

ENGLISH LEARNING FOR CURIOUS MINDS



Episode #622
A Short History of Fire
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Transcript

[00:00:05] Hello, hello, hello, and welcome to English Learning for Curious Minds, by Leonardo English, the show where you can listen to fascinating stories and learn weird and wonderful things about the world at the same time as improving your English.

[00:00:21] I'm Alastair Budge, and today we are going to be talking about the history of fire.

[00:00:28] We humans are the only animal on Earth that has truly [mastered¹](#) fire: that has learned to keep it, make it, cook with it, and build entire civilisations around it.

[00:00:41] And today, we are going to [trace²](#) that story. How fire changed our bodies, our minds, the way we interact with one another, and made the modern world possible.

[00:00:53] OK then, let's not waste a minute and get right into it.

[00:01:00] There is a cave in South Africa called Wonderwerk.

[00:01:05] The name means "miracle" in Afrikaans.

¹ learned to control extremely well

² follow the development or history of it

A Short History of Fire

[00:01:10] This cave contains up to 7 metres of [sediment](#)³, [deposits](#)⁴, layers that had built up, millimetre by millimetre, over hundreds of thousands of years. Like a huge tower of human, and even pre-human, history.

[00:01:29] About one metre down, in a layer dating to roughly one million years ago, researchers from Boston University found [charred](#)⁵ plant material and burned bone [fragments](#)⁶.

[00:01:45] Both had been heated to temperatures of around 500 degrees Celsius, almost 1,000 degrees Fahrenheit.

[00:01:55] This was not a [wildfire](#)⁷ that [swept](#)⁸ through. The burning had happened inside the cave, repeatedly, over time, in the same spot.

[00:02:06] It was the oldest known fireplace in the world.

[00:02:12] The creatures who most probably made this fire were called Homo erectus.

³ material like dirt or sand that builds up over time

⁴ layers of material left over time

⁵ partly burned and blackened by fire

⁶ small pieces

⁷ a large uncontrolled fire in nature

⁸ moved quickly across the area

A Short History of Fire

[00:02:17] That name, as the Latin scholars among you will know, simply means [upright⁹](#) human. They were not Homo sapiens, not quite us. Their brains were smaller, their bones heavier, their foreheads thick and heavy.

[00:02:35] But they walked on two legs, they made stone tools, and, importantly for what we're talking about today, they used fire.

[00:02:45] Now, nobody knows exactly when the first of our ancestors started using fire; one million years ago is simply as far back as the reliable evidence goes.

[00:02:57] What we do know is that for a very long period, our ancestors were not making fire. They were finding it.

[00:03:07] Fire breaks out in the wild, as it always has and always will.

[00:03:12] Lightning strikes a dry tree. A lava flow ignites grassland. Dry grass catches in the heat of a long summer.

[00:03:23] And almost every animal on Earth, when this happens, does the same thing.

[00:03:30] It runs. Fire is scary. It's hot. [Instinct kicks in¹⁰](#), and even the fiercest [predator¹¹](#) will run in the opposite direction.

⁹ standing on two legs; not bent over

¹⁰ a natural reaction starts automatically

¹¹ an animal that hunts and eats other animals

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[00:03:42] Homo erectus did something different. At some point, they approached.

[00:03:49] Perhaps they picked up a burning branch and carried it back. Perhaps they found **smouldering**¹² wood and kept it alive. However it happened, the crucial step was this: they stopped merely fleeing fire and started managing it.

[00:04:08] Of course, this wasn't a simple task. As any **seasoned**¹³ camper will know, **tending**¹⁴ a fire and keeping it **alight**¹⁵ requires real effort. You have to find wood to burn, carry it, arrange it properly, and protect the flame from wind and rain.

[00:04:28] So keeping a fire alive required attention, planning, and cooperation.

[00:04:35] It required something that looks, in other words, very much like care.

[00:04:41] And as for why Homo erectus would want to have a fire, well, there are numerous immediate benefits. Warmth through cold nights. Light to see by. And perhaps most importantly, safety.

¹² burning slowly with smoke but little flame

¹³ experienced and skilled

¹⁴ looking after and taking care of it

¹⁵ burning; on fire

A Short History of Fire

[00:04:57] A fire keeps large predators away. And in a world where leopards, lions, hyenas, and sabre-toothed cats were a constant [menace](#)¹⁶, especially in the darkness of night, fire was a wonderful [deterrent](#)¹⁷.

[00:05:15] But fire changed humans in ways that go far deeper than warmth and safety.

[00:05:23] In 2009, a Harvard professor named Richard Wrangham published a book called *Catching Fire: How Cooking Made Us Human*.

[00:05:36] The argument, as you might guess from the title, is that cooking food rather than eating it raw is one of the fundamental differences between humans and every other animal.

[00:05:51] And the consequences go far deeper than simply getting to enjoy a hotter, and dare I say, tastier meal.

[00:06:00] His argument is this. Raw food is hard to [digest](#)¹⁸. Your body has to work extremely hard to [extract](#)¹⁹ calories from uncooked meats, roots, and plant material.

[00:06:17] Cooking changes all of that.

¹⁶ danger or threat

¹⁷ something that stopped animals

¹⁸ break down inside the body

¹⁹ take out or get

A Short History of Fire

[00:06:20] It breaks down the [cellular](#)²⁰ structure of food before it even enters your mouth. Proteins [unravel](#)²¹. [Starches](#)²² become easier to absorb. Tough [fibres](#)²³ soften. And cooked food releases anywhere between 30 and 100 percent more calories than the same food eaten raw.

[00:06:45] So if you are getting more energy from the same amount of food, you do not need such a large, energy-hungry digestive system to process it. And the energy you are no longer spending on digestion becomes available for something else.

[00:07:05] Wrangham's argument is that this [surplus](#)²⁴ energy went to the brain.

[00:07:11] He points to Homo erectus, who appeared roughly 1.8 million years ago.

[00:07:18] Earlier [hominins](#)²⁵, like Australopithecus, had large [guts](#)²⁶, small brains, and big teeth suited to chewing tough, raw food.

²⁰ relating to the tiny parts that make up living things

²¹ come apart or open up

²² substances in foods like potatoes, rice, and bread that give energy

²³ tough parts of plants

²⁴ more than what was needed

²⁵ early humans and their close ancestors

²⁶ the organs that digest food

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[00:07:31] Homo erectus had dramatically smaller teeth and a smaller gut.

[00:07:38] But a [noticeably](#)²⁷ larger brain. This shift happens at roughly the time we see the first signs of fire use.

[00:07:51] Wrangham's claim is that this is not a coincidence. Cooking made this transition possible. Perhaps cooking drove it.

[00:08:02] Now, not everyone agrees.

[00:08:05] Some researchers argue the energy came from raw meat and bone marrow. Their argument is that eating more animal protein, not cooking, explains the [anatomical](#)²⁸ changes.

[00:08:18] But here is what is not [in dispute](#)²⁹: we are the only animal on earth that cooks its food.

[00:08:27] Chimpanzees are our closest living relatives. They share roughly 98 percent of our DNA. And they have never, in any documented setting, cooked anything.

[00:08:41] And it is not because they don't want to.

²⁷ in a way that is easy to see or notice

²⁸ relating to the structure of the body

²⁹ not agreed on; argued about

A Short History of Fire

[00:08:44] In a series of experiments by researchers at Harvard and Yale, chimpanzees were given a choice between a raw piece of food and a cooked one.

[00:08:57] All 29 chimpanzees in the study chose the cooked option. And more [strikingly](#)³⁰: when the chimps were shown that they could place a raw piece of food into a device that would produce a cooked version afterwards, they were willing to wait.

[00:09:17] So even though they wanted to eat, they held back from eating the raw food, specifically in order to get the cooked version.

[00:09:28] So chimpanzees understand the transformation, from raw to cooked food. They prefer the result. They will even [delay gratification](#)³¹ to get it.

[00:09:41] They just don't know how to use or make fire.

[00:09:46] Humans do. And that single difference may be the most [consequential](#)³² in the entire history of life on Earth.

[00:09:56] Now, there is one more physical consequence of fire we need to talk about. It concerns sleep.

³⁰ in a very clear and surprising way

³¹ wait for a better reward later instead of taking a smaller reward now

³² very important because it had major effects

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[00:10:05] Before fire, our ancestors almost certainly slept in trees, as most great apes still do.

[00:10:13] Trees are safer from predators.

[00:10:16] But you don't have to have slept in many trees yourself to know that trees are not particularly comfortable places to spend the night.

[00:10:25] You wake up frequently, you sleep lightly and uncomfortably.

[00:10:31] Chimpanzees sleep around ten hours a night because their sleep is so frequently disturbed.

[00:10:38] Humans sleep seven to eight hours. And we sleep deeply.

[00:10:45] And to bring this back to fire, with a fire burning through the night, you could sleep on the ground and be safe. And because you felt safe, and you were safe, you could sleep properly. The deep, dreaming sleep that [consolidates](#)³³ memory, repairs the body, and allows the brain to do its work.

[00:11:09] The depth of human sleep, tied to memory, learning, creativity, and health, may itself be, [in part](#)³⁴, a consequence of learning to manage fire.

³³ makes stronger and more stable

³⁴ partly; not completely

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[00:11:24] And by moving our beds from the branches to the ground, we created a new physical space: the circle.

[00:11:34] And it was in this circle, protected by the flames, that the second great transformation happened: we started to talk in a different way.

[00:11:47] An [anthropologist](#)³⁵ at the University of Utah named Polly Wiessner spent four decades studying a group of Kalahari Desert bushmen in southern Africa.

[00:12:00] This group is one of the oldest-surviving [hunter-gatherer](#)³⁶ cultures on earth. She analysed hundreds of their conversations. And she found a very clear pattern.

[00:12:14] During the day, conversations were mostly practical. Economic decisions. Disputes. Complaints. Discussions about food and hunting.

[00:12:26] Around the fire at night, the topics were very different.

[00:12:31] Storytelling [accounted for](#)³⁷ 81 percent of all conversations, compared to only 6 percent during the day.

³⁵ a scientist who studied people and human societies

³⁶ a person who lives by hunting animals and collecting wild plants

³⁷ made up or formed

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[00:12:41] At night, by firelight, people told stories about distant lands, about people they had never met, about ancestors and spirits and the distant past. They [speculated](#)³⁸ about things they could not see. They laughed. They imagined.

[00:13:01] Many researchers argue this is where human language, storytelling, and imagination really grew, around the calm of the fire.

[00:13:13] Stories [bind](#)³⁹ communities. They carry knowledge across generations. They let us think about distant places and people, past events, and futures that have not yet happened.

[00:13:28] And the fire restructured domestic life in practical ways too.

[00:13:34] Cooking with fire requires different tasks: collecting the wood, starting the fire, tending the fire, doing the cooking, and, of course, someone still needs to go and hunt the unfortunate animal everyone is going to eat.

[00:13:49] This requires co-operation, [specialisation](#)⁴⁰, and [division of labour](#)⁴¹. Often, though not always, cooking became associated more with women, and hunting more with men.

³⁸ guessed or thought about something without knowing for sure

³⁹ bring together and connect

⁴⁰ focusing on one particular task or skill

⁴¹ sharing different jobs between different people

A Short History of Fire

[00:14:04] And Wrangham, in the book I mentioned earlier, makes another, more [provocative](#)⁴² suggestion.

[00:14:12] He argues that cooking may have been one of the early drivers of [pair bonding](#)⁴³, of a more stable relationship between a man and a woman, based less on romantic love than on [mutual advantage](#)⁴⁴.

[00:14:29] Imagine a woman [crouching](#)⁴⁵ over a fire, with cooked food in front of her. That food was valuable. It had taken time to prepare. And because it was soft, warm, and ready to eat, it could also be stolen.

[00:14:48] Wrangham's argument is that a man could provide protection, especially from other members of the group, in exchange for a share of that cooked food.

[00:15:01] Over time, he suggests, this practical arrangement may have helped shape something closer to human pair bonding: not marriage as we understand it today, but an early form of domestic partnership.

⁴² likely to make people think, argue, or react strongly

⁴³ forming a close relationship between two people

⁴⁴ a situation that helped both sides

⁴⁵ bending low close to the ground

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[00:15:18] It is, I should stress, simply a theory, but an interesting one nonetheless, that the first human couples got together and stayed together in order to protect their dinner.

[00:15:32] So, for hundreds of thousands of years, then, early humans found fire, kept it, and built their lives around it.

[00:15:41] But, importantly, they were entirely [at the mercy of⁴⁶](#) finding it.

[00:15:48] If the flame went out, that was it. You had to wait for lightning to strike again, or travel far to find fire somewhere else. The warmth, the safety, the cooked food, the community — all of it depended on a flame that someone, somewhere, had to have been lucky enough to find.

[00:16:11] That dependence is what changed around 400,000 years ago.

[00:16:17] We stopped waiting for the lightning, and learned how to make fire ourselves.

⁴⁶ completely controlled by it and unable to change it

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[00:16:24] First, it's thought it was through [percussion](#)⁴⁷, striking pieces of [flint](#)⁴⁸ against iron [pyrite](#)⁴⁹ to create sparks that could catch in a small bundle of [tinder](#)⁵⁰: small, dry pieces of wood or leaves.

[00:16:39] Later came the [friction](#)⁵¹ method: spinning a dry wooden rod against a flat piece of softer wood until there's enough heat built up to set dry leaves or wood alight.

[00:16:53] There is of course no way to know what it felt like when the first person, wherever he or she was, figured out how to create fire.

[00:17:03] But it must have felt like magic, like you had just figured out the secret to one of the world's greatest puzzles.

[00:17:11] And they had, really.

[00:17:14] But for most of the million-year story of fire, the fuel was simple. It was wood, for the most part.

⁴⁷ making sparks by hitting two hard objects together

⁴⁸ a hard stone that can make sparks

⁴⁹ a shiny mineral that can produce sparks when struck

⁵⁰ dry material that catches fire easily

⁵¹ heat made when two things rub together

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[00:17:24] Sometimes dried grass, [peat](#)⁵², charcoal, or animal [dung](#)⁵³. Things that had grown under the sun, stored its energy, and released it again as heat and light when they burned.

[00:17:38] And it was enough. Enough to build every civilisation before roughly 300 years ago.

[00:17:46] The ancient Egyptians, classical Greece, the Roman Empire, medieval Europe: all of it [ran on](#)⁵⁴ burning wood and charcoal. You could [smelt](#)⁵⁵ metals, fire pottery, heat homes, cook food, and light streets.

[00:18:04] Then, gradually, the wood started to run out.

[00:18:10] In Britain, by the 17th century, forests had been [stripped](#)⁵⁶.

[00:18:16] Wood for building ships, for building houses, for heating: all of it was [scarce](#)⁵⁷ and getting increasingly expensive.

⁵² partly decayed plant material used as fuel

⁵³ animal waste

⁵⁴ used as its main source of power or energy

⁵⁵ heat and melt metal from rock

⁵⁶ removed almost completely

⁵⁷ not enough; hard to find

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[00:18:26] But people still needed fire, or rather, the heat that fire gave out.

[00:18:32] The answer was right [under their noses](#)⁵⁸, or to be precise, under their feet: coal, and later, oil.

[00:18:42] Now, the existence of coal had been common knowledge for centuries. It washed up on the beach, and you could collect it in small quantities from hillsides, or from relatively close to the surface. And people in northeast England and South Wales had been burning it in small quantities for generations.

[00:19:06] But it was regarded as a poor [substitute](#)⁵⁹: dirtier, smellier, and compared to wood, which you just got from trees, it was much harder to get at in any sort of useful quantity.

[00:19:20] But there wasn't an alternative; England was running out of trees, it was running out of wood.

[00:19:29] And this need, this [desperation](#)⁶⁰, was the [first domino](#)⁶¹ in the Industrial Revolution, and you could even argue every technological development that you and I benefit from today.

⁵⁸ very close to them and easy to find

⁵⁹ something used instead of wood

⁶⁰ a strong feeling of needing it badly

⁶¹ the first event that caused many other events to happen

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[00:19:44] In 1709, a man named Abraham Darby worked out how to make iron using [coke](#)⁶², a [purified](#)⁶³, high-carbon form of coal.

[00:19:59] This was the first time someone had managed to make iron with coal, rather than charcoal, burnt wood.

[00:20:07] And this had considerable advantages.

[00:20:11] Using coal was much cheaper. It turned iron, and later steel, from scarce, expensive materials into industrial [commodities](#)⁶⁴.

[00:20:23] And more importantly, coal appeared to be virtually [limitless](#)⁶⁵.

[00:20:30] Before this, iron production was limited by the rate at which forests could grow back.

[00:20:37] After Darby, it was limited only by how fast you could dig.

[00:20:43] And Britain dug very fast. In 1700, roughly five-sixths of all coal mined in the entire world came from Britain.

⁶² a fuel made from coal

⁶³ cleaned by removing unwanted parts

⁶⁴ basic goods that were bought and sold

⁶⁵ without an end or clear limit

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[00:20:56] Annual iron [output](#)⁶⁶, which stood at around 2,500 tons in the early 1700s, reached 2.5 million tons by 1850. A [thousand-fold](#)⁶⁷ increase in just a century and a half.

[00:21:14] Now, I don't want to turn this into an episode about the Industrial Revolution [we already have one on that, it's episode number 150], but the main point is that this was primarily a fire revolution.

[00:21:29] It was about inventing better and better ways to create energy, to create heat, and then transform that into different forms of energy and industrial output.

[00:21:43] And after that, came oil, which is an even more [energy-dense](#)⁶⁸ fuel than coal, and being liquid, is far easier to transport.

[00:21:53] What followed was the fastest transformation of human life in the entire million-year story of fire. Cars, aeroplanes, ships, factories, central heating, electric light: all of it, at its root, a consequence of setting fire to stuff and using its heat.

⁶⁶ the amount produced

⁶⁷ one thousand times greater

⁶⁸ containing a large amount of energy in a small amount

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[00:22:15] Now, it would be [remiss⁶⁹](#) of me not to mention the environmental [side-effects⁷⁰](#) of all of this, the trillions of tonnes of CO2 this is all estimated to have released into the atmosphere, and what this might mean for the planet's future.

[00:22:31] But to come back to where we started.

[00:22:34] Sometime around a million years ago, our early ancestors found fire in the wild and kept it burning. Then we learned how to make it ourselves. We used it to cook our food, shape our societies, and build things our ancestors could never have imagined.

[00:22:54] Fire might seem like just another part of the natural world. But for us humans, it changed everything.

[00:23:02] OK then, that is it for today's episode on the history of fire.

[00:23:08] I hope it's been an interesting one, and that you've learnt something new.

[00:23:12] As always, I would love to know what you thought of this episode. Let me know in the comments below, if you're listening somewhere where you can comment. And for the members among you, you can head right into our community forum at community.leonardoenglish.com and get chatting away to other curious minds.

⁶⁹ failing to say something that should be said

⁷⁰ extra unwanted results

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[00:23:29] You've been listening to English Learning for Curious Minds by Leonardo English.

[00:23:34] I'm Alastair Budge, you stay safe, and I'll catch you in the next episode.

[END OF EPISODE]

Key vocabulary

Word	Definition
Mastered	learned to control extremely well
Trace	follow the development or history of it
Sediment	material like dirt or sand that builds up over time
Deposits	layers of material left over time
Charred	partly burned and blackened by fire
Fragments	small pieces
Wildfire	a large uncontrolled fire in nature
Swept	moved quickly across the area
Upright	standing on two legs; not bent over
Instinct kicks in	a natural reaction starts automatically
Predator	an animal that hunts and eats other animals
Smouldering	burning slowly with smoke but little flame
Seasoned	experienced and skilled

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Tending	looking after and taking care of it
Alight	burning; on fire
Menace	danger or threat
Deterrent	something that stopped animals
Digest	break down inside the body
Extract	take out or get
Cellular	relating to the tiny parts that make up living things
Unravel	come apart or open up
Starches	substances in foods like potatoes, rice, and bread that give energy
Fibres	tough parts of plants
Surplus	more than what was needed
Hominins	early humans and their close ancestors
Guts	the organs that digest food
Noticeably	in a way that is easy to see or notice
Anatomical	relating to the structure of the body

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In dispute	not agreed on; argued about
Strikingly	in a very clear and surprising way
Delay gratification	wait for a better reward later instead of taking a smaller reward now
Consequential	very important because it had major effects
Consolidates	makes stronger and more stable
In part	partly; not completely
Anthropologist	a scientist who studied people and human societies
Hunter-gatherer	a person who lives by hunting animals and collecting wild plants
Accounted for	made up or formed
Speculated	guessed or thought about something without knowing for sure
Bind	bring together and connect
Specialisation	focusing on one particular task or skill
Division of labour	sharing different jobs between different people
Provocative	likely to make people think, argue, or react strongly
Pair bonding	forming a close relationship between two people

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Mutual advantage	a situation that helped both sides
Crouching	bending low close to the ground
At the mercy of	completely controlled by it and unable to change it
Percussion	making sparks by hitting two hard objects together
Flint	a hard stone that can make sparks
Pyrite	a shiny mineral that can produce sparks when struck
Tinder	dry material that catches fire easily
Friction	heat made when two things rub together
Peat	partly decayed plant material used as fuel
Dung	animal waste
Ran on	used as its main source of power or energy
Smelt	heat and melt metal from rock
Stripped	removed almost completely
Scarce	not enough; hard to find
Under their noses	very close to them and easy to find

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Substitute	something used instead of wood
Desperation	a strong feeling of needing it badly
First domino	the first event that caused many other events to happen
Coke	a fuel made from coal
Purified	cleaned by removing unwanted parts
Commodities	basic goods that were bought and sold
Limitless	without an end or clear limit
Output	the amount produced
Thousand-fold	one thousand times greater
Energy-dense	containing a large amount of energy in a small amount
Remiss	failing to say something that should be said
Side-effects	extra unwanted results

Language spotlight

1. Instinct kicks in

- **Meaning:** A natural, automatic reaction begins without conscious thought.
- **Synonyms:** React automatically, act on instinct, respond naturally
- **Antonyms:** Think carefully, act deliberately, make a considered decision
- **Examples:**
 - When the child slipped near the edge, **instinct kicked in** and her father grabbed her arm.
 - During the emergency, **instinct kicked in** and the firefighter immediately knew what to do.

2. At the mercy of

- **Meaning:** Completely controlled by a person, situation, or force, with little or no power to change the outcome.
- **Synonyms:** Dependent on, controlled by, subject to
- **Antonyms:** In control of, independent of, in charge of

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- **Examples:**

- Without a car, we were **at the mercy of** the local bus timetable.
- Small boats are often **at the mercy of** bad weather during storms.

3. Under their noses

- **Meaning:** Very close to someone or obvious, but not noticed by them.
- **Synonyms:** In plain sight, right in front of them, clearly visible
- **Antonyms:** Hidden away, out of sight, concealed
- **Examples:**
 - The missing keys were **under his nose** the whole time, sitting on the kitchen table.
 - The solution was **right under our noses**, but nobody thought of it until later.

4. Run out of

- **Meaning:** To use all of something so that none is left.

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- **Synonyms:** Use up, exhaust, deplete
- **Antonyms:** Stock up on, replenish, refill
- **Examples:**
 - We **ran out of** milk, so I had to go to the shop.
 - The expedition almost failed because the team **ran out of** fresh water.

5. Get right into it

- **Meaning:** To begin something immediately, without wasting time.
- **Synonyms:** Start immediately, get started, begin straight away
- **Antonyms:** Delay, put off, hesitate
- **Examples:**
 - We only had an hour for the meeting, so we **got right into it**.
 - After a brief introduction, the teacher **got right into it** and started the lesson.

Quiz

Listening Comprehension Multiple Choice Questions

1. According to the podcast, what was one of the earliest ways humans created fire themselves?

- a) Using matches
- b) Striking flint against iron pyrite
- c) Focusing sunlight through glass
- d) Using electricity

2. What was one of the most important benefits of fire for early humans?

- a) Faster travel
- b) Protection from predators
- c) Better stone tools
- d) More drinking water

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3. According to Richard Wrangham, what was a major result of cooking food?

- a) Humans became taller
- b) Humans needed less sleep
- c) Humans could obtain more energy from food
- d) Humans became stronger hunters

4. What did the chimpanzees in the experiments prefer?

- a) Cooked food
- b) Frozen food
- c) Raw food
- d) Sweet food

5. What fuel helped drive the Industrial Revolution in Britain?

- a) Coal
- b) Wood
- c) Peat

d) Animal dung

True or False

6. Homo erectus had smaller teeth and a smaller gut than earlier hominins. (True/False)

7. Fire may have helped humans sleep more deeply and safely on the ground.

(True/False)

8. According to Polly Wiessner's research, most daytime conversations were stories about ancestors and spirits. (True/False)

9. Oil contains less energy than coal and is more difficult to transport. (True/False)

10. Abraham Darby discovered a way to produce iron using coke instead of charcoal.

(True/False)

Fill-in-the-Blank

11. His argument is this. Raw food is hard to _____. Your body has to work extremely hard to extract calories from uncooked meats, roots, and plant material.

12. But here is what is not ___ dispute: we are the only animal on earth that cooks its food.

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13. Storytelling accounted ____ 81 percent of all conversations, compared to only 6 percent during the day.

14. He argues that cooking may have been one of the early drivers of ____ bonding, of a more stable relationship between a man and a woman, based less on romantic love than on _____ advantage.

15. Now, it would be remiss of me not to mention the environmental ____-effects of all of this, the trillions of tonnes of CO₂ this is all estimated to have released into the atmosphere, and what this might mean for the planet's future.

Vocabulary Practice

16. What does "**smouldering**" mean?

- a) Burning slowly with smoke but little flame
- b) Completely frozen
- c) Moving very quickly
- d) Covered in water

A Short History of Fire

17. What does "**surplus**" mean?

- a) A shortage
- b) More than is needed
- c) A type of tool
- d) A difficult problem

18. What does "**crouching**" mean?

- a) Standing very tall
- b) Running quickly
- c) Sitting in a chair
- d) Bending low close to the ground

19. What does "**scarce**" mean?

- a) Easy to find
- b) Expensive
- c) New and modern

d) Hard to find or not available in large amounts

20. What does "**consequential**" mean?

a) Very important because it has major effects

b) Difficult to understand

c) Extremely old

d) Slightly dangerous

Answers

1. b) Striking flint against iron pyrite
2. b) Protection from predators
3. c) Humans could obtain more energy from food
4. a) Cooked food
5. a) Coal
6. True
7. True
8. False
9. False
10. True
11. digest
12. in
13. for
14. pair, mutual
15. side
16. a) Burning slowly with smoke but little flame
17. b) More than is needed
18. d) Bending low close to the ground
19. d) Hard to find or not available in large amounts
20. a) Very important because it has major effects