Driven Out

The First Year East of Eden — How Adam and Eve, With Nothing in Their Hands, May Have Met Every Need

A scriptural, speculative study of the first days, weeks and months after Adam and Eve were driven from the garden with nothing in their hands — every tool and necessity in order, the time each took, and the obstacles they met — with the weight of every argument stated.

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Introduction

A. The question, and the claims inside it

Genesis moves fast. In one chapter Adam and Eve are sent out of the garden wearing coats God made for them. In the next, their son Cain is building a city, and within a few generations his descendants are keeping cattle, playing the harp and the organ, and working brass and iron. Between the closing of the garden and the first city lies a span of time Scripture passes over in a handful of verses. This study goes back into that span and asks a practical question.

On the day they were driven out, Adam and Eve had the coats of skins on their backs and nothing else. No knife. No fire. No pot, no basket, no rope, no roof. Water is needed several times a day and food every day. Every tool a person needs to be even somewhat comfortable has to be made, and every tool needs another tool to make it. How might the first days, weeks and months have actually gone? In what order would each necessity have been made, how long would each have taken, and what would have gone wrong before it went right?

This is a study of a scene Scripture does not narrate. So it must be honest about what kind of study it is. Some of what follows is stated in the text. Some follows from the text by inference. A great deal is a reconstruction: a likely picture drawn from what human beings actually need to stay alive and what they have actually done, in recorded history and in modern experiment, when they had to make things from nothing. All three are in this study, and every section says which is which.

The question breaks into six smaller claims. They are named here and referred to by these names throughout.

- **Claim 1 — Empty hands.** They left the garden with the coats of skins and nothing else: no tool, no fire, no vessel.
- **Claim 2 — Full minds.** They began with real knowledge and sound bodies. They were not primitives learning everything from scratch.
- **Claim 3 — Not abandoned.** God went on speaking to the family outside the garden, and may have taught them more than the record states.
- **Claim 4 — Plants, not flesh.** Their food was plants until the Flood. Animals were killed for covering and for offering, not for meat.
- **Claim 5 — Cursed, not ruined.** The land outside was still watered, mild and rich, but it now resisted their labour.
- **Claim 6 — Hard-won firsts.** Every necessity cost real time, pain and failure before it worked.

Here is where the study comes out, so that no reader is kept waiting. Claim 1 is very close to a direct statement. Claim 2 rests on strong evidence. Claim 3 is a direct statement in its first half and a reasonable inference in its second. Claim 4 is a strong inference from the text, with a fair argument on the other side. Claim 5 is a reasonable inference, shared with this library's Climate Change study. Claim 6

is the reconstruction itself. Scripture supports it in general terms, because the curse is a sentence of toil. Its particulars come from human experience, not from the text, and they are labelled that way every time.

Weighing it: Framing only — takes no side on any of the six claims.

In short. One question, six parts, and a different kind of answer for each part. Some of it Scripture says, some it implies, and much of it we have to picture carefully.

B. How arguments are weighted in this study

Every argument carries a stated weight, in five terms, used with exactly these meanings throughout. Appendix A tabulates every one in a single place.

- **Direct statement** — Scripture says it in so many words. The only question is what the words mean.
- **Strong inference** — It follows closely from what Scripture says. The alternative has to strain against the text.
- **Reasonable inference** — It is the more natural reading, but an honest and careful reader can take it otherwise.
- **Corroboration only** — Consistent with this position, but roughly as consistent with the opposite one. It may be stated; it may not be leaned on.
- **Neutral** — Commonly cited by one side or the other, and it genuinely settles nothing.

Five more labels are used for sections that argue nothing: *Narrative*, *Method*, *not argument*, *Concession*, *Opposing case*, *stated*, and *Mixed*, *stated per point*. In this study *Narrative* has a special meaning. It marks a **pictured scene**: a reconstruction of what may have happened, built from the text and from human experience, which Scripture does not itself narrate. A Narrative section is not evidence for anything. It is the study's best picture, offered as a picture.

How to read a note. Every section ends with a "Weighing it" note. Its bold opening line says two things: how strong the point is, and which claim it bears on and in which direction. The rest of the note names what the opposing reading can fairly answer. The bold line is written to be read alone, with no verse reference and no foreign word in it.

Three disciplines are held throughout.

Verify, do not recall. Every King James quotation in this study was checked by machine against the 1769 text, and the verse blocks were generated from that text, not typed. Every Hebrew word is taken from the Strong's Hebrew concordance in this library's Sources folder, with its number. Every figure about survival, tools or time comes from a named account or experiment listed in Sources Consulted. Where a figure is this study's own estimate, it says so.

Survival accounts are evidence about people, not about Adam. Every castaway in recorded history started with something: a knife, a kettle, seeds, or a lifetime of his people's craft. None started with

nothing. Chapter 3 sets out exactly what each one had. Their records are used for two things only: how long a task takes once the first tool exists, and what isolation and hardship do to a human body and mind. They are never used to say what Adam did.

Name the nearest counter-instance before someone else does. Where an argument rests on a pattern, the closest case that does not fit it is stated in the same section.

Weighing it: Method, not argument — bears no weight either way on any claim.

In short. Five terms, a direction on every note, every quotation machine-checked, every figure sourced, and every pictured scene labelled as a picture.

C. The crux: did Adam start from zero in knowledge as well as in tools?

Any discussion of this subject soon divides on a question that usually goes unspoken. Here it is.

When Adam and Eve were sent out, were they beginners who had to discover everything by trial and error, or were they skilled people who had been shown how things are done?

Answer "beginners," and the first year east of Eden looks like the worst castaway story ever told: two people dying of exposure while they work out what fire is. Answer "shown," and the first year looks like hard labour carried out by people who already knew what to do and only lacked the things to do it with.

The text does not answer the question in so many words. It does give several pieces of evidence, and they all lean the same way. Adam named every beast and fowl brought to him, and the names stood. Before they ever left the garden, the two of them **"sewed fig leaves together, and made themselves aprons" (Genesis 3:7)**: the first human craft in Scripture, done within an hour of the Fall, with no tools at all. They watched God make coats of skins, which means they watched an animal killed and its skin taken and fashioned. And God did not stop speaking to the family when the gate closed behind them. He spoke to Cain at length in the next chapter.

The verdict, stated here so the whole study is read in its light: **they had nothing in their hands, but they did not have nothing in their heads.** The hardship of the first year was real. Every tool had to be made, and every first attempt could fail. It was the hardship of skilled people without equipment, not of ignorant people without understanding. That changes the scale of the problem, not its reality.

Weighing it: Reasonable inference — toward Claim 2 (full minds), and so toward a first year that was hard but not hopeless. The evidence is direct: the naming, the fig-leaf aprons, the coats of skins and God's speech to Cain. That it means Adam knew how to make fire or chip a flake is inference. A reader who holds the opposite view can fairly answer that knowing how to sew leaves is not knowing how to make fire. Nothing in the text says Adam was shown any particular craft other than what God did in front of him at Genesis 3:21.

In short. Everything turns on whether they knew how and lacked the means, or lacked both. The text leans to the first.

D. The opposing cases, stated at their actual strongest

There are two ways to get this subject wrong, and each has serious arguments behind it. Both are set out here at full strength before anything is answered. A third dispute, over what they ate, is set out after them.

Case One: they were true beginners, and the struggle was enormous. Its points are these.

1. **The sentence is toil. "in sorrow shalt thou eat of it all the days of thy life" (Genesis 3:17)**. The Hebrew word for "sorrow" here is *'itstsabown* (H6093), "worrisomeness, i.e. labor or pain." Hardship is the whole point of the curse.
2. **They were driven, not escorted. "So he drove out the man" (Genesis 3:24)**. Nothing in the text says God sent them out equipped.
3. **The crafts appear one by one, and late.** Tents and cattle, harp and organ, brass and iron each have a named "father" or "instructer" in the seventh generation from Adam (Genesis 4:20-22). If Adam had known all these things, why are they credited to his descendants?
4. **No instruction is recorded.** Scripture records God teaching Adam the names of nothing, the making of nothing, and the use of nothing outside the garden.
5. **The way back was closed.** The cherubim and the flaming sword **"to keep the way of the tree of life" (Genesis 3:24)** mark separation, not continued tutoring.
6. **Every recorded first was costly.** The first birth, the first offering and the first death all came without precedent.

Case Two: they were so well equipped, in knowledge and in the land, that the hardship hardly counts. Its points are these.

1. **Adam's knowledge was unlike ours.** He named every beast and fowl, and the names stood (Genesis 2:19-20). A mind that could do that could work out a fire drill in an afternoon.
2. **God clothed them Himself. "Unto Adam also and to his wife did the LORD God make coats of skins, and clothed them" (Genesis 3:21)**. The God who did that did not then leave them to freeze.
3. **God kept talking.** He questioned Cain, warned him, and set a mark on him (Genesis 4:6-15). Abel offered "by faith" (Hebrews 11:4), which means a word had been given to believe.
4. **The world was still very rich.** No rain, an even mist, rivers running out of Eden, gold in Havilah, and animals that did not yet fear man (Genesis 2:5-14; 9:2).
5. **Their bodies were nearly whole.** Adam lived 930 years (Genesis 5:5). Whatever strength and resistance to sickness that implies, it was theirs from the first day.
6. **Scripture elsewhere says God teaches craft.** Of the farmer: **"For his God doth instruct him to discretion, and doth teach him" (Isaiah 28:26)**. Of the tabernacle's craftsman, God says, **"I have filled him with the spirit of God, in wisdom, and in understanding, and in knowledge, and in all manner of workmanship" (Exodus 31:3)**.

A third dispute: did they eat meat? Most readers who picture this scene picture Adam hunting. The case for meat before the Flood runs like this: Abel kept sheep, and a flock is kept for something; he offered **"the firstlings of his flock and of the fat thereof" (Genesis 4:4)**, which takes a knowledge of butchery; the earth before the Flood **"was filled with violence" (Genesis 6:11)**; and Genesis 9:3 may be a re-statement of an old permission rather than a new one. Chapter 8 §A answers this. In brief, this library holds that permission to eat flesh was first given after the Flood.

Every one of these points is answered in the chapter where its verse is handled. The answer to Case One, point 3 is partial: the crafts of Genesis 4 really were later developments, and Chapter 13 says so.

Weighing it: Opposing cases, stated — this section argues neither side; it sets both out at full strength.

In short. One side says it was nearly impossible; the other says it was nearly easy. The text supports neither extreme, and the study tries to stand where the text stands.

E. Text, translation, and method

The King James Version is the base text throughout, as in the rest of this library. Hebrew words are taken from the Strong's Hebrew concordance in this library's Sources folder, and the Strong's number is given in the text.

Three of this library's own studies supply positions this one builds on without re-arguing them. *Climate Change: A Study From Creation to New Creation* supplies the picture of the pre-Flood world: a mist rather than rain (Genesis 2:5-6), a gentler landscape, no animal death before the Fall, and a land under a curse but not yet a ruin. *The Language of Adam* supplies the finding that speech was given, not developed, and that the first family passed on instruction by word. The Bible Stories Anthology's *The Fall and the First Promise* and *Cain and Abel* supply the reading of the coats of skins as God's first sacrifice and His teaching of the way back.

The modern material — castaway accounts, experimental archaeology, survival practice and nutrition studies — is listed in full in Sources Consulted. Two cautions apply to all of it. First, it describes people with modern bodies, and Adam's body was not that. Second, some of it is published inside a long-age framework that this library does not follow. Where a study is cited, only its observation is used: how long a hide takes to soften, how much wild grain a sickle gathers in an hour. Its dating is not.

Weighing it: Method, not argument.

In short. King James text, Strong's numbers, three of this library's own studies as foundations, and modern evidence used for what it observes, not for what it assumes.

Chapter 1 — What They Carried Out of the Garden

Before anything can be made, the inventory has to be taken. What did Adam and Eve actually have on the day they were sent out? The answer has three parts: what was in their hands, what was in their heads, and what was in their bodies.

A. In their hands: the coats of skins, and nothing else

> **Genesis 3:21** *Unto Adam also and to his wife did the LORD God make coats of skins, and clothed them.*
>
> **Genesis 3:23** *Therefore the LORD God sent him forth from the garden of Eden, to till the ground from whence he was taken.*
>
> **3:24** *So he drove out the man; and he placed at the east of the garden of Eden Cherubims, and a flaming sword which turned every way, to keep the way of the tree of life.*

The word for "coats" is *kuttoneth* (H3801), "a shirt," rendered elsewhere "coat, garment, robe." It is the same word used of Joseph's coat (Genesis 37:3) and of the coats of the priests (Exodus 28:4). It is not a loincloth or an apron. It is a real garment, a tunic covering the body. The fig-leaf aprons they had made for themselves are called *chagowr* (H2290), "a belt (for the waist)," rendered "girdle" and "apron." What they made covered their loins. What God made covered them.

So they went out clothed, and clothed well. The skins were God's own work, and nothing in the text suggests they were rough or temporary. Scripture names nothing else they took with them. There is no knife, no vessel, no fire carried from the flaming sword, and no seed or plant. The text does not say none of these things went with them. It names only the coats, and everything else in the passage is about what was lost.

That silence matters here, and it is not an argument from silence of the careless kind. The same passage takes care to record exactly what God gave them, the coats, and how. A writer who records the one gift in such detail would have had every reason to record a second.

Weighing it: Strong inference — toward Claim 1 (empty hands). The coats are a direct statement. That nothing else went with them is an inference, but a strong one: the passage records God's one provision carefully and records no other. The opposing reading can fairly answer that Scripture often leaves out practical details, and that a fire, a seed or a stone blade could have gone with them without being mentioned. That is possible. Nothing in the text requires it.

In short. Two good garments made by God's own hand, and as far as the record goes, nothing else at all.

B. In their heads: what they already knew

Their hands were empty. Their minds were not, and the text gives at least five things they already knew how to do.

They could name and classify. "whatsoever Adam called every living creature, that was the name thereof" (Genesis 2:19). This library's Climate Change study calls this the first act of biological classification in human history: observing each creature closely enough to name it so that the name stood. A man who knows every kind of animal by its features knows which have thick hides, which give fat, which are gentle and which are strong.

They knew the plants. God gave them **"every herb bearing seed ... and every tree, in the which is the fruit of a tree yielding seed" (Genesis 1:29)** for food, and Adam was put in the garden **"to dress it and to keep it" (Genesis 2:15)**. *'Abad* (H5647), "dress," is the ordinary word for working the ground. A gardener knows which plants feed people, which grow from seed, and which are good for fibre.

They could make things. "they sewed fig leaves together, and made themselves aprons" (Genesis 3:7). *Taphar* (H8609) is "to sew." This is the first human craft in Scripture, and they did it on the day of the Fall, with nothing but leaves and whatever would bind or pierce them. A fig leaf is large and tough, and fig wood and bark are fibrous. Whatever they used to join the leaves, they had worked out a way to fasten one soft material to another. That is the whole principle of the garment, the basket, the net and the shelter.

They had watched an animal killed and skinned. Coats of skins mean an animal died and its skin was taken off, worked and shaped. They saw it done by God Himself. Nothing in Scripture says how God made the coats, so this study does not claim He used any particular method. But Adam and Eve did not go out never having seen a hide removed from a body. They had seen it once, and seen it done right.

They could speak, reason and teach. Adam's first recorded words are a full sentence with a reason attached: **"she shall be called Woman, because she was taken out of Man" (Genesis 2:23)**. As this library's Language of Adam study shows, speech was given, not developed, and the first family handed instruction on by word. Two people who can talk through a problem, divide work and remember what failed yesterday are far ahead of any lone castaway.

Weighing it: Strong inference — toward Claim 2 (full minds). Each of the five abilities rests on a direct statement. That they carried this knowledge into practical skill outside the garden is a strong inference, because the text never suggests the Fall erased what Adam knew. The opposing reading fairly answers that knowing animals and plants is not knowing how to strike a flake or spin a fire drill, and that the sewing of fig leaves may have been crude. Both points are fair. They limit how much the inference carries; they do not reverse it.

In short. They knew the animals, knew the plants, had already made something with their own hands, had seen a hide taken, and could talk the problem through. That is a great deal to carry out of a garden.

C. In their bodies: sound, strong, and now mortal

Adam lived 930 years (Genesis 5:5), and his sons and grandsons lived almost as long. Whatever the long pre-Flood lifespans mean physically, and this library's Climate Change study treats them as the plain record they appear to be, they mean the first bodies were made to last. On the day they left Eden, Adam

and Eve had never been sick. They had no inherited weakness, no worn joint, no damaged tooth. They had eaten nothing but good food all their lives.

But something had changed. **"for dust thou art, and unto dust shalt thou return" (Genesis 3:19)**. The clock that had never run was now running. And the sentence named two new experiences their bodies would now know: sorrow, and sweat. *Ze'ah* (H2188), "sweat," means "perspiration." Sweat was not new as a bodily function. What was new was labour hard enough to produce it as a matter of course, as the price of every meal.

Every survival account in Chapter 3 shows the same thing: a body under strain needs more water, more food and more rest, and an injured body heals slowly without care. Adam and Eve had a great advantage over every castaway in history. They were starting at full strength. They would also, for the first time, find the limit of that strength.

Weighing it: Reasonable inference — toward Claim 2 (full minds) in its bodily sense, and toward Claim 6 (hard-won firsts). The lifespans and the sentence of sweat and dust are direct statements. That their bodies were stronger and more resistant than ours is a reasonable inference from the lifespans. The opposing reading can fairly answer that long life is not the same as great strength, and that the text never describes their physical condition. True. The inference rests on what a 930-year life implies, not on any description.

In short. They left Eden in the best bodies any people have ever had, and for the first time those bodies could be tired, hurt and worn down.

D. What they did not have

Set out plainly, here is everything a person needs to be "somewhat comfortable," and which of it they had on the first morning.

- **Covering** — yes: two coats from God.
- **Water** — yes, if they were near the river. No way to carry it.
- **Food** — yes, growing wild. No way to store it, cook it or grind it.
- **A cutting edge** — none.
- **Fire** — none.
- **Cord, thread or rope** — none, beyond whatever bound the fig leaves.
- **A container** of any kind — none.
- **Shelter** — none, beyond trees and the lie of the land.
- **Bedding** — none.
- **A digging tool** for the ground they were sent to till — none.
- **A way to keep time** — the sun, the moon and the stars (Genesis 1:14), which they knew.
- **Company** — each other, and the God who had not stopped speaking to them.

The list is short at the top and long at the bottom. Everything this study traces, chapter by chapter, is the long work of moving items from the "none" column to the "yes" column.

Weighing it: Narrative — a summary of Chapter 1, resting on the weights already stated in §A to §C.

In short. Clothed, near water, surrounded by food, and holding nothing at all. That is where the first year begins.

Chapter 2 — The Land East of Eden

A castaway's chances depend almost entirely on where he lands. Selkirk had goats, turnips and a cabbage palm. The Lone Woman of San Nicolas had seals and shellfish. What did the land east of Eden offer? Scripture tells us more than is usually noticed, and leaves some important questions open.

A. Which way they went, and the water they found

"he placed at the east of the garden of Eden Cherubims" (Genesis 3:24). The guard was set on the east side. When Cain is later driven out, he goes further in the same direction, to **"the land of Nod, on the east of Eden" (Genesis 4:16)**. The family's first home outside the garden was east of it.

Water was there. **"And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads" (Genesis 2:10)**. A river that "went out of" Eden left the garden and divided into four streams that ran on through whole lands. The four were the Pison, the Gihon, the Hiddekel and the Euphrates (2:11-14). Wherever exactly the garden lay, and this library does not try to locate it on a post-Flood map, running water left it and ran on through the surrounding country. Two people walking out of the garden had only to follow water to keep water.

This settles the most urgent need of all before the first day is out. A person needs water within about three days, and much sooner when working hard and sweating. With no container, the only safe way to drink is to live beside the source. The first camp east of Eden was almost certainly by a river, a branch of one, or a spring fed by the mist.

Weighing it: Strong inference — toward Claim 5 (cursed, not ruined), on the question of water. That a river went out of Eden and ran through other lands is a direct statement. That the family camped by running water is a strong inference, because nothing else keeps two people without containers alive. The opposing reading can fairly answer that the gate on the east need not have been near any of the four rivers. True, but the mist watered **"the whole face of the ground" (Genesis 2:6)**, so seeps and springs were very likely within reach.

In short. Water ran out of Eden into the land around it. The first camp was by that water, because without a vessel there was nowhere else to live.

B. A mist, not rain, and what that means for shelter and for fire

> **Genesis 2:5** *And every plant of the field before it was in the earth, and every herb of the field before it grew: for the LORD God had not caused it to rain upon the earth, and there was not a man to till the ground.*
> **2:6** *But there went up a mist from the earth, and watered the whole face of the ground.*

This library's Climate Change study reads these verses as describing a whole watering system: water rising from the ground and watering everything evenly, without storms. That study holds that the system lasted, in some form, until the Flood. The Flood is the first rain Scripture records, and the bow in the cloud afterward is presented as something new.

If that is right, two things follow for a family with nothing.

Shelter was needed less urgently than in almost any survival story ever told. No rain means no soaking, and being soaked is what kills castaways in cold places. A milder, more even climate means the first nights were survivable in good clothing under the trees. The text still records a daily cooling, **"the cool of the day" (Genesis 3:8)**, and a mist means dew. So shelter mattered, but as comfort and protection rather than rescue.

Fire would almost never have been found burning on its own. Today most natural fires are started by lightning, and lightning comes from storms. In a world watered by mist and without rain, storm lightning may have been rare or absent. If so, Adam could not have picked up a burning branch from a lightning strike, as some early peoples are pictured doing. Fire had to be made, or given. Chapter 7 takes this up.

Weighing it: Reasonable inference — toward Claim 5 (cursed, not ruined) on shelter, and toward Claim 6 (hard-won firsts) on fire. The mist and the absence of rain at the time of Genesis 2:5 are direct statements. That the system lasted beyond the garden, as the Climate Change study holds, is a reasonable inference. That it meant little lightning is this study's own further inference, and the weakest step in the chain. The opposing reading can fairly answer that Genesis 2:5 describes the time before man was made, not the centuries after, and that volcanic or other natural fire was possible. Both are fair, and the study holds this point loosely.

In short. No rain made shelter less urgent, and probably made fire harder to find. The one need was eased and the other made harder.

C. Stone, gum, and clay

Was there stone to chip, at the very place they stood? The question is fair, and Scripture gives more of an answer than might be expected.

> **Genesis 2:11** *The name of the first is Pison: that is it which compasseth the whole land of Havilah, where there is gold;*
> **2:12** *And the gold of that land is good: there is bdellium and the onyx stone.*

The land beside the first river had gold, bdellium and **"the onyx stone"**. Strong's says of *shoham* (H7718), "onyx": "a gem, probably the beryl (from its pale green color)." Its identity is not certain, and translators have offered several. It matters here because some candidate stones would make cutting tools and some would not. True onyx belongs to the chalcedony family, the same fine-grained silica family as flint, and it breaks to a razor edge. Beryl is hard but does not flake well. Scripture does not settle which it was, and this study will not pretend it does. What it does settle is that the first readers were told there was stone in that country, and it was worth naming.

Bedolach (H916), "bdellium," Strong's gives as "a (fragrant) gum (perhaps amber); others a pearl." If it was a tree gum or resin, it is one of the most useful materials a person with nothing can find. Resin glues a stone to a handle, seals a basket so it holds water, burns hot as a fire-starter, and dresses a wound. That is an inference about the word, not a statement of the text.

And flint? Flint, the classic tool-stone, occurs as nodules in chalk and limestone. In the creation-science model this library follows, much of the world's chalk and limestone was laid down in the Flood. If so, the classic flint beds of today's world may have been scarce before it. That does not leave Adam without stone. Created rock existed from the third day, when God gathered the waters and the dry land appeared (Genesis 1:9, below). Quartz, quartzite, basalt and other hard stones that break with an edge are not Flood deposits, and every river carries cobbles. A cobble smashed against another cobble gives sharp fragments, even when it is not a good tool-stone. This is the honest position. **There was stone. There may not have been good flint. A rough edge was available from the first day; a fine one may have taken searching.**

> **Genesis 1:9** *And God said, Let the waters under the heaven be gathered together unto one place, and let the dry land appear: and it was so.*

Then there is clay. **"And the LORD God formed man of the dust of the ground" (Genesis 2:7)**. *'Aphar* (H6083), "dust," Strong's renders also as "clay, earth, mud." And *yatsar* (H3335), "formed," is in Strong's words "to mould into a form; especially as a potter." Adam was the first thing in history shaped from clay by a potter's hands. The material of his own body lay at his feet, and every riverbank has it. Whether he knew how to fire clay is another matter. Chapter 10 takes that up.

Weighing it: Mixed, stated per point — toward Claim 5 (cursed, not ruined) and Claim 6 (hard-won firsts). Stone in Havilah, a gum or resin, and clay are all direct statements, though the identity of *shoham* and *bedolach* is uncertain. That flint may have been scarce before the Flood is this study's inference from the creation-science model, and holds only if that model is right. That river cobbles give a usable edge is an observation from experience, not from the text. The opposing reading can fairly answer that if flint was abundant before the Flood, the problem disappears. Then Claim 6 is weaker on this point, and the study would be glad of it.

In short. Stone was there, gum or resin was there, and clay was underfoot. Good flint may not have been. The first edge was rough; a better one had to be found.

D. Thorns and thistles: a curse, and an unexpected tool

> **Genesis 3:17** *And unto Adam he said, Because thou hast hearkened unto the voice of thy wife, and hast eaten of the tree, of which I commanded thee, saying, Thou shalt not eat of it: cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life;*
>
> **3:18** *Thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field;*

Qots (H6975), "thorn," Strong's derives from a root "in the sense of pricking." *Dardar* (H1863), "thistle," is "of uncertain derivation." This library's Climate Change study observes that this whole category of plant appears in the text here, at the curse, for the first time.

Thorns were a punishment. They tore skin, choked crops and made every field a fight. But a thorn is also a ready-made awl: a sharp point that pierces a hide so that a cord can pass through. Many traditional peoples have used thorns for exactly this, and as pins, fish hooks and needles. It is a small irony, and this study offers it as no more than that: the plant that came with the curse put the first sewing awl in the hands of the man who had to sew new clothes.

Weighing it: Narrative — the thorns are a direct statement; their use as awls is a picture drawn from practice, not from the text. No claim rests on it. A reader can fairly say it is a homiletic touch, and it is.

In short. The curse brought thorns into the field, and with them the first needle anyone east of Eden would use.

E. Animals that did not yet fear man

After the Flood God says something that was evidently not true before it:

> **Genesis 9:2** *And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hand are they delivered.*

"the fear of you and the dread of you shall be upon every beast of the earth". If that is a new arrangement after the Flood, as its form suggests, then before the Flood animals did not fear man in the same way. That has two consequences for the first year.

Animals could be approached. A man who needed a skin for a garment, or a lamb for an offering, did not have to hunt it down. The animals Adam had named in the garden came to him. Outside it, the gentle kinds may still have let him walk up, lead them and tie them. This is the most natural explanation of how Abel came to be **"a keeper of sheep" (Genesis 4:2)** within one generation, without centuries of taming.

Were there dangerous animals? This library holds that no animal preyed on another before the Fall (Genesis 1:30), and Scripture does not say when predation began after it. By the time of Psalm 104, **"The young lions roar after their prey" (Psalm 104:21)**. Whether any animal was a danger to Adam in the first year, the text does not say. This study treats the first year as a time when animals were more a resource than a threat, and labels that a reasonable inference.

Weighing it: Reasonable inference — toward Claim 5 (cursed, not ruined), on the question of animals. Genesis 9:2 is a direct statement about the post-Flood world. That it marks a change, so that animals before the Flood lacked this fear, is a reasonable inference from its wording as a new grant. The opposing reading can fairly answer that 9:2 may confirm and strengthen a fear that began at the Fall. If so, animals in the first year may have been warier than pictured here, and every hide harder to get.

In short. The animals Adam had named still came near. A sheep could be led rather than hunted, and nothing in the record says anything hunted him.

Chapter 3 — What Castaways Can Teach, and What They Cannot

Over the last three centuries a handful of people have been cut off from the rest of humanity and had to make their own way. Their records are among the best evidence there is for what the first year east of Eden may have demanded. But not one of them started with nothing, and that has to be said first.

A. The record, and what each one started with

Alexander Selkirk was put ashore alone on Más a Tierra in the Juan Fernández Islands in September 1704, and was taken off in February 1709: four years and four months. Woodes Rogers, who rescued him, lists what he had: "a Firelock, some Powder, Bullets, and Tobacco; a Hatchet, a Knife, a Kettle, a Bible." Even so, Rogers writes that "for the first eight months [he] had much ado to bear up against Melancholy, and the Terror of being left alone in such a desolate place." He "got fire by rubbing two sticks of Piemento Wood together upon his knee." When his powder ran out he caught goats "by speed of foot." He "built two Hutts with Piemento Trees, covered them with long Grass, and lin'd them with the Skins of Goats." He sewed new clothes of goatskin with a nail for a needle, and when his shoes wore out his feet hardened until he "run every where without Annoyance."

The Lone Woman of San Nicolas Island, later baptised Juana Maria, lived alone off the California coast from late 1835 to 1853, about eighteen years. She lived in a hut partly built of whale bones and in a nearby cave. She wore a dress of cormorant feathers and the skins of wild ducks, "which she sewed together with sinews of the seal." Archaeologists have found her bone needles, sandstone abraders, and woven water bottles coated with asphaltum, a natural tar. She lived on shellfish and seal fat. She had been raised in a culture that already knew every one of these crafts.

The Lykov family fled into the Siberian forest in 1936 and were found in 1978, forty-two years later. They took a few possessions, some seeds and parts of a spinning wheel and loom. As their iron kettles rusted away, "the only replacements they could fashion came from birch bark," which could not be set over a fire. Clothes were patched until they fell apart, "then replaced with hemp cloth grown from seed." They made birch-bark galoshes. In 1961 a June frost killed their garden, and by spring they were "eating shoes and bark." The mother died of starvation that year. Then a single grain of rye sprouted in

their pea patch. They fenced it and guarded it night and day, and from its eighteen grains rebuilt their whole crop.

Ishi, the last of the Yahi people, came out of the California hills in 1911. He had lived most of his life in hiding with a dwindling family group, by the old ways. The surgeon Saxton Pope, who knew him, recorded that he could make fire with the drill "in less than two minutes," and that "in half an hour he could make the most graceful and perfectly proportioned arrowhead imaginable." Ishi carried a lifetime of inherited craft.

Ötzi, the Iceman, found in the Alps in 1991, was a traveller who died with his equipment. Among it were birch-bark containers, one blackened inside and holding fresh maple leaves and charcoal. The museum that keeps him explains: "Ötzi wrapped charcoal embers in the leaves and carried them in the birch-bark container. In this way, the embers could be kept for several hours and fanned into fire in a few seconds." He also carried tinder fungus, a flint dagger, and a tool for sharpening flint. He had mended his clothes with grass fibres.

John Plant, who publishes as *Primitive Technology*, builds things in the Australian bush using only what he makes there, without metal tools. He is the nearest modern case to starting with nothing. Even so, he starts with a modern education and knows what he is aiming at. His hut with a fired-tile roof, walls and underfloor heating took 102 days, including ten days to fell and shape the timber frame with a stone axe he had made himself, five days to build a kiln, and twenty-six firings to make 450 tiles.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts), and neither way on Adam himself. These are real records of real people, and they show the scale of the work. None of them started where Adam started, and that is why they rate as corroboration only. The opposing reading can fairly answer that every one of them was handicapped in ways Adam was not: alone, sick, grieving, in a hostile climate, or with a modern body.

In short. Every castaway in history began with something, whether a knife, seeds or a people's craft. Their records show how long the work takes, not how it begins.

B. Seven lessons from the record

Read side by side, the accounts teach seven things that bear directly on the first year east of Eden.

1. **Fire is the hinge.** Selkirk's life changed when he could make fire from wood. The Lykovs kept theirs going. Ötzi carried his in a bark can. Without fire there is no cooked food, no warmth on a cold night, no light, no hardened wood, no fired clay and no smoked hide.
2. **The first edge comes before almost everything else.** Every account depends on a knife or something that does a knife's work. The Lone Woman made bone needles and used sandstone to grind. Plant made a stone axe before he could build anything.
3. **Containers are the quiet necessity.** When the Lykovs' kettles failed, their whole diet changed. The Lone Woman's tarred water bottles let her live away from her spring. A person without a vessel has to live where the water is.

4. **Fibre is everywhere, and it holds everything together.** Grass, sinew, bark, hemp: every account depends on cord, from Ötzi's grass mending to the Lone Woman's seal-sinew stitching.
5. **Despair is a bigger danger than hunger.** Selkirk took eight months to master his melancholy, and his recovery came, by Rogers's account, with "reading, singing Psalms, and praying." The Lykovs survived a famine that killed one of them by guarding one grain of rye.
6. **Knowledge beats strength.** Ishi made fire in two minutes; a beginner takes days. The difference is not muscle. It is knowing which wood, which motion, which tinder.
7. **The body adapts, and so does the menu.** Selkirk's feet hardened until he could run barefoot over rock. The Lykovs ate whatever grew. A body living on what the land gives changes to meet it.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts), and in lesson 6 toward Claim 2 (full minds). These are patterns drawn from a small number of accounts and given as patterns. The opposing reading can fairly answer that seven lessons drawn from six lives are a generalisation. They are offered as the shape of the problem, not as laws.

In short. Fire, an edge, a vessel, a cord, a steady mind, real knowledge, and time for the body to harden. Everything in the rest of this study is one of those seven.

C. Where Adam's case is unlike all of them

Four differences set the first year east of Eden apart from every account above. Two make it harder, and two make it easier.

Harder: nothing at all. Every castaway had something made by someone else: a kettle, a knife, a seed, a needle, an inherited technique. Adam had nothing made by man, because no man had yet made anything except a fig-leaf apron.

Harder: no example. No human being before Adam had ever chipped a stone, made a fire, tanned a hide or baked a cake. Ishi learned from his elders. Plant learned from books and archaeology. Adam had only what God had shown him, what he knew of the creation, and his own mind.

Easier: two of them, and in their prime. Every account above but the Lykovs' is of one person alone. A man and a woman together can share the work, keep each other's spirits up, keep watch, and talk through every failure. And they were in perfect health on the first day.

Easier: a world still rich and still mild. Selkirk had the Pacific's winter storms. The Lone Woman had wind and fog on a bare island. The Lykovs had the Siberian winter. Adam had a land watered by mist, and, as this library reads it, without the violent weather of the present world.

Weighing it: Reasonable inference — the two harder points toward Claim 6 (hard-won firsts), the two easier points toward Claims 2 and 5. Each difference rests on a direct statement or a conclusion already weighed in Chapters 1 and 2. The opposing reading can fairly answer that the "no example" point is softened if God showed Adam more than the text records (Claim 3). That is right, and it is why Claim 3 matters so much.

In short. No one has ever started with less than Adam. No one has ever started with a better mind, a better body or a kinder land.

Chapter 4 — The Bootstrap Problem

Every tool needs another tool to make it. A knife needs a stone to strike it from. A handle needs a knife to shape it. A cord needs fibre, and fibre often needs a blade to cut it. A fire drill needs a notch cut in a board. This is the bootstrap problem: how does a person with bare hands make the *first* tool, the one that makes the rest possible? Every survival manual skips this step, because every reader of a survival manual already owns a knife. Adam did not.

A. What bare hands can do

Before any tool is made, a great deal can be done with hands, teeth, nails and the weight of the body.

- **Break dead wood.** Dry branches up to about wrist-thick snap over a knee or against a rock. Longer poles break by levering them in the fork of a tree.
- **Strip bark and fibre.** The inner bark of many trees and the stems of many plants peel off in long strips by hand, especially when green.
- **Twist cord.** Two strands of fibre twisted against each other hold together, and the twist locks. This takes no tool at all, only fingers and practice. The fig-leaf aprons of Genesis 3:7 show that Adam and Eve already knew how to bind one thing to another.
- **Pull plants and dig soft ground.** Roots, tubers and bulbs come out of soft soil by hand. Hard ground needs a stick.
- **Gather and carry in the coats.** A tunic gathered at the hem makes a bag. The first thing they carried fruit in may well have been their own clothing.
- **Bite.** Teeth cut fibre, strip bark and split a stem. The Wola people of New Guinea sharpened their bamboo knives "by removing a thin strip, generally with the teeth," according to the anthropologists who studied them.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts), showing where the work starts. These are observations about human hands in any age, not statements of Scripture. Nothing about Adam rests on them. A reader can fairly say they are obvious, and they are; they are listed because they are the true starting point.

In short. Before the first tool, there are hands, teeth and weight. They can break, strip, twist, pull and carry, and that is enough to begin.

B. The first edge: six ways to cut without a knife

A cutting edge is the most important single tool there is. Here are six ways to get one without having one, roughly in order of how quickly they could have been found.

1. **Smashed stone.** Throw one hard cobble against another, or onto a rock, and some of the pieces have sharp edges. This takes no skill. It is wasteful and the edges are irregular, but the first piece can be cutting within minutes of picking up the first stone. Archaeologists who study the simplest stone tools find that most cut marks on ancient bones were made by plain sharp flakes, not by shaped tools: "sharp flakes and flake fragments are enormously useful in cutting operations, particularly in various aspects of animal butchery (skinning, defleshing, dismembering, etc.)."
2. **Split cane or reed.** Where cane, reed or bamboo grows, a stem split lengthwise has an edge that cuts meat. The Wola butchered pigs with split bamboo, which "forms an excellent cutting edge" and "could be quickly resharpened." Freshwater reeds by a river are the likeliest cane east of Eden.
3. **Shell.** A broken mussel or clam shell from the river cuts and scrapes. The Illinois people used mussel shells as scrapers, and a French observer in 1702 wrote that they cut corn "with shells, which they find more convenient than knives."
4. **Bone.** Once any animal has died, its long bones break into splinters with points and edges. A split rib makes a scraper; a splinter rubbed on sandstone makes an awl or a needle, like the Lone Woman's.
5. **Thorn.** After the curse, thorns were everywhere (Genesis 3:18). A thorn will not cut, but it pierces, and piercing is half of sewing.
6. **Knapped stone.** Striking flakes deliberately from a good stone with a hammerstone, and then trimming them, gives far better tools. It is a real skill. In one controlled study, twenty-six beginners received up to ninety hours of training over several months, and "only experts were able to combine percussive force and accuracy" to make handaxes of the ancient standard. A usable flake comes quickly; a fine blade takes a long apprenticeship.

The order matters. Adam did not need to be a skilled knapper on the first day. He needed one sharp thing, and smashed stone, split reed and broken shell all give one with no skill at all. Skill would come with use, and it would keep growing for generations.

Scripture itself remembers stone blades long after metal was known. When Zipporah circumcised her son, she **"took a sharp stone" (Exodus 4:25)**. *Tsor* (H6864) is, in Strong's words, "a stone (as if pressed hard or to a point); (by implication, of use) a knife." When Joshua was told **"Make thee sharp knives" (Joshua 5:2)**, the Hebrew reads *charboth tsurim*, "knives of rocks." *Chereb* (H2719) is "a cutting instrument … as a knife, sword, or other sharp implement," and *tsur* (H6697) is "a rock or boulder … also an edge." Most modern versions render the phrase "flint knives." Israel had bronze and iron, and still cut with stone for this rite. The stone blade was never forgotten.

Weighing it: Mixed, stated per point — toward Claim 6 (hard-won firsts), and toward Claim 2 (full minds) on how quickly the first edge came. That stone knives were known and used is a direct statement (Exodus 4:25; Joshua 5:2). The six methods are observations from ethnography and experiment, weighed as corroboration only. That Adam found at least one of them within days is a reasonable inference from his knowledge of the creation and the materials around him. The opposing reading can fairly answer that a man who had never seen a stone flake might not think of smashing a

cobble at all. This study's answer is that a man who sewed leaves on the day of the Fall was not likely to be defeated by a rock for long. That is a judgment, and it is stated as one.

In short. The first edge did not need skill: a smashed cobble, a split reed or a broken shell would do. Skill came afterward, and Scripture still remembers stone knives a thousand years later.

C. Cord: the tool that holds the other tools together

With an edge comes cord. Almost every other tool depends on it: a handle lashed to a stone, a shelter tied at its frame, a hide stitched into a garment, a basket woven, a load carried, an animal led.

Cord can be made from inner bark, from the long fibres of plants such as nettle, flax, hemp and many grasses, from strips of hide, and from sinew, the long tendons of an animal's back and legs. The simplest method needs no tool at all: two strands are twisted, each in the same direction, and then laid against each other so that they twist together the opposite way and lock. This "reverse wrap" is how most of the world's traditional cordage has been made. A practised hand makes a metre in a few minutes; a beginner's first metre is lumpy and slow.

Scripture's own record of spinning comes much later, but it describes the same hand-work: **"all the women that were wise hearted did spin with their hands" (Exodus 35:25)**, and the woman of Proverbs **"layeth her hands to the spindle" (Proverbs 31:19)**. The first cord east of Eden was very likely twisted in the same way, without a spindle, between finger and thumb or rolled against the thigh.

Weighing it: Reasonable inference — toward Claim 2 (full minds) and Claim 6 (hard-won firsts). That they could bind materials together rests on Genesis 3:7, a direct statement. That they made cord early, from bark and plant fibre, is a reasonable inference from the fact that almost nothing else can be built without it. The method is observation, not Scripture. The opposing reading can fairly answer that the text never mentions cord before the Flood. True; it never mentions most of what a household needs.

In short. Twisted fibre is the glue of every early tool. It needs only fingers to make, and the first fig-leaf aprons show they already knew the principle.

D. The first three tools: an edge, a cord, and a stick

Put the first three together and the bootstrap problem is solved.

A digging stick. They were sent out **"to till the ground from whence he was taken" (Genesis 3:23)**. The first tilling tool in every culture is the digging stick: a stout straight branch, its end rubbed to a point on a rough stone, or scraped with a flake, and later hardened in fire. With it a person can open soil, dig roots, plant seed and break clods.

A hafted tool. A stone lashed to a stick with cord becomes a hammer, an adze or an axe, and later a hoe. A stick split at one end, a stone wedged in the split and bound with wet hide or sinew that shrinks as it dries: that is a tool with reach and force, built from three things that cost nothing.

A carrying tool. Cord plus a few green sticks makes a crude frame or net; bark folded and pinned makes a tray. Now food can be carried back to camp, and the camp no longer has to move to the food.

From here every other tool follows. The rest of this study is the story of what was built on these three.

Weighing it: Reasonable inference — toward Claim 6 (hard-won firsts). The command to till is a direct statement. That the digging stick was the first tilling tool is a reasonable inference from what tilling with bare hands would require, supported by worldwide practice. The opposing reading can fairly answer that God might have provided a tool unrecorded. Possible, but the text gives no hint of it, and Claim 1 stands against it.

In short. A sharp stone, a twisted cord and a pointed stick: once those three exist, everything else can be made.

Chapter 5 — Day One

What follows is a pictured scene. Scripture does not narrate the first day outside the garden, so this chapter is a reconstruction. It is built from the text weighed in Chapters 1 and 2 and from what human beings need. It is offered as a likely picture, not as a finding.

A. The gate behind them

The last thing they saw of the garden was the guard: **"Cherubims, and a flaming sword which turned every way" (Genesis 3:24)**. *Lahat* (H3858), "flaming," Strong's gives as "a blaze." Whatever else that sword was, it was the only fire either of them had ever seen. They knew what flame looked like. They had no way to make it.

They walked east, because that was the way out. They were clothed in coats of skin, the first garments of leather anyone had ever worn, still smelling of the animal that had died that day. Behind them was every tree "pleasant to the sight, and good for food." Ahead was ground that would now give them thorns as readily as fruit.

As this study pictures it, they did not walk far. There was no reason to. The land just outside was not desert. It was the same country that bordered a garden watered by a river. The first decision of the first day was a simple one: stay near the water.

Weighing it: Narrative — a pictured scene. The cherubim, the flaming sword and the east are direct statements; the walk and the decision are this study's picture.

In short. They went out east, clothed, with the only fire they had ever seen guarding the gate behind them.

B. Water, and the first meal

The first need was water. As Chapter 2 §A concluded, a river went out of Eden and ran on through the land. They drank from it with their hands. Most adults need two to three litres of water a day at rest, and much more when working and sweating. With no vessel, every drink meant going to the bank.

The first meal was food that needed no work: fruit from trees, berries, seeds, and green herbs, things Adam knew from tending the garden. God had told them **"thou shalt eat the herb of the field" (Genesis 3:18)**. *'Eseb* (H6212) is, in Strong's words, "grass (or any tender shoot)": leafy herbs, grasses and the seeding plants among them. The land still gave freely. What was new was that some of it was guarded by thorns, and that from now on the good things would have to be looked for rather than simply picked.

Weighing it: Narrative — a pictured scene, resting on Claim 5 (cursed, not ruined) and Claim 4 (plants, not flesh). That they ate fruit and herbs on the first day is a picture, consistent with the diet of Genesis 1:29 and 3:18. The water figures are modern guidance for modern bodies.

In short. They drank from the river with their hands and ate what grew, the way they always had. Only now they had to search for it.

C. The first afternoon: first attempts

As this study pictures the afternoon, two people who had never needed a tool now began to need several. Food could not be carried, so Eve gathered the hem of her coat into a pouch. A root would not come out of hard ground, so Adam broke a branch and dug. The first sharp stone may have come that afternoon. It may have come the next day. Adam found that a cobble thrown against a rock leaves edges, and that an edge cuts fibre, and fibre twisted makes a cord. Each of those steps is simple. Each is easy to miss when no one has ever taken it before.

There would have been failures. A stone that crumbles instead of breaking clean. A fibre that snaps. A stick that will not point. A cut finger: very likely the first blood either of them shed by their own hand. These are small things. They were also the first of their kind in the history of the world.

Weighing it: Narrative — a pictured scene, illustrating Claim 6 (hard-won firsts). Nothing here is stated in Scripture. It applies Chapter 4's findings to the first afternoon.

In short. The first afternoon was full of small firsts and small failures: a pouch made of a coat, a broken stick, perhaps a first sharp stone, and a first cut.

D. The first night

Then the sun went down. In the garden, darkness had never been a danger. Now it was the first night outside, with no fire, no lamp, no roof and no wall.

As this study pictures it, they slept under the trees, in their coats, close together for warmth, on a bed of leaves or grass pulled together by hand. The night was cooler than the day. The mist rose, and by

morning the grass was wet. Nothing hunted them, so far as the record goes. But every sound in the dark was a sound they had never had reason to fear before.

And they talked. Two people who had been sentenced that morning, and clothed that afternoon by the God they had disobeyed, lay awake in the dark with everything to say to each other. Adam had already done one thing that shows where his mind was that day. After hearing the sentence of death, he named his wife: **"And Adam called his wife's name Eve; because she was the mother of all living" (Genesis 3:20)**. A man under a sentence of death gave his wife a name that means life. Whatever else the first night held, it held that.

Weighing it: Narrative — a pictured scene; the naming of Eve is a direct statement, and its placement after the sentence is the order of the text. That the name looks forward in hope is a reasonable reading of "the mother of all living" set against "unto dust shalt thou return." It is not the only reading; some see it simply as Adam's recognition of what she would become.

In short. The first night had no fire, no roof and no wall. It did have each other, and a name that looked forward to life.

Chapter 6 — The First Week

Again a pictured scene, built from the materials of Chapters 2 and 4. The order of tasks follows the order of need, which is the one part of this chapter that rests on more than imagination.

A. A camp by the water

By the second day the family needed a base: a place where water was close, firewood (once there was fire) was near, the ground was dry enough to sleep on, and the useful plants grew. Every survival record shows the same choice. Selkirk eventually moved inland to a place with water, wood and goats. The Lone Woman built where she could watch the sea and reach her spring. The first camp east of Eden was very likely on rising ground near the river, under trees, within easy walking of the cobbles of the riverbed and the reeds of its bank.

Weighing it: Narrative — a pictured scene, resting on the strong inference of Chapter 2 §A that they stayed by water.

In short. The first home was a patch of dry ground by the river, chosen for its water, its stones and its shade.

B. The first sharp stones, and the first cord

The first week was the week of the first tools. Chapter 4 explains what had to be made and in what order. As this study pictures the week, Adam spent much of it in the riverbed: testing stones, smashing cobbles, learning which kinds break clean and which crumble, keeping the best flakes and throwing away the rest. Split reeds from the bank gave a second kind of edge.

Eve, as this study pictures it, worked out the cord. She had shared in sewing the fig-leaf aprons. Bark and plant fibre stripped by the river gave the first strands. By the end of the week there was string enough to lash a stone into a split stick, tie a bundle, and begin a carrying net.

None of this is in the text. The division of work between them is a guess. What is not a guess is that both tasks had to be done before almost anything else, and that two people could do them twice as fast as one.

Weighing it: Narrative — a pictured scene; the order of tasks rests on Chapter 4's reasonable inference, and the division of labour is a guess.

In short. Adam in the riverbed learning stone; Eve on the bank learning fibre. By the week's end they had edges and string.

C. The first booth

By the end of the first week, as this study pictures it, there was a shelter. In a climate without rain, the first need was not a waterproof roof. It was shade by day, a windbreak and some warmth by night, a dry floor, and some privacy. The text records that their first response to their nakedness was to hide **"amongst the trees of the garden" (Genesis 3:8)**. A people newly aware of shame wants walls.

The simplest structure is a lean-to: a ridge pole wedged between two trees or forked sticks, other poles leaned against it, and branches, bark and grass laid over them. A larger version, two lean-tos facing each other, is a booth. Scripture's word for such a shelter is *sukkah*, and Jacob **"made booths for his cattle" (Genesis 33:17)**. A survival writer who teaches the method estimates that a first-time builder needs "2-4 hours" for a debris hut, the small, heavily insulated version, and an experienced one about ninety minutes. With a flake to cut branches and cord to tie them, a booth for two was a day's work.

Weighing it: Narrative — a pictured scene; the method and the time are observations from survival practice, and the motive of privacy is a reasonable reading of Genesis 3:7-10.

In short. A booth of poles and branches, built in a day, made the first home: shade, a windbreak, a dry floor and a wall between two people and the open world.

D. The first failures of the first week

It is easy, telling this, to let every step succeed. It would not have. This study pictures at least these failures in the first week, because every survival record has them:

- **Hands.** Smashing stone splits fingernails and bruises palms. Stripping bark raises blisters. By the third day both pairs of hands would be raw.
- **Wasted work.** Cord made from the wrong fibre rots or snaps. A lean-to built across the wind instead of against it is cold. A stone that looked good shatters into useless crumbs.
- **Food that disagrees.** Even a man who knows plants meets new ones outside the garden, and some are bitter, binding or worse.

- **Fatigue. "In the sweat of thy face" (Genesis 3:19)** was no figure of speech by the end of the first week. Bodies that had never been tired now went to sleep aching.
- **Discouragement.** Selkirk needed eight months to master despair. Adam and Eve had each other, but they had also just lost Eden.

Weighing it: Narrative — a pictured scene, illustrating Claim 6 (hard-won firsts). Each failure is drawn from survival experience; none is in the text. A reader can fairly answer that Adam's knowledge would have prevented most of them. Some, perhaps. Not the blisters.

In short. Raw hands, wasted work, a bad meal, aching backs and a heavy heart. The first week was won, but not cheaply.

Chapter 7 — Fire

Of all the necessities, fire is the one that most divides "surviving" from "living." It is also the one that most clearly could not be picked up from the ground.

A. Why fire mattered, even without meat

Most people picture the first fire roasting the first kill. If Claim 4 is right, and there was no meat before the Flood, fire still mattered for at least eight reasons.

1. **Warmth** on cool nights and in the cooler seasons.
2. **Light** after sunset, and the hours of work and company it adds to a day.
3. **Cooking plants.** Many roots, tubers, seeds and grains are hard to digest raw and some are unsafe. Cooking makes far more of a plant's food value available.
4. **Bread. "In the sweat of thy face shalt thou eat bread" (Genesis 3:19)**. *Lechem* (H3899) can mean food generally, and this library's story of the Fall reads it as metonymy (a figure of speech putting one thing for the whole class) for all food. Strong's adds, "especially bread, or grain (for making it)." Whatever the figure, ground grain becomes bread only with heat.
5. **Hardening.** A digging stick or a spear point hardened in the coals lasts far longer.
6. **Clay.** Pottery is clay that has been through fire.
7. **Hides.** The last step in making soft leather is smoke.
8. **Offering.** When Noah came out of the ark he **"offered burnt offerings on the altar" (Genesis 8:20)**. *'Olah* (H5930), "burnt offering," is "as going up in smoke." Whether the first offerings outside Eden were burnt, Scripture does not say. This library's story of Cain and Abel notes the tradition that fire fell on Abel's offering and labels it tradition.

There is a modern study that shows how much cooking matters. Researchers at Giessen in Germany surveyed 513 people who ate a mostly raw diet. They found "an average weight loss of 9.9 kg ... for men and 12 kg" for women, and "about 30% of the women under 45 years of age had partial to complete amenorrhea": their monthly cycle had partly or wholly stopped. Those people had modern bodies and

modern foods, and Eve did not. But if anything like this held in the first year, fire was not a comfort. It touched the command to **"Be fruitful, and multiply" (Genesis 1:28)**.

Weighing it: Mixed, stated per point — toward Claim 6 (hard-won firsts) on how much depended on fire. The bread, the burnt offerings after the Flood and the potter's verb are direct statements. That cooking matters to the energy a body gets from plants is well established for modern people and only corroborative for Adam and Eve. The opposing reading can fairly answer that bodies made to last 930 years may have thrived on raw food. Possibly. The Giessen figures are given as a warning about modern bodies, not a finding about the first ones.

In short. Even without meat, fire meant warmth, light, digestible food, bread, hard tools, pottery, soft leather, and perhaps the offering. It was worth almost any amount of labour.

B. How fire is made from nothing

There are only two practical ways to make fire from nothing: friction and percussion.

Friction. Rubbing one piece of wood hard and fast against another produces fine hot dust. If the woods are right, dry, and worked long enough, the dust smoulders into an ember. The ember is tipped into a nest of fine dry tinder (shredded bark, dry grass, plant fluff) and blown on until it bursts into flame. Three friction methods need nothing but wood and hands:

- **The fire plow.** A stick with a blunt point is rubbed hard back and forth along a groove in a soft, dry board. One encyclopedia describes it: "The point of the first piece is rubbed quickly through the groove of the second piece in a 'plowing' motion, to produce hot dust that then becomes a coal." The groove wears itself in. No notch, cord or cutting tool is required. Of all methods, this needs the least equipment.
- **The hand drill.** A straight, light stem is spun back and forth between the palms, its tip pressed into a shallow pit in a board. A notch cut beside the pit collects the hot dust. This needs an edge to cut the notch, which by the end of the first week they had.
- **The bow drill.** The same spindle is turned by a cord wrapped round it and fixed to a bent stick, sawn back and forth. It is easier on the hands, but needs a cord strong enough to take the friction.

Percussion. Striking iron pyrite, a common mineral, against a hard stone such as flint or quartz throws off sparks hot enough to catch in very fine tinder, such as the dried fungus Ötzi carried. It needs no wood at all, but it needs pyrite, which is not found everywhere. At one archaeological site in England, pyrite is "incredibly rare," and the excavators concluded it had been carried there on purpose "with the intention of making fire." If pyrite lay in the riverbeds east of Eden, Adam's work with stone may have shown him sparks long before he understood them.

Weighing it: Corroboration only — on methods, neither way on any claim. These are descriptions of how fire is made, from observation and ethnography. No part of them comes from Scripture. They tell us what Adam *could* have done, not what he did.

In short. Fire from nothing means wood rubbed on wood until it smokes, or the right stone struck on the right stone until it sparks. The fire plow needs no tool at all.

C. How long it takes, and what goes wrong

For someone who knows how, friction fire is quick. Ishi did it "in less than two minutes." For someone learning, it is one of the hardest skills in survival practice. One instructor plans a full week for a beginner's hand drill: short practice sessions several times a day to build up hand strength, the actual drill set on the third or fourth day, and an ember toward the end of the week. Even then, the guide warns, the main obstacle is blisters, and pushing too hard too early "can set progress back several days."

Every step can fail.

- **The wrong wood.** Some woods polish instead of grinding, and never make an ember. Some are too hard, some too soft, some too resinous.
- **Damp wood.** Friction fire needs very dry material. In a world watered by mist and dew, morning wood would be damp. Standing dead stems and dry wood dried in the sun would have to be found and kept dry.
- **Hands.** Hand-drill spinning tears palms open in a beginner.
- **The ember dies.** A good coal tipped into poor tinder goes out in seconds.
- **The flame dies.** A tinder bundle that flares and catches nothing larger is gone in a moment.

So how long did Adam's first fire take? There are two honest answers, and they depend on Claim 3.

If Adam had to work it out alone, he had a mind that understood the creation, he could see that rubbing makes heat, and he had seen flame at the gate. He would still need the right woods, the right motion, dry tinder, and enough practice to get through blisters. Days, very likely; possibly weeks.

If God showed him, as He had shown him the coats of skins, then fire may have come within days, and the hard part was hands and materials, not understanding. Isaiah 28 says of the farmer that **"his God doth instruct him to discretion, and doth teach him" (Isaiah 28:26)**. Isaiah is speaking of Israel's farmers in his own day, not of Adam. But he states a principle about the God of craft and harvest, and it is fair to ask whether it applied first to the first farmer.

Weighing it: Reasonable inference — toward Claim 6 (hard-won firsts) on the difficulty of fire, and, if Claim 3 holds, toward a shorter struggle. The difficulty of friction fire for a beginner is well attested, and Ishi's speed shows the difference skill makes. That Adam's first fire took days or weeks is this study's estimate. Isaiah 28:26 is a direct statement about God teaching farmers, but applying it to Adam is only corroboration. The opposing reading can fairly answer that Adam may have worked out fire on the first day, or been shown it before he left the garden. Neither can be ruled out.

In short. For a skilled hand, two minutes. For a learner, days of blisters and failed embers. Which Adam was depends on whether he was taught.

D. Keeping fire, once it is had

The hardest fire is the first. The second hardest is the next one, if the first is allowed to die. That is why every people without matches has kept fire going rather than making it fresh.

- **Banking.** Coals buried in ash at night are still alive in the morning and can be blown back to flame.
- **Carrying.** Ötzi carried embers in a birch-bark container lined with fresh maple leaves, and they "could be kept for several hours and fanned into fire in a few seconds." A slow-burning fungus or a coil of bark rope smoulders for hours.
- **Feeding.** A fire that is kept needs fuel gathered every day. The woodpile becomes a daily chore, along with water and food.
- **Watching.** Someone has to be responsible for the fire. In a household of two, then three, then a growing family, this was a constant duty.

The Lykov family's story shows how much depended on it. With no matches and no way to buy any, their fire and their stove were their life for forty years.

The Law later made the same rule for the altar:

> **Leviticus 6:13** *The fire shall ever be burning upon the altar; it shall never go out.*

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts). Fire-keeping is attested across many peoples and in Ötzi's equipment; nothing in Scripture describes it before the Flood. The law of Leviticus 6:13 concerns the altar, not a household, so it is cited as an echo, not evidence.

In short. Once fire was won, it was never willingly let go. It was banked at night, carried in bark, fed daily and watched always.

Chapter 8 — Skins and Blades

How does a person skin an animal without a cutting tool, or divide a large one? This chapter answers that directly. First, though, it has to settle why Adam would be killing animals at all.

A. Why animals died: covering and offering, not meat

This library holds that permission to eat flesh was first given after the Flood. The case rests on two verses read together.

> **Genesis 1:29** *And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat.*
>
> **Genesis 9:3** *Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things.*

At creation, God gave man plants **"for meat"**, which in King James English means food. After the Flood He says, **"Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things"**. The words **"even as the green herb have I given you"** point back to Genesis 1:29 as the earlier grant, and now enlarge it. If man had always been permitted flesh, the enlargement would have no point. This library's story *Creation and the Garden* states it plainly: "Permission to eat meat came only after the Flood (Genesis 9:3)." The Climate Change study holds the same position.

Now the opposing case from Introduction §D, at full strength, and an answer to each point.

- **Abel kept sheep, and a flock is kept for something.** It is. A flock gives skins for clothing, wool for spinning, animals for offering, and probably milk. Jabal's household is described as those who **"have cattle" (Genesis 4:20)** in a line that was not obedient, and milk appears early in the patriarchs' world (Judges 4:19 shows it carried in a skin bottle). A flock needs no meat-eating to justify it.
- **The fat thereof shows butchery.** It does, and this chapter takes that seriously. Knowing where the fat lies is knowing the inside of an animal. But under the Law, the fat of the offering was precisely the part no one ate: **"all the fat is the LORD's" (Leviticus 3:16)**. Abel's offering of the fat is evidence that he divided animals, not that he ate them.
- **The earth was filled with violence.** It was (Genesis 6:11). Whether that violence included men eating flesh against God's word, the text does not say. Cain's line in particular may well have. That would be disobedience, not permission.
- **Genesis 9:3 may re-state an old permission.** Its form tells against this. It is framed as a gift, **"have I given you"**, and compared to the earlier gift of plants. A re-statement would not need the comparison.

So the first year's animals died for two reasons: for **covering**, because the coats of skins would wear out and children would need clothing, and for **offering**, because God had shown the way back by a death in Genesis 3:21, and Abel later brought the firstlings. Scripture later joins the two: of a burnt offering, **"the priest shall have to himself the skin of the burnt offering which he hath offered" (Leviticus 7:8)**. In the Law, the animal that was offered also clothed. Whether the first offerings outside Eden also gave the first new garments, the text does not say. It is a fair picture.

There is one more possibility, and it should be named. Death had now entered the world (Romans 5:12). Animals would die of age, injury and sickness. A skin could be taken from an animal already dead without killing one. In the first months, that may have been the commonest source of all.

Weighing it: Strong inference — toward Claim 4 (plants, not flesh), on whether flesh was permitted before the Flood; reasonable inference on whether Adam and Eve kept to it. Genesis 1:29 and 9:3 are direct statements, and the "even as the green herb" comparison makes the first grant plants only. That Adam's household obeyed is the more natural reading, since Abel's offering is praised. The opposing reading can fairly answer that Abel's flock and his handling of the fat show a familiarity with killing and dividing animals, and that some before the Flood surely ate flesh. Both are true. Neither shows that it was permitted.

In short. Animals died east of Eden for covering and for offering, not for the table. Skinning and dividing were needed all the same.

B. Killing without a weapon

With a hunted wild animal, the hardest part of the work is getting close enough. If Chapter 2 §E is right, that before the Flood animals did not yet fear man, then the first animals Adam needed could be approached, led with a cord, and held.

The act itself would have been the first killing by human hands of anything at all. The text records that Adam had already watched God do it once. As this study pictures it, Adam did it the way the Law would later prescribe, with a cut at the throat. **"And he shall kill the bullock before the LORD: and the priests, Aaron's sons, shall bring the blood" (Leviticus 1:5)**. A sharp stone flake, or split reed, opens the throat of a sheep or goat as surely as a steel knife, if the edge is fresh and the hand is firm. A blunt or crumbling edge does not, and makes the work cruel and slow. The first lesson in butchery was that the edge had to be good before the work began.

Nothing in this was easy to do. These were animals Adam had named. The library's story of the Fall puts it this way: "The first death Adam and Eve ever saw was an innocent animal dying — not for its own wrongdoing, but for theirs." Doing it himself was a different thing again.

Weighing it: Reasonable inference — toward Claim 4 (plants, not flesh) on why it was done, and toward Claim 6 (hard-won firsts) on what it cost. That animals were killed for coats is a direct statement (Genesis 3:21), though God did it. That Adam killed animals for offering and covering later is a strong inference from Abel's offering. The method is pictured from the Law and from what a stone edge can do. The opposing reading can fairly answer that the first skins Adam took may have come only from animals already dead. That is possible, and §A says so.

In short. The animal came when called; the edge had to be sharp; and the man who had named the animals now had to kill one.

C. Skinning: fewer cuts than you would think

This is the heart of the question this study began with: how does one skin an animal without a cutting tool? The answer is that skinning needs much less cutting than most people imagine. A sharp edge is needed for a few opening cuts. After that, most of the hide comes off by hand.

Hunters and farmers who skin carefully use a method called **fisting**. One teacher of it puts the principle plainly: use the knife "only where you really actually have to," because "it seriously takes FOREVER to skin an animal carefully with a knife," and do the rest by hand, pushing a fist between the skin and the body and using your body weight. The steps, for a sheep or goat, are these:

1. **Opening cuts.** A cut down the belly, from throat to tail. A cut around each leg above the hoof, and a cut along the inside of each leg to meet the belly cut. A cut around the neck or behind the head. With a fresh stone flake this is a matter of minutes.

2. **Starting the hide.** At the edges of each cut, the skin is lifted and worked loose with fingers and, where it clings, the edge.
3. **Fisting.** A closed fist is pushed between the hide and the body and worked along. The connective layer tears cleanly, and the hide comes away in large sections with almost no cutting.
4. **Finishing.** The hide is pulled off the back and over the shoulders, with a few nicks where it is tight.

Ishi had another method, recorded by Pope for small animals: "Often in skinning rabbits he would make a small hole in the skin over the abdomen and blow into this, stripping the integument free from the body and inflating it like a football." Butchers in many lands still blow air under a sheep's skin to loosen it.

So the honest answer is this. **You cannot skin an animal with no edge at all; the first cuts must be made. But one sharp flake, or one split reed, is enough, and the rest is hands.** Adam, who had once watched it done, would have had a sheep's hide off in an hour or two the first time, and much faster with practice.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts), showing the task was hard but not impossible. The method is from present-day practice and Pope's record of Ishi. Nothing in Scripture describes skinning before the Law, and even there it says only **"he shall flay the burnt offering" (Leviticus 1:6)**. The opposing reading can fairly answer that first attempts tear hides badly. They do, and early garments were very likely patched.

In short. A few cuts with one sharp stone, then fists. That is how a hide comes off, and it has been done that way for as long as there have been hides.

D. Dividing a larger animal

A larger animal (a full-grown ram, a bullock, or one of the great grazing beasts) is a bigger problem. It is heavy. The bones are thick. And under the Law, an offering was **"cut ... into his pieces" (Leviticus 1:6)**. Dividing it takes three tools: an edge, a heavy stone, and leverage.

- **Joints, not bones.** A large animal comes apart at its joints, not through its bones. With a stone flake, the tendons and ligaments around each joint are cut, the limb is levered back against the joint, and it separates. Anyone who has carved a fowl knows the principle. A beef carcass yields to it the same way, only slower.
- **The heavy stone.** Where a bone must be broken, a large cobble does it. Archaeologists find bones broken this way at sites all over the world.
- **Many flakes.** A stone edge dulls quickly in meat and fat. The answer is not to resharpen it but to strike a new flake. A butcher with stone tools keeps a pile of them and uses dozens on one large animal.
- **Two people.** A heavy carcass needs one person to hold, turn and pull while the other cuts. Adam and Eve were two.

Researchers have tested this. Nicholas Toth and Kathy Schick processed an elephant that had died of natural causes using only simple stone flakes. In another experiment, a team butchered an elephant's foot and made tools from its bones, using only the simplest stone technology. Simple flakes worked. Schick and Toth conclude that sharp flakes, not shaped tools, were the main knives in the earliest butchery they study.

Did Adam ever need to divide a large animal in the first year? Very likely not. Sheep and goats are what an offering and a garment need. But Abel's **"fat thereof" (Genesis 4:4)** shows that within a generation the family knew the inside of an animal well enough to separate its fat. The Law's later lists, **"the fat that covereth the inwards ... And the two kidneys, and the fat that is on them" (Leviticus 3:3-4)**, show how much knowledge that takes.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts). The methods are from experimental archaeology and ordinary butchery. That the family divided animals is a strong inference from Genesis 4:4. That they handled large animals in the first year is not claimed. The opposing reading can fairly answer that stone-tool butchery in experiments is done by people who already know anatomy. So did Adam, on Chapter 1's evidence, but he had never yet applied it.

In short. A large animal is taken apart at the joints with a pile of fresh flakes and a heavy stone, by two people. It is slow and bloody, but simple flakes do it.

E. From hide to garment: the slowest work of all

Taking off a hide is quick. Turning it into a garment is not. A raw hide left alone either rots or dries into stiff, hard rawhide. Rawhide has its uses. It is excellent for lashing, because it shrinks tight as it dries. But it does not make clothing. To make soft leather, or a supple fur robe, the hide must be worked.

The traditional method, used across North America and elsewhere, is this.

1. **Fleshing.** Every scrap of flesh and fat is scraped from the inside of the hide, over a smooth log or beam. The scraper can be a stone flake, a split rib, a sharpened bone, or a shell.
2. **Dehairing,** if leather rather than fur is wanted. Soaking in water, or in water with wood ash, loosens the hair so it can be scraped off.
3. **Dressing.** The hide is soaked and worked in an oily solution. Traditionally that is the animal's own brains mashed in warm water. The saying among tanners is that "every animal has enough brain to tan its own hide." Egg yolks or other fats also serve.
4. **Softening.** As the hide dries, it is pulled, stretched and worked over a rope or a post without stopping, so the fibres cannot bond. One guide calls this "the make-or-break moment" and says it takes "anywhere from three to eight hours depending on humidity and deer size."
5. **Smoking.** The finished hide is hung over a smouldering, smoky fire. This sets the tan, so that the leather stays soft even after it gets wet.

From a fresh hide to a finished piece of soft leather is two or three days' hard work for someone who knows how. For someone learning, the first hides are stiff in places, thin in others, and very likely ruined more than once.

Then the leather has to be cut and sewn. The tools are a sharp edge to cut, an awl (a thorn, or a sharpened bone splinter) to pierce, and thread. The best thread from an animal is sinew, the long tendons along the backbone and in the legs, dried and split into strands. Selkirk sewed with a nail. The Lone Woman sewed bird skins with "sinews of the seal." Ötzi mended his with grass.

Here is where Adam and Eve's knowledge most clearly met their lack of tools. They already knew the principle of joining one soft material to another, from the fig leaves. They had worn a garment made of skins and could see how it was made. What they lacked was every single tool for doing it again.

Weighing it: Corroboration only on the methods — toward Claim 6 (hard-won firsts); reasonable inference that it was done in the first year. Scripture never describes how skins were prepared before the tabernacle. That the coats were worn by God's making is a direct statement, and that children would need clothing is plain. When new garments were first made, the text does not say. The opposing reading can fairly answer that God's coats may have lasted many years, as Israel's did in the wilderness by a special act of God (Deuteronomy 8:4). Nothing says the coats of Eden were made the same way. But if they were, the pressure of the first year eased.

In short. A hide comes off in an hour. Becoming a garment takes days: scraping, soaking, dressing, hours of stretching, smoking, cutting and sewing with sinew and thorn.

F. What the animal gave besides its skin

An animal that died for an offering or a covering gave more than its hide, and a household with nothing would use every part of it.

- **Sinew** — the best thread and lashing there is.
- **Bone** — awls, needles, scrapers, points, and handles.
- **Horn** — spoons, cups, and later the trumpet.
- **The stomach and bladder** — the first waterproof bags. A cleaned stomach, tied at its ends, holds water.
- **Fat** — if it was not offered, it gave lamp fuel and leather dressing.
- **Wool and hair** — spun into yarn. **"all the women whose heart stirred them up in wisdom spun goats' hair" (Exodus 35:26)**.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts). These are uses known from many traditional peoples and, for goats' hair, from the tabernacle. None is recorded before the Flood.

In short. Nothing was wasted. Sinew became thread, bone became needles, the stomach became a water bag, and the wool became yarn.

Chapter 9 — The Herb of the Field and the First Bread

If Claim 4 is right, the whole of the family's food came from plants: what grew wild, and what they could make grow. This chapter traces that work from the first handful of fruit to the first loaf.

A. Gathering, and the problem of seasons

At first, food was gathered: fruit, nuts, berries, leaves, shoots, roots, bulbs and seeds. Adam knew the garden's plants (Chapter 1 §B), and many of the same plants grew outside it. This study has no figure for how much food a gatherer in that land could find in a day. In the present world, gatherers in good country often meet their needs in a few hours of work a day, and the land east of Eden was richer than any country now on earth.

The difficulty is time, not quantity. Fruit ripens in its season and then is gone. God made the lights of heaven **"for signs, and for seasons, and for days, and years" (Genesis 1:14)**, and *mo'ed* (H4150), "seasons," is in Strong's words "an appointment, i.e. a fixed time or season." Whether the climate before the Flood had the full swing of **"cold and heat, and summer and winter" (Genesis 8:22)** that God promises after it is not certain. But plants have seasons in any climate. What is abundant one month is absent the next.

So the first lesson of gathering was the ant's. **"The ants are a people not strong, yet they prepare their meat in the summer" (Proverbs 30:25)**. Food had to be stored: dried in the sun, kept off the damp ground, and protected from mice and birds. That needs baskets, platforms and pits, all of which are work.

Weighing it: Reasonable inference — toward Claim 5 (cursed, not ruined) on abundance, and Claim 6 (hard-won firsts) on storage. The plant diet and the seasons are direct statements. That plants had seasonal gaps before the Flood is a reasonable inference from Genesis 1:14 and from the nature of plants. The opposing reading can fairly answer that the pre-Flood climate may have been so even that something was always ripe. If so, storage mattered less.

In short. The land gave freely, but only in season. The first harvest taught the first lesson in storing.

B. Tilling: the work they were sent out to do

They were not sent out to gather. They were sent out **"to till the ground" (Genesis 3:23)**. Within a generation, **"Cain was a tiller of the ground" (Genesis 4:2)**. Somewhere in the first year, as this study pictures it, the first plot was opened.

Tilling with a digging stick is slow. The ground is broken a stick's depth at a time, roots are pulled, stones are moved, and seed is set in by hand. The curse made it harder: **"Thorns also and thistles shall it bring forth to thee" (Genesis 3:18)**. A plot left alone for a week is overgrown. Proverbs describes exactly what an untended field becomes: **"it was all grown over with thorns, and nettles had covered the face thereof" (Proverbs 24:31)**. The thorns had to be cleared, and kept cleared, by hand.

Then there was the wait. Seed sown takes weeks or months to bear. Through the whole of that time the gathering had to go on, the plot had to be weeded, and the birds kept off. The first planted crop was a gamble of months of labour against one harvest. The Lykovs once lost everything to a single June frost, and rebuilt their rye from one surviving stalk.

Weighing it: Direct statement for the command and for Cain's calling; reasonable inference for a first plot within the first year — toward Claim 6 (hard-won firsts). The command to till and the thorns are in the text. When the first plot was opened, it does not say. The opposing reading can fairly answer that tilling may have begun only after some years of gathering. It may; nothing in the argument depends on the date.

In short. They were sent out to farm. The first field was a stick, a patch of cleared ground, a handful of seed, and months of fighting thorns before anything came back.

C. Wild grain: more than you would think

Before any field was planted, there was wild grain. And here a modern experiment shows how generous a land can be.

In the summer of 1967 the agronomist Jack Harlan went to the foothills of the Taurus Mountains in Turkey, where wild einkorn wheat still grows in dense stands. Using a sickle of the oldest kind, a wooden handle set with sharp stone flakes, he harvested **up to two pounds of wild grain an hour**. From that he worked out that **a family of four could gather enough wild einkorn to feed themselves for a year in about three weeks**, working their way up the hillside as the stands ripened.

That was in today's world, in a land under thousands of years of curse and grazing. Harlan's tool was a stick and some stone flakes, and every part of it was within Adam's reach by the end of the first month. If wild grasses with edible seed grew east of Eden, as **"every herb bearing seed" (Genesis 1:29)** suggests they did, then a few weeks at harvest time could have filled every basket they could make.

Weighing it: Corroboration only — toward Claim 5 (cursed, not ruined). Harlan's figures are a measured experiment in the present world. Whether wild grain stands like his grew east of Eden is not stated in Scripture. The opposing reading can fairly answer that cereals as we know them may be the product of later cultivation. True for many; wild einkorn, the grain Harlan harvested, is the wild plant itself.

In short. One modern experiment found that three weeks with a stone-bladed sickle could feed a family for a year. The land east of Eden was richer than Harlan's hillside.

D. From grain to bread: threshing, winnowing, grinding, baking

Grain in the ear is not yet food. Four more steps stand between the harvest and the **"bread"** of Genesis 3:19, and each one needs tools.

Threshing. The grain has to be knocked out of the ear. Isaiah describes the simplest way: **"the fitches are beaten out with a staff, and the cummin with a rod" (Isaiah 28:27)**. A stick and a flat patch of hard ground, or a skin spread on the ground, are all it takes.

Winnowing. The loose grain is tossed in the air on a breezy day, and the wind carries off the chaff. A tray of bark or a woven basket serves.

Grinding. This is the great labour. Grain is ground by laying it on a large flat stone and rubbing it with a smaller one held in both hands, kneeling and pushing back and forth. That is the saddle quern, the oldest mill. Scripture treats the millstones as a household's life: **"No man shall take the nether or the upper millstone to pledge: for he taketh a man's life to pledge" (Deuteronomy 24:6)**. Making a quern is itself work. A suitable flat stone has to be found and carried home, and its surface pecked rough with a hammerstone over hours.

The cost of grinding is written in bones. The anthropologist Theya Molleson studied skeletons from Abu Hureyra in Syria, one of the earliest known grain-growing villages. She found that the women's big toes were bent upward, their knees enlarged where they met the ground, and their lower backs and elbows worn. She traced all of it to kneeling for hours a day at the quern, pushing a stone over grain: "Backbreaking work!" She also found teeth cracked by grit from the grinding stones. Whatever "the sweat of thy face" meant to Adam, it meant this to the people who ground the grain.

Baking. Ground meal mixed with water becomes dough. With fire, it becomes bread. The oldest bread in Scripture is the cake on the hearth: Sarah was told to **"make cakes upon the hearth" (Genesis 18:6)**, and Elijah woke to **"a cake baken on the coals" (1 Kings 19:6)**. *'Uggah* (H5692) is in Strong's words "an ashcake (as round)." The dough is patted flat and laid on hot stones or buried in hot ashes, then brushed off and eaten. That is very likely what the first bread east of Eden was.

Before fire, grain could still be eaten. Soaked, sprouted, or pounded and mixed with water, it is food. Roasted ears, **"parched corn" (Ruth 2:14)**, need only a little fire. But bread, the word God used, needs all of it: harvest, threshing, winnowing, grinding and baking.

Weighing it: Mixed, stated per point — toward Claim 6 (hard-won firsts). "Bread" in the sentence of Genesis 3:19 is a direct statement, whether it means bread itself or, by metonymy, all food. The steps from grain to bread are described in later Scripture and in archaeology, and are corroboration for the first year. That the first bread was an ash cake is a reasonable inference from the simplest method Scripture knows. The opposing reading can fairly answer that if *lechem* in 3:19 means simply "food," the verse does not require bread at all. Then this section describes what came, not what was commanded.

In short. From a field of grass to a cake on the coals takes a stick, a tray, a pair of stones and fire, and a great deal of kneeling.

Chapter 10 — Shelter, Vessels and the Household

A camp becomes a home when there is somewhere to sleep, something to carry water in, something to store food in, and a fire that stays lit. This chapter gathers the household needs not yet covered.

A. From a booth to a house

The first booth (Chapter 6 §C) would not have lasted long. Branches dry and drop their leaves, poles rot at the ground, and the wind tears the roof. Over the first year, as this study pictures it, the shelter improved in stages:

- **A better frame:** stouter poles, set in holes dug with the digging stick and lashed with cord or rawhide.
- **Thatch:** bundles of grass or reed, tied in overlapping rows. Selkirk covered his huts "with long Grass."
- **Walls of wattle and daub:** a woven lattice of flexible sticks, plastered with clay and dung that dries hard. This is among the oldest building methods in the world, and needs only hands, sticks, mud and time.
- **A hearth:** a ring of stones, inside or just outside the door, with the fire kept in it.
- **Skins:** on the floor, on the bed and over the door. Selkirk "lin'd [his huts] with the Skins of Goats."

The first city appears only one generation later, when Cain **"builded a city" (Genesis 4:17)**. Whatever that city was, its builders knew how to build. They learned it from someone, and the first teacher was most likely their father.

Weighing it: Narrative — a pictured progression; the methods are worldwide traditional practice, and Cain's city is a direct statement. That the family built progressively better shelters through the first year is this study's picture. The opposing reading can fairly answer that, with no rain, a booth may have served for years. In a mild climate it may have. But privacy, storage and the coming of children all press toward walls.

In short. The booth became a hut: poles in the ground, thatch above, walls of woven sticks and clay, a hearth, and skins on the floor.

B. Bedding and the comforts of a night

Sleeping on the ground takes heat from the body all night, even in a mild climate. The first improvement to any camp is a bed raised off the ground or insulated from it: a thick pile of grass, leaves or reeds, then a frame of poles with a mattress of grass, then skins on top. A survival guide notes that the right thickness of loose dry material does as much as a sleeping bag. A pillow of rolled skin, a cover of fur: these are small things, and they decide whether a person who has worked all day actually rests at night. The psalmist knew it: **"for so he giveth his beloved sleep" (Psalm 127:2)**.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts). Practice, not Scripture.

In short. Grass first, then a frame, then skins. A good night's sleep had to be built like everything else.

C. Vessels: the quiet necessity

Without a vessel, a family must live at the water's edge and eat each meal where it grows. Every vessel loosens that chain a little. Here are the vessels possible from nothing, roughly in the order they could have come.

1. **Hands and leaves.** Cupped hands, a large leaf folded into a cone, a shell.
2. **Bark.** A sheet of bark folded at the ends and pinned with thorns or tied with cord holds water for a while and food for longer. The Lykovs, when their iron failed, made their vessels of birch bark.
3. **Gourds.** Where gourds grow, a dried, hollowed gourd is a bottle that lasts for years.
4. **Baskets.** Woven from reed, grass, bark strips or willow. A tight basket holds grain; a basket smeared with pitch holds water. Scripture shows the method twice. Moses' mother **"took for him an ark of bulrushes, and daubed it with slime and with pitch" (Exodus 2:3)**, and Noah was told to **"pitch it within and without with pitch" (Genesis 6:14)**. The Lone Woman of San Nicolas made woven water bottles coated with asphaltum. If the *bedolach* of Havilah was a resin (Chapter 2 §C), the material lay near the first river.
5. **Skin and stomach bottles.** A goat's skin, sewn closed and tied at the neck, is the classic water bottle of the East. *Chemeth* (H2573), the **"bottle of water" (Genesis 21:14)** Abraham gave Hagar, is "a skin bottle (as tied up)." **"Neither do men put new wine into old bottles" (Matthew 9:17)** refers to the same thing. An animal's stomach, cleaned and tied, is the simplest version.
6. **Pottery.** Clay shaped and fired becomes a pot that can sit on a fire, store grain safe from mice, and hold water indefinitely. It is the most valuable vessel and the hardest to make. It needs good clay, a temper of sand or grit so it does not crack, days of slow drying, and a fire hot enough and long enough. One experimenter's guide to firing in an open pit gives about 500 to 600°C, kept up "for a good 3 hours," and warns that before the method was right, "about 60% of broken pottery" was the result. Air trapped in the walls makes pots burst in the fire.

Pottery is very likely the latest of these. But there is something fitting in the thought of Adam learning it. He was the first thing a potter ever formed: *yatsar* (H3335), "to mould into a form; especially as a potter" (Genesis 2:7). Scripture keeps the picture to the end: **"we are the clay, and thou our potter; and we all are the work of thy hand" (Isaiah 64:8)**.

Cooking without a pot. Before pottery, water could still be boiled. Stones heated in the fire were dropped into water held in a skin, a tight basket, or a hide-lined pit, and the water came to a boil. This is stone boiling, used widely by peoples without pots. River stones were preferred, the stones were about fist-sized, and they cracked with use. It is slow and laborious, and it works.

Weighing it: Mixed, stated per point — toward Claim 6 (hard-won firsts). Pitch-sealed baskets, skin bottles and potters are direct statements in later Scripture and corroboration for the first year. The

order of the list is this study's estimate of difficulty. The potter's verb in Genesis 2:7 is a direct statement; its fitness for Adam's own pottery is a reflection, not an argument. The opposing reading can fairly answer that we do not know whether pottery existed before the Flood. True. Brick does appear soon after it (Genesis 11:3), and Tubal-cain's metalwork (Genesis 4:22) needed fire hot enough for any pot.

In short. Cupped hands, then bark, gourd, a pitched basket, a skin bottle, and last of all a fired pot. Each vessel freed the family a little further from the riverbank.

D. The household's quiet duties

Several needs come with any settled camp, and no survival account omits them.

- **Sanitation.** A camp by water must keep its waste away from it, or the water sickens the family. The Law later gave Israel the rule: **"thou shalt dig therewith, and shalt turn back and cover that which cometh from thee" (Deuteronomy 23:13)**. Whether Adam needed to be told, or simply knew, the principle is as old as camps.
- **Washing.** Hands, bodies and garments. Water was close; soap was not. Wood ash in water makes a weak lye that cleans.
- **Firewood.** Every day, gathered and stacked dry.
- **Water.** Every day, carried once there were vessels to carry it in.
- **Repair.** Cord breaks, baskets split, roofs leak (if not from rain, then from dew and wind), tools dull, and garments tear. A household with nothing that lasts spends a good part of every day mending.

Weighing it: Corroboration only — toward Claim 6 (hard-won firsts). Deuteronomy 23:12-13 is a direct statement under the Law, cited here as later practice. The rest is ordinary experience.

In short. Wood, water, waste, washing and mending: the daily round that every household since has known began here.

Chapter 11 — The Obstacles No Tool Could Fix

Every chapter so far has been about things that could be made. Some of the hardest parts of the first year could not be solved by making anything. This chapter names them, because a picture of the first year that leaves them out is a false picture.

A. Injury, and the first wound that would not heal by itself

Stone flakes are sharp in every direction. Knapping throws chips at the eyes. Fire burns. Thorns pierce and break off under the skin. Hides are scraped with edges that slip. Poles fall. Every survival account is full of small injuries, and one of them, Selkirk's, nearly killed him: Rogers records that after a fall from a precipice while chasing a goat, Selkirk lay senseless for about twenty-four hours.

Adam and Eve had never been hurt in Eden. Their bodies were sound, and this study has inferred that they were stronger and healed better than ours. But they were now under the sentence of dust (Genesis 3:19). A deep cut could fester. A sprain could put one of the only two workers out of action for a week. When one of them was hurt, the other had to do the work of both and care for the injured one besides.

Weighing it: Reasonable inference — toward Claim 6 (hard-won firsts). That injury came with work is ordinary experience, and that their bodies were now mortal is a direct statement. How quickly they healed, the text does not say. The opposing reading can fairly answer that bodies made for 930 years may have shrugged off most injuries. Most, perhaps. Not all; they did die.

In short. Every tool they made could hurt them, and every injury fell on a household of two.

B. Exhaustion: the meaning of sweat

"In the sweat of thy face shalt thou eat bread" (Genesis 3:19). By the end of the first month, as this study pictures it, Adam and Eve knew what that sentence meant in their own bodies. Every day began with water and wood, went on to food, and ended with whatever tool or shelter or garment was next on the list. Nothing they made lasted; everything had to be mended. There was no day off. The first sabbath command Scripture records comes with the manna, in Exodus 16.

Solomon, long after, called this the human lot: **"this sore travail hath God given to the sons of man to be exercised therewith" (Ecclesiastes 1:13)**. The first two people to bear it had known life without it.

Weighing it: Direct statement for the sentence of toil — toward Claim 6 (hard-won firsts). The daily round is a picture. The opposing reading can fairly answer that a rich land and a strong body made the work lighter than any later farmer's. Lighter, likely. Not light; the sentence says sweat.

In short. Every day began with water and wood and ended in tiredness. They were the first people to know the difference between the garden and the field.

C. Grief, shame and blame

The first year began with the worst day in human history. They had lost the garden, the tree of life, and the ordinary daily company of God walking in the cool of the day. They had heard the sentence of death. And they had already turned on each other: **"The woman whom thou gavest to be with me, she gave me of the tree" (Genesis 3:12)**, and she in turn, **"The serpent beguiled me" (Genesis 3:13)**.

A man and a woman alone in a wilderness, one of whom has blamed the other before God, have something to repair besides tools. The text does not say how they repaired it. It does say that Adam named her Eve after the sentence (Genesis 3:20), that **"Adam knew Eve his wife" (Genesis 4:1)**, and that the family went on together. Whatever was broken that day between them was mended enough for a marriage to go on and a family to grow.

Selkirk's eight months of "Melancholy, and the Terror of being left alone" were the hardest part of his ordeal, and he was guilty of nothing worse than quarrelling with his captain. Adam and Eve carried a real

guilt and a real loss. That they did not despair has one explanation in the text: they had been given a promise.

Weighing it: Reasonable inference — toward Claim 6 (hard-won firsts), on the inward cost. The blame, the naming, and the marriage that continued are direct statements. Their inward experience is inference. The opposing reading can fairly answer that the text records no grief at all, and that projecting modern feelings onto Adam is a risk. It is; this section stays close to what the words show.

In short. The hardest repair of the first year was not a roof. It was a marriage that had broken in blame on the day of the Fall.

D. The fear of death, and the promise against it

They knew now that they would die. The writer of Hebrews describes the condition this began: men **"who through fear of death were all their lifetime subject to bondage" (Hebrews 2:15)**. They had not yet seen a human death. They had seen an animal's. Every illness or injury in the first year must have raised a question they had never had to ask: is this the one?

Against that fear they had one thing: **"I will put enmity between thee and the woman, and between thy seed and her seed; it shall bruise thy head, and thou shalt bruise his heel" (Genesis 3:15)**. The library's story of the Fall calls it "the first promise of the Messiah in scripture." Eve's words at Cain's birth, **"I have gotten a man from the LORD" (Genesis 4:1)**, show that she held on to it. The library's study of Climate Change suggests she may have hoped the promised seed had already come.

Weighing it: Reasonable inference — toward Claim 3 (not abandoned), in the sense that they were not left without a word. Genesis 3:15 and 4:1 are direct statements. That the promise sustained them is a reasonable inference from Eve's words. The opposing reading can fairly answer that Eve's statement may express only thankfulness. It may; it still credits the LORD.

In short. They now feared death, and they held a promise that one of her seed would crush the one who brought it.

E. The presence that remained

One of the strongest pieces of evidence for Claim 3 lies in Cain's words, in the next chapter. When God sentenced him, Cain said: **"Behold, thou hast driven me out this day from the face of the earth; and from thy face shall I be hid" (Genesis 4:14)**. Then **"Cain went out from the presence of the LORD, and dwelt in the land of Nod, on the east of Eden" (Genesis 4:16)**.

To be driven *from* God's face and presence, Cain must have been living *in* it. Outside the garden, Adam's family still had a place where the LORD was found, where offerings were brought, and where He spoke. Cain had heard Him speak at length (4:6-7) and been questioned by Him (4:9-10). Abel offered **"By faith" (Hebrews 11:4)**, and faith answers a word. The God who had walked with them in the garden had not stopped speaking to them outside it.

That does not prove that God taught them to make fire or chip a flake. It does mean the first year was not lived in silence. If they did not know how to do something, there was Someone to ask.

Weighing it: Strong inference — toward Claim 3 (not abandoned). That God spoke to Cain is a direct statement; that the family lived in God's presence outside the garden is a strong inference from 4:14 and 4:16, since one cannot be driven from a presence one was never in. That God taught them practical skills is a reasonable inference at most, supported only by analogy (Isaiah 28:26; Exodus 31:3). The opposing reading can fairly answer that Genesis 4 describes a time some years later, not the first year. True; but nothing in the text suggests the presence began only then.

In short. Cain was driven out from God's presence, so the family had been living in it. Outside the garden, God still spoke.

F. The first birth, with no one to help

Of all the first year's possible trials, this one stands apart. Scripture does not say when Eve first conceived. It records only that after they left the garden, **"Adam knew Eve his wife; and she conceived, and bare Cain" (Genesis 4:1)**. A healthy young couple commanded to **"Be fruitful, and multiply" (Genesis 1:28)** may well have conceived within the first year. This study pictures it that way, and labels it a picture.

Consider what that meant. **"in sorrow thou shalt bring forth children" (Genesis 3:16)**. *'Etseb* (H6089), "sorrow," Strong's gives as "(painful) toil; also a pang (whether of body or mind)." No woman had ever given birth. No one had ever seen a birth. There was no midwife, no mother, no sister, no older woman who had been through it. There was Eve, there was Adam, and there was God. The cord had to be cut with whatever edge they had: a fresh stone flake or a split reed, the same tools that skinned the animals. The baby had to be wrapped in something soft, very likely a fur or a worked skin. The mother had to be fed and kept warm through the days after. From then on, a newborn in a camp of fire, water and sharp stones needed watching every hour.

Every birth since has had someone who had seen one before. The first had none. As this study pictures it, the first year's greatest danger and its greatest joy came on the same day.

Weighing it: Narrative — a pictured scene; the sentence of sorrow in childbearing and Cain's birth after the expulsion are direct statements, and the timing within the first year is a picture. The opposing reading can fairly answer that years may have passed before Cain was born. They may have; the birth was still the first, whenever it came.

In short. The first birth came with no one who had ever seen one: a mother, a father, a stone flake for the cord, and the God who had promised her seed.

Chapter 12 — A Possible Calendar

This chapter lays the whole first year out in order. It is a reconstruction, and every date in it is an estimate. Where a task has a modern time figure, it comes from the sources named in earlier chapters; where it does not, the figure is this study's own. Appendix B gives the same inventory as a table.

A. The first day

- **Morning:** Driven out. Clothed in coats of skin. Walk east, toward water.
- **Midday:** Drink from the river by hand. Eat fruit, herbs and seeds as found.
- **Afternoon:** First improvised tools: a broken branch to dig, a coat hem gathered as a pouch, perhaps the first smashed-stone edge and the first twisted fibre.
- **Night:** Under trees, in their coats, on gathered leaves and grass. No fire. Cool air, then dew.

Weighing it: Narrative — a pictured scene.

In short. Water, food, a stick and a hem for a pouch, and a dark night under the trees.

B. The first week

- **Days 2–3:** Choose a camp by the river on dry rising ground. Test riverbed stones; smash cobbles for flakes; cut reeds for a second edge. Strip bark and fibre; twist the first cord.
- **Days 3–5:** Build the first booth of poles and branches, cut and lashed with flake and cord (a day's work). Make a pointed digging stick. Gather grass for bedding.
- **Days 4–7:** First attempts at fire, by plow or drill if Adam had to work it out. Blisters. Failed embers. Damp wood. Learn which woods smoke.
- **Throughout:** Raw hands, bruised fingers, a first cut, aching backs, and the first discouragement.

Weighing it: Narrative — a pictured scene; task times from survival practice.

In short. By the end of the week: a camp, a booth, a pile of flakes, cord, a digging stick, and very likely no fire yet.

C. The first month

- **Week 2:** Fire, as this study pictures it, if not before. Then the second great task: keeping it. A hearth ring of stones; a woodpile; embers banked in ash at night.
- **Weeks 2–3:** Hafted tools: a stone lashed into a split stick as a hammer or adze. Fire-hardened digging stick. First bark trays and folded-bark vessels; first loosely woven basket.
- **Weeks 2–4:** Cooked food: roasted roots and seeds, parched grain. Begin storing dried fruit and seed off the ground.

- **Weeks 3–4:** First animal killed, as this study pictures it, for covering or offering, by Adam's own hand. Skinning with flakes and fists. The hide fleshed, stretched and worked, and probably spoiled the first time. Sinew dried for thread; bones split for awls; the stomach cleaned for a water bag.

Weighing it: Narrative — a pictured scene; that an offering was made early rests on the reasonable inference that the pattern of Genesis 3:21 was followed, not on any date in the text.

In short. By the month's end: fire kept, hafted tools, baskets, cooked food, and the first hide and the first sinew.

D. Months two to six

- **Shelter:** The booth rebuilt as a hut: poles in holes, thatch, walls of woven sticks and clay. A raised bed with skins.
- **Field:** A first plot cleared of thorns and broken with the digging stick; seed sown from wild plants; weeding and guarding begin.
- **Grain:** At the wild-grain season, a stone-bladed sickle and weeks of harvesting. Threshing with a stick, winnowing in the wind.
- **Quern:** A flat grinding stone found and carried home; its face pecked rough over hours. A hand stone to rub with. The kneeling and the aching back begin.
- **Bread:** The first ash cake on the coals.
- **Vessels:** Tighter baskets; a basket sealed with resin or pitch; a skin water bottle sewn with sinew.
- **Clothing:** A first garment of worked skin, rough but wearable, to spare the coats God made.

Weighing it: Narrative — a pictured scene; grain-harvest figures from Harlan, grinding from Molleson, as cited in Chapter 9.

In short. By midyear: a real hut, a field, a granary basket, a quern, bread on the coals, a water bottle and a second set of clothes.

E. The rest of the first year

- **Pottery:** First attempts at clay vessels dried and fired in the hearth; most crack. A few survive.
- **The first harvest** from the planted plot, and the first real store of food against the lean season.
- **Animals:** As this study pictures it, the first few gentle animals kept near the camp, the beginning of the flock Abel would keep.
- **Childbirth:** If Eve conceived early, the first birth near the year's end, with no one who had ever seen one.
- **Rhythm:** By the end of the year, a pattern: water, wood, food, fire, mending; field and flock; the offering; rest at night. The household of the next nine centuries.

Weighing it: Narrative — a pictured scene.

In short. By the year's end the camp was a home, the field had borne, the first pots had been fired, and perhaps a child had been born.

F. After the first year, to Seth

Then the record resumes. Two sons were born. **"And Abel was a keeper of sheep, but Cain was a tiller of the ground" (Genesis 4:2)**: the two works of the first year, field and flock, each now a calling. **"And in process of time" (Genesis 4:3)** both brought offerings. The flock had grown large enough to give **"the firstlings of his flock and of the fat thereof" (Genesis 4:4)**. Then the first murder, and Cain's going out from the presence of the LORD. Then, when Adam was 130 years old, **"a son in his own likeness, after his image; and called his name Seth" (Genesis 5:3)**. And Adam lived another eight hundred years after that, **"and he begat sons and daughters" (Genesis 5:4)**.

> **Genesis 4:2** *And she again bare his brother Abel. And Abel was a keeper of sheep, but Cain was a tiller of the ground.*
>
> **4:3** *And in process of time it came to pass, that Cain brought of the fruit of the ground an offering unto the LORD.*
>
> **4:4** *And Abel, he also brought of the firstlings of his flock and of the fat thereof. And the LORD had respect unto Abel and to his offering:*

Weighing it: Direct statement — toward Claim 6 (hard-won firsts) only in the sense that field and flock, the first year's two labours, became the sons' two callings. The calendar of the first year is a picture; the record from Genesis 4:1 to 5:4 is the text itself.

In short. What began as a stick and a skin in the first year became, within a generation, a farmer and a shepherd, a field and a flock.

Chapter 13 — From a Flake to a Forge

Genesis 4 lists three achievements in the seventh generation from Adam through Cain: tents and cattle, harp and organ, brass and iron. Case One in the Introduction pointed to these as evidence that Adam knew none of these things. This chapter answers that point, and concedes part of it.

A. What "father" and "instructer" mean

> **Genesis 4:20** *And Adah bare Jabal: he was the father of such as dwell in tents, and of such as have cattle.*
>
> **4:21** *And his brother's name was Jubal: he was the father of all such as handle the harp and organ.*
>
> **4:22** *And Zillah, she also bare Tubalcain, an instructer of every artificer in brass and iron: and the sister of Tubalcain was Naamah.*

Jabal is **"the father of such as dwell in tents, and of such as have cattle"**. Jubal is **"the father of all such as handle the harp and organ"**. Tubal-cain is **"an instructer of every artificer in brass and iron"**.

"Father" here is plainly figurative. Jabal did not father every herdsman. It names the founder of a way of life: the man from whom a whole guild or tradition descends. An "instructer" is a teacher of craftsmen.

This means the verses do not say no one before them ever sheltered under a skin, or blew through a reed, or saw metal. Abel kept sheep three generations before Jabal. They say these men founded the settled crafts: the tent-dwelling herdsman's life, the trained musician, the school of smiths. That is the difference between a first attempt and a tradition.

Weighing it: Reasonable inference — this answers Case One, point 3, in part, and bears on Claim 2 (full minds). That "father" names a founder of a way of life is the plain sense of the figure. That earlier generations knew the beginnings of these crafts is a reasonable inference from Abel's flock. The opposing reading can fairly answer that metalworking, at least, really is new in Genesis 4:22, and Adam almost certainly never smelted iron. That is right, and §C concedes it.

In short. "Father" and "instructer" name founders of crafts and teachers of trades, not the first people ever to touch a tent, a pipe or a piece of metal.

B. How knowledge grew when lives were long

Every skill in this study improves with practice and is passed on by teaching. In the present world a master craftsman has perhaps forty working years to learn and teach. Before the Flood, Adam lived 930 years. On the ages Scripture gives, this library's Language of Adam study shows that Adam was alive for the births of eight generations. Lamech, Noah's father, was born in the year 874 after creation, while Adam was still living.

So a skill Adam worked out in the first year could be refined for centuries by the man who first learned it, and taught directly to his great-great-great-great-grandsons. Nothing had to be rediscovered. The crafts that took the present world thousands of years to build could have grown from a smashed cobble to a forge within a few lifetimes. The text gives no ages for Cain's line, so it cannot say whether Tubal-cain lived while Adam did. It may well be that he did.

Weighing it: Strong inference — toward Claim 2 (full minds) as it bears on how fast skill accumulated. The ages are direct statements; the overlaps are arithmetic from them. That craft knowledge grew quickly because of them is a strong inference. The opposing reading can fairly answer that long life does not guarantee teaching, and that Cain's line separated from Adam early. True; and that separation is part of why the crafts appear in Cain's line under their own founders.

In short. When a craftsman lives nine hundred years and can teach his great-grandsons' grandsons, a flake can become a forge in a handful of generations.

C. What Adam did not have, and never had

It must be conceded plainly. There is no evidence that Adam, in the first year or after, worked metal. Smelting copper takes a furnace, charcoal, forced air and very high heat. Working iron takes more. These are the skills Tubal-cain is said to have taught, and there is no reason to move them back to the first

generation. Gold lay in Havilah (Genesis 2:11-12), and native gold can be beaten cold into shape, so Adam may have known it as a soft and beautiful metal. But the first year east of Eden was a year of stone, wood, fibre, bone, skin and clay.

Weighing it: Concession — this section limits the study's own claims. Case One is right that metalworking belongs to the seventh generation, not the first.

In short. The first year had no metal tools, and probably the first generation had none either. Brass and iron came with Tubal-cain.

Chapter 14 — What the Story Teaches

"For whatsoever things were written aforetime were written for our learning, that we through patience and comfort of the scriptures might have hope" (Romans 15:4). The record of Genesis 3 and 4 is short. It was not written to satisfy curiosity about fire drills. But even a reconstruction of the first year shows some things the text intends us to see.

A. Thorns, sweat, and the last Adam

The curse named thorns and sweat. The Gospels name them again.

> **Matthew 27:29** *And when they had platted a crown of thorns, they put it upon his head, and a reed in his right hand: and they bowed the knee before him, and mocked him, saying, Hail, King of the Jews!*
>
> **Luke 22:44** *And being in an agony he prayed more earnestly: and his sweat was as it were great drops of blood falling down to the ground.*

The soldiers **"platted a crown of thorns, they put it upon his head"**. In Gethsemane **"his sweat was as it were great drops of blood falling down to the ground"**. The two marks of the curse on Adam's labour, thorns and sweat, are found on the one Paul calls **"the last Adam" (1 Corinthians 15:45)**. The first Adam's sin brought thorns into the field. The last Adam wore them on His head.

He bore the curse, and He did not stay under it. **"This Jesus hath God raised up, whereof we all are witnesses. Therefore being by the right hand of God exalted, and having received of the Father the promise of the Holy Ghost, he hath shed forth this, which ye now see and hear" (Acts 2:32-33)**. By His cross, His resurrection and His ascension to God's right hand, the work was finished that makes the gift of holy spirit available, and with it the hope of a creation set free. **"Because the creature itself also shall be delivered from the bondage of corruption into the glorious liberty of the children of God" (Romans 8:21)**. At the end of the book, **"there shall be no more curse" (Revelation 22:3)**.

The thorns-and-crown connection is a picture drawn by readers. The Gospels do not say it was intended. But the curse, the cross and the promise of no more curse are all in the text.

Weighing it: Reasonable inference for the thorns and sweat as a deliberate echo; direct statement for the curse, the cross, resurrection and ascension, and the promise of no more curse. The opposing reading can fairly answer that the crown of thorns was a soldiers' mockery, not a sign. It was both, if the echo was intended; the study does not lean on it.

In short. The first Adam's field grew thorns; the last Adam wore them, rose, ascended, and will lift the curse for good.

B. Work is not the curse

It would be easy to read the first year as a story in which work itself is the punishment. That is not what Genesis says. Adam worked in the garden before the Fall: **"to dress it and to keep it" (Genesis 2:15)**. What the curse added was resistance, sorrow and sweat. Labour itself was always part of being made in God's image.

Under grace, labour is honoured, not merely endured. **"let him labour, working with his hands the thing which is good, that he may have to give to him that needeth" (Ephesians 4:28)**. **"And whatsoever ye do, do it heartily, as to the Lord, and not unto men" (Colossians 3:23)**. The man who twisted the first cord and the woman who ground the first meal were doing the work God gave them. Every believer who works with his hands stands in a line that runs back to them.

Weighing it: Direct statement — on the dignity of work before and after the Fall. The opposing reading has nothing to answer; this is not disputed.

In short. Work came before the curse. The curse made it hard. Grace makes it honourable again.

C. God's provision, then and now

The first year shows a pattern that runs through Scripture. God provided what Adam and Eve could not provide for themselves: the covering, at the cost of a life. Then He set them where they could provide the rest by their own labour: water, a rich land, the materials of every tool, and minds able to use them. He did not do for them what they could do. He did for them what they could not.

That is the same pattern Jesus taught: **"for your heavenly Father knoweth that ye have need of all these things. But seek ye first the kingdom of God, and his righteousness; and all these things shall be added unto you" (Matthew 6:32-33)**. And Paul: **"But my God shall supply all your need according to his riches in glory by Christ Jesus" (Philippians 4:19)**. The supply does not always come as a finished coat. Often it comes as a riverbed full of stones and a mind able to see what a stone is good for.

Weighing it: Reasonable inference — toward Claim 3 (not abandoned), drawn as an application. The provisions named are direct statements; the pattern is this study's reading of them. The opposing reading can fairly answer that the first year's hardships show God's judgment as much as His provision. They show both, and the study says so.

In short. God gave them what they could not make, and the means to make the rest. He still works that way.

D. What would change this study's mind

This study holds six claims at different weights. These are the findings that would move them.

1. **On Claim 1 (empty hands):** a text showing that God gave Adam a tool, a fire or seed on leaving the garden. None is known.
2. **On Claim 3 (not abandoned):** a text showing that God ceased to speak to the family between the expulsion and Genesis 4. Genesis 4:14 and 4:16 point the other way.
3. **On Claim 4 (plants, not flesh):** a text before Genesis 9 that grants or approves eating flesh. Abel's flock and his offering of the fat are the closest, and neither does it.
4. **On Claim 5 (cursed, not ruined):** clear evidence that the pre-Flood world had rain, storms and harsh seasons from the beginning. That would make shelter and fire far more urgent, and the first year far harder than pictured here.
5. **On the absence of good flint (Chapter 2 §C):** evidence that good tool-stone was common at the surface before the Flood. That would make the first edge easier, and this study would be glad to say so.

None of these is known to exist in the text. If one is found, the study will be revised.

Weighing it: Method, not argument.

In short. Five findings would change this study, and anyone can go and look for them.

E. The main takeaway

They walked out of the garden with nothing in their hands. They did not walk out with nothing. They had coats made by God, minds that had named the living world, a land still rich, a river, each other, and a promise. Everything else they made: the first edge from a smashed stone, the first cord from bark, the first fire from wood rubbed on wood, the first hide stripped by hand, the first bread from a flat stone and the coals. Each one came with failure and blood and sweat, exactly as the sentence said. And by the end of their first year, as this study pictures it, they had made a home in a cursed world. They had been taught, and they would teach their children, the way back to God by a substitute's life.

That is a story for our learning. The curse is real, and so is the work. So is the God who clothed the first sinners with His own hand and did not stop speaking to them outside the gate.

Weighing it: Narrative — a summary of the whole study, resting on the weights stated in each chapter.

In short. Empty hands, full minds, hard work and a faithful God: that was the first year, and it is the pattern of every year since.

Appendix A — The Weight of Every Argument in This Study

Every argument made in the body of this study, with its rating, its direction, and what the opposing reading can fairly answer. Ratings use the five-step scale defined in Introduction §B. Pictured scenes (*Narrative*) are listed only where they carry a point. This is the first version of the study, so no argument has yet been withdrawn or demoted; a later version must list any that are, marked as such.

#	Argument	Where	Weight and direction	What the other reading fairly answers
1	They knew how, and lacked only the means	Intro C	Reasonable inference, toward Claim 2	Sewing leaves is not making fire; no craft instruction is recorded
2	They left with the coats and nothing else	Ch1 A	Strong inference, toward Claim 1	Scripture often omits practical details
3	They carried five kinds of knowledge: naming, plants, sewing, having watched a hide taken, speech	Ch1 B	Strong inference, toward Claim 2	Knowledge is not skill; the fig-leaf sewing may have been crude
4	Their bodies were sound and strong, and now mortal	Ch1 C	Reasonable inference, toward Claims 2 and 6	Long life is not the same as strength
5	The first camp was by running water	Ch2 A	Strong inference, toward Claim 5	The gate need not have been near a river; the mist gave springs anyway
6	A mist and no rain made shelter less urgent	Ch2 B	Reasonable inference, toward Claim 5	Genesis 2:5 describes the time before man was made
7	A rainless world had little lightning, so fire had to be made or given	Ch2 B	Reasonable inference (weak step), toward Claim 6	Volcanic or other natural fire was possible
8	Stone, gum or resin, and clay were present; good flint may have been scarce	Ch2 C	Mixed: direct statement for stone and clay; inference for flint	If flint was abundant, the first edge was easy
9	Thorns gave the first awls	Ch2 D	Narrative	A homiletic touch, and no more
10	Animals did not yet fear man, and could be approached	Ch2 E	Reasonable inference, toward Claim 5	Genesis 9:2 may confirm a fear that began at the Fall
11	Castaway records show the scale of the work	Ch3 A	Corroboration only, toward Claim 6	Every castaway was handicapped in ways Adam was not
12	Seven lessons from the castaway record	Ch3 B	Corroboration only, toward Claim 6	Six lives are a small base for a generalisation
13	Adam's case was harder in two ways and easier in two	Ch3 C	Reasonable inference, toward Claims 2, 5 and 6	"No example" is softened if God taught him
14	Bare hands can break, strip, twist, pull and carry	Ch4 A	Corroboration only, toward Claim 6	Obvious; listed as the true starting point

#	Argument	Where	Weight and direction	What the other reading fairly answers
15	The first edge needed no skill: smashed stone, reed, shell, bone	Ch4 B	Mixed: stone knives a direct statement in later Scripture; methods corroboration only	A man who had never seen a flake might not think to smash a cobble
16	Cord came early, twisted by hand	Ch4 C	Reasonable inference, toward Claims 2 and 6	No cord is mentioned before the Flood
17	The digging stick was the first tilling tool	Ch4 D	Reasonable inference, toward Claim 6	God might have provided a tool unrecorded
18	Fire mattered even without meat, including for fertility	Ch7 A	Mixed: bread a direct statement; raw-food data corroboration only	Bodies made for 930 years may have thrived on raw food
19	Fire can be made from nothing by plow, drill or percussion	Ch7 B	Corroboration only, neither way	Describes what Adam could do, not what he did
20	The first fire took days or weeks, less if God taught him	Ch7 C	Reasonable inference, toward Claim 6	He may have worked it out on the first day, or been shown it in the garden
21	Fire, once had, was kept	Ch7 D	Corroboration only, toward Claim 6	Leviticus 6:13 concerns the altar, not a household
22	Flesh was not permitted as food before the Flood	Ch8 A	Strong inference, toward Claim 4	Abel's flock and his handling of the fat show familiarity with animals
23	Adam's household kept to the plant diet	Ch8 A	Reasonable inference, toward Claim 4	Some before the Flood surely ate flesh
24	Animals were killed for offering and covering	Ch8 B	Reasonable inference, toward Claims 4 and 6	The first skins may have come from animals already dead
25	A hide comes off with a few cuts and the fists	Ch8 C	Corroboration only, toward Claim 6	First attempts tear hides badly
26	A large animal is divided at the joints with many flakes	Ch8 D	Corroboration only, toward Claim 6	Experimenters already knew anatomy
27	A hide becomes a garment only after days of work	Ch8 E	Corroboration only for method; reasonable inference that it was done in the first year	God's coats may have lasted many years
28	Every part of the animal was used	Ch8 F	Corroboration only	None of it is recorded before the Flood
29	Seasonal gaps made storage necessary	Ch9 A	Reasonable inference, toward Claims 5 and 6	The pre-Flood climate may have kept something always ripe
30	A first field was opened within the first year	Ch9 B	Direct statement for the command; reasonable inference for the timing	Tilling may have begun only after years of gathering
31	Wild grain could feed a family for a year in weeks	Ch9 C	Corroboration only, toward Claim 5	Many cereals are products of later cultivation

#	Argument	Where	Weight and direction	What the other reading fairly answers
32	Grain became bread only by threshing, winnowing, grinding and baking	Ch9 D	Mixed: bread a direct statement; the steps corroboration	If *lechem* means "food," bread is not required
33	The shelter improved from booth to hut	Ch10 A	Narrative	With no rain, a booth may have served for years
34	Vessels came in order, pottery last	Ch10 C	Mixed: later Scripture direct; order this study's estimate	Pottery before the Flood is not attested
35	Injury was a constant risk	Ch11 A	Reasonable inference, toward Claim 6	Long-lived bodies may have healed fast
36	Daily toil was the meaning of sweat	Ch11 B	Direct statement, toward Claim 6	A rich land made the work lighter than later
37	Grief and blame had to be repaired	Ch11 C	Reasonable inference, toward Claim 6	The text records no grief; projecting feelings is a risk
38	The promise of the seed sustained them	Ch11 D	Reasonable inference, toward Claim 3	Eve's words may express only thanks
39	The family lived in God's presence outside the garden	Ch11 E	Strong inference, toward Claim 3	Genesis 4 describes a later time
40	God taught them practical skills	Ch7 C, Ch11 E	Reasonable inference at most; supported only by analogy	No such teaching is recorded
41	The first birth had no one to help	Ch11 F	Narrative	Years may have passed before Cain was born
42	"Father" and "instructer" name founders of crafts, not first users	Ch13 A	Reasonable inference; answers Case One point 3 in part	Metalworking really is new in Genesis 4:22
43	Long lives made skill grow fast	Ch13 B	Strong inference, toward Claim 2	Long life does not guarantee teaching; Cain's line separated early
44	There was no metal in the first year	Ch13 C	Concession	—
45	Thorns and sweat return in the Passion	Ch14 A	Reasonable inference	The crown of thorns was a soldiers' mockery
46	Work came before the curse	Ch14 B	Direct statement	Not disputed
47	God gave what they could not make, and the means to make the rest	Ch14 C	Reasonable inference, toward Claim 3	The hardships show judgment as much as provision

Appendix B — The Inventory: Every Necessity in Order

Each item a household with nothing must make, in the order this study pictures it being needed. "First working one" is the time to a first usable version for a capable beginner, drawn from the sources in Chapters 3 to 10. Where no source gives a figure, the estimate is this study's own and is marked *est.* All figures are for modern people; they are guides to scale, not claims about Adam.

#	Necessity	When needed	First made from	First working one	Chief difficulties
1	Drinking water	Day 1	River, by hand	Immediate	No vessel; must live at the water's edge
2	Food	Day 1	Fruit, herbs, seeds	Immediate	Searching; thorns; unfamiliar plants
3	A carrying pouch	Day 1	Coat hem, large leaves	Minutes (est.)	Holds little; ties up the garment
4	A digging stick	Day 1–3	Broken branch, point rubbed on stone	An hour (est.)	Point blunts; later fire-hardened
5	A cutting edge	Day 1–3	Smashed cobble, split reed, shell	Minutes once found	Finding stone that breaks clean; cut fingers
6	Cord	Day 2–4	Inner bark, plant fibre, twisted by hand	A metre in minutes with practice	Wrong fibres rot or snap
7	Bedding	Day 1–7	Leaves and grass, then a frame and skins	An hour (est.)	Damp from dew; cold from the ground
8	A first shelter (booth)	Day 3–7	Poles, branches, bark, grass	About a day; debris hut 2–4 hours	Wind; collapse; poor siting
9	Fire	Week 1–2	Fire plow, hand drill or bow drill; or pyrite struck on stone	Days to a week for a learner; under 2 minutes for the skilled	Wrong wood; damp wood; blisters; dying embers
10	Fire-keeping	From the first fire	Hearth ring, banked ash, ember carrier	Same day	Must be fed and watched always
11	Hafted tools (hammer, adze, hoe)	Weeks 2–3	Stone lashed into split stick	Hours (est.)	Lashing loosens; handle splits
12	Trays and bark vessels	Weeks 2–3	Folded bark pinned with thorns	An hour (est.)	Leak; cannot go on the fire
13	Baskets	Weeks 2–4	Reed, grass, bark strips, willow	A day for a first loose one (est.)	Slow; loose weave spills

#	Necessity	When needed	First made from	First working one	Chief difficulties
14	A skin, by an animal's death	Weeks 3–4	Animal for offering or covering; or one already dead	An hour or two to remove the hide	The first killing; a dull edge; torn hides
15	Sinew thread and bone awls	Weeks 3–4	Back and leg tendons; split bone rubbed on sandstone	A day to dry sinew (est.)	Splitting fine strands
16	Soft leather	Month 1–2	Fleshing, dressing, 3–8 hours of softening, smoking	Two to three days	First hides stiff or ruined
17	A water bag	Month 1–2	Cleaned stomach; sewn skin	A day (est.)	Leaks at seams
18	Stored food	Month 1 on	Drying in sun; baskets off the ground	Ongoing	Mice, birds, damp
19	A field	Months 2–3	Digging stick, hoe; wild seed	Weeks to clear; months to harvest	Thorns; weeds; birds; the long wait
20	A sickle	At grain season	Wooden handle set with stone flakes	Hours (est.)	Setting flakes firmly
21	Threshing and winnowing	At grain season	Stick, hard ground or skin; bark tray and wind	Same day	Need a breeze; loss of grain
22	A quern	At grain season	Flat stone and hand stone, pecked rough	Hours to a day	Finding and carrying the stone; hours of kneeling daily
23	Bread	At grain season	Ash cake on hot stones or coals	Minutes once there is meal and fire	Burning; grit in the teeth
24	A better house	Months 2–6	Poles in the ground, thatch, wattle and daub	Weeks (est.)	Labour; clay that cracks
25	A sealed basket	Months 2–6	Basket coated with resin or pitch	A day once resin is found (est.)	Finding pitch or resin
26	Stone boiling	Once there is fire and a vessel	Hot river stones dropped in a skin or basket	Hours	Cracking stones; slow
27	A worked-skin garment	Months 3–6	Soft leather sewn with sinew	Days	Measuring, cutting, sewing by hand
28	Fired pottery	Months 6–12	Clay, temper, days of drying, a pit or hearth fire held about 3 hours at 500–600°C	Weeks of trials	Cracking, bursting; many failures
29	A flock	Year 1 on	Gentle animals kept near camp	Gradual	Grazing, guarding, fencing

#	Necessity	When needed	First made from	First working one	Chief difficulties
30	Help in childbirth	Whenever the first child came	Each other, a fresh flake for the cord, soft skins	—	No one had ever seen a birth

Appendix C — The Castaway Record

The survival accounts used in this study, side by side, with what each person started with. Not one began with nothing. That is the main reason none of them can show how Adam began; they can show only how long the work took once begun.

Person	Where and when	Alone?	Started with	What they made or did	Source
Alexander Selkirk	Más a Tierra, Juan Fernández Islands, 1704–1709 (4 years 4 months)	Alone	Musket, powder, hatchet, knife, kettle, Bible, bedding, clothes	Friction fire with pimento wood; two huts of pimento wood, thatched and lined with goatskins; goatskin clothes sewn with a nail; knife from barrel hoops; caught goats on foot	Woodes Rogers, *A Cruising Voyage Round the World* (1712), as quoted; *Wikipedia*, "Alexander Selkirk"
The Lone Woman (Juana Maria)	San Nicolas Island, California, 1835–1853 (about 18 years)	Alone	A lifetime of her people's crafts	Hut partly of whale bone; cave dwelling; cormorant-feather and duck-skin clothing sewn with seal sinew; bone needles; sandstone abraders; asphaltum-coated woven water bottles	*Wikipedia*, "Juana Maria" (citing Nidever and the archaeological finds)
The Lykov family	Siberian taiga, 1936–1978 (42 years)	Family of six	Some possessions, seeds, parts of a spinning wheel and loom, iron kettles	Birch-bark vessels after the kettles rusted; hemp cloth grown from seed; birch-bark galoshes; survived the 1961 famine; rebuilt rye from one grain	Mike Dash, "Lost in the Taiga" (2013)
Ishi	California hills; came out in 1911	Last survivor of a small group	A lifetime of Yahi craft	Fire by drill in under two minutes; an arrowhead in half an hour; skinned rabbits by inflating the skin	Saxton Pope, *Hunting With Ishi*
Ötzi, the Iceman	The Alps; found in 1991	A traveller	Full Copper Age equipment	Embers carried in a leaf-lined birch-bark container; tinder fungus; flint dagger; clothes mended with grass	South Tyrol Museum of Archaeology, "Equipment"
John Plant (*Primitive Technology*)	Australian bush, modern	Alone, by choice	Modern education; no metal tools	Stone axe; fire sticks; kiln; tiled-roof hut with underfloor heating in 102 days	*Primitive Technology* blog, 5 September 2015

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Sources Consulted

Primary text. The King James Version is the base text throughout. Every verse block was generated by machine from the 1769 text of the King James Version, in the open-source JSON edition of the aruljohn *Bible-kjv* project, and every inline quotation was checked against the same text.

Hebrew. The Strong's Hebrew Concordance (KJV) in this library's Sources folder supplied every Strong's number and gloss quoted: *kuttoneth* (H3801), *chagowr* (H2290), *taphar* (H8609), *'abad* (H5647), *'itstsabown* (H6093), *'etseb* (H6089), *ze'ah* (H2188), *qots* (H6975), *dardar* (H1863), *shoham* (H7718), *bedolach* (H916), *'aphar* (H6083), *yatsar* (H3335), *lahat* (H3858), *tsor* (H6864), *tsur* (H6697), *chereb* (H2719), *lechem* (H3899), *'uggah* (H5692), *'olah* (H5930), *chemeth* (H2573), *'eseb* (H6212) and *mo'ed* (H4150).

This library's own studies. *Climate Change: A Study From Creation to New Creation* (pod-V9), for the pre-Flood world: the mist, no animal death before the Fall, a land cursed but not ruined, the long lifespans, Adam's knowledge, and the reading of Genesis 6. *The Language of Adam* (pod-V1), for speech as given, the passing on of instruction by word, and the overlap of generations. The Bible Stories Anthology's *Creation and the Garden*, *The Fall and the First Promise* and *Cain and Abel*, for the plant diet before the Flood, the coats of skins as the first sacrifice, and the tradition of fire on Abel's offering. `Research-Method.md` for the governing method and `Book-Formatting-Standard.md` for the format of this deliverable.

Castaway and survival accounts. Woodes Rogers, *A Cruising Voyage Round the World* (1712), on Alexander Selkirk, as quoted by Mark Jardine, "The Man Who … Missed the Union" (2016), and summarised in *Wikipedia*, "Alexander Selkirk"; Selkirk's fall from a precipice as reported from Rogers in John Howell's 1841 narrative (Hermitary). *Wikipedia*, "Juana Maria," on the Lone Woman of San Nicolas Island. Mike Dash, "Lost in the Taiga" (2013), on the Lykov family. Saxton Pope, *Hunting With Ishi — The Last Yana Indian* (eScholarship). South Tyrol Museum of Archaeology, "Equipment," on Ötzi; Penn Museum, *Expedition*, "Ötzi the Iceman." John Plant, *Primitive Technology*, "Building a hut with a kiln-fired tiled roof, underfloor heating and mud pile walls" (2015).

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Survival practice. Woodland Ways, "How to learn Hand Drill Friction Fire"; Salt and Prepper, "Debris Hut"; SkillCult, "Skinning Deer and Goats by Fisting"; "How to brain tan a deer hide the old-fashioned way"; Wildwood Survival, "Pitfiring Earthenware."

Nutrition. Koebnick and others, "Consequences of a Long-Term Raw Food Diet on Body Weight and Menstruation: Results of a Questionnaire Survey" (*Annals of Nutrition and Metabolism*, 1999), the Giessen Raw Food Study.

What was not used, and how the modern sources were used. Several of the archaeological sources date their material within a long-age framework. This library does not follow that framework, and only their observations about tools, times and methods are used here. No source was used to say what Adam did; they are used to show what a task requires.

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Genesis 1:28 Ch 7A, Ch 11F

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