horrible deathtraps. The similar Oil Fabricator can do the same with Oil. Either way, this is highly inefficient as a power source, as the electricity cost alone is more than the resultant product will produce in a power system.
-A Deep Storage Unit can be made, mostly from Enderman components. If powered by a tiny bit of Essence (and enough Electricity to heat a small house) it can store a practically unlimited (~2 billion m3) amount of a single type of solid bulk matter (Dirt, Stone, Gold, Wood, etc... anything that's relatively homogenous and won't be ruined by a bit of molecular-level scrambling), which can be transported in and out with Pipes or Conveyor Belts. If anything is added to it that isn't the same kind of thing it already has in it, or if the power flow is interrupted, the storage field collapses, destroying the entire contents (causing some minor damage to the local area, although the collapse of the storage field redirects most of the explosion to subspace). On the other hand, if the DSU is somehow overloaded, the contents are immediately converted to antimatter (and promptly explode... an explosion that is

technically much less powerful than it should be, given that most of it occurs in subspace, but since we're talking about explosion that's potentially on a planet-bustingly powerful scale, it's not much comfort if it merely produces an explosion on the scale of a nuclear detonation inside your base).