

Results

Team Members:

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2. Run the following queries and list the paragraph IDs and content of the top 10 results.

Q1 power nap benefits

Q2 whale vocalization production of sound

Q3 pokemon puzzle league

Using BM25 scoring function

Requested query is: power nap benefits

85bcaa2516682b1738c121bfd1d7bd60c9d2e274-The power nap is thought to maximize the benefits of sleep versus time. It is used to supplement normal sleep, especially when a sleeper has accumulated a sleep deficit.

76cae6cb9749c647ae52077d6fd535f3ccdb41a2-Some companies have nap rooms to allow employees to take a power nap. This may be in a form of a nap room with a recliner, or chairs specially designed for power napping installed in a designated area. Companies with nap rooms claim that employees are happier and become more productive at work.

05ee98915108d6fea8b95d4aefd51acadf85bb3a-For several years, scientists have been investigating the benefits of napping, both the power nap and much longer sleep durations as long as 1-2 hours. Performance across a wide range of cognitive processes has been tested. Studies demonstrate that naps are as good as a night of sleep for some types of memory tasks.

9fe0ea9205e708269ec2cf437aa23360c5805a8b-A Flinders University study of individuals restricted to only five hours of sleep per night found a 10-minute nap was overall the most recuperative nap duration of various nap lengths they examined (lengths of 0 min, 5 min, 10 min, 20 min, and 30 minutes): the 5-minute nap produced few benefits in comparison with the no-nap control; the 10-minute nap produced immediate improvements in all outcome measures (including sleep latency, subjective sleepiness, fatigue, vigor, and cognitive performance), with some of these benefits maintained for as long as 155 minutes; the 20-minute nap was associated with improvements emerging 35 minutes after napping and lasting up to 125 minutes after napping; and the 30-minute nap produced a period of impaired alertness and performance immediately after napping, indicative of sleep inertia, followed by improvements lasting up to 155 minutes after the nap.

0a0af8bdfc8a4ead32792ccd702dd6455e068d16-A power nap is a short sleep which terminates before the occurrence of deep sleep or slow-wave sleep (SWS), intended to quickly revitalize the subject. The expression was coined by Cornell University social psychologist James Maas.

1b470a36adea668e666acefd8b82ba1336620315-Various durations are recommended for power naps, which are very short compared to regular sleep. The short duration of a power nap is designed to prevent nappers from sleeping so long that they enter a normal

sleep cycle without being able to complete it. Going beyond sleep stages I and II but failing to complete a full sleep cycle can result in a phenomenon known as sleep inertia, where one feels groggy, disoriented, and even more sleepy than before beginning the nap. Brief naps (10–15 minutes) can improve alertness directly after awakening without the detrimental effects of sleep inertia associated with longer naps.

0bb27470730936e60db6de54836ef6700c58e53f-Similar nap rooms and stations also exist in higher education institutions. Many colleges and universities provide napping furnitures such as cots and giant bean bags in libraries for students to take a nap after a long study. At least one university has a nap room set up in a gym. Some medical schools also set up nap rooms at the teaching hospitals. The nap rooms may include sleeping pods or cots, white noise machines, and antimicrobial pillows.

bf2d3d9fab4e234bcf4ce753f9e99a8c90e9cea9-People who regularly take power naps may develop a good idea of what duration works best for them, as well as what tools, environment, position, and associated factors help induce the best results. Some may prefer to take power naps regularly even if their schedules allow a full night's sleep. Mitsuo Hayashi and Tadao Hori have demonstrated that a nap improves mental performance even after a full night's sleep. New sleep sensors and sleep timers available on several mobile devices allow advocates of power naps to sleep for exactly as long as they would like to.

31b12608564134c2d86ad73ed53f5ad7997f1caa-A brief period of sleep of around 15 to 20 minutes, preceded by consuming a caffeinated drink or another stimulant, may combat daytime drowsiness more effectively than napping or drinking coffee alone. A stimulant nap (or coffee nap, caffeine nap, occasionally napuccino) was discovered by British researchers, Horne and Reyner, to be more effective than regular naps in improving post-nap alertness and cognitive functioning. In a driving simulator and a series of studies, Horne and Reyner investigated the effects of cold air, radio, a break with no nap, a nap, caffeine pill vs. placebo and a short nap preceded by caffeine on mildly sleep-deprived subjects. A nap with caffeine was by far the most effective in reducing driving "incidents" and subjective sleepiness as it helps the body get rid of sleep-inducing chemical compounds known as adenosine. Caffeine in coffee takes up to half an hour to have an alerting effect, hence "a short (<15min) nap will not be compromised if it is taken immediately after the coffee." One account suggested that it was like a "double shot of energy" from the stimulating boost from caffeine plus better alertness from napping. This procedure has been studied on sleep-deprived humans given the task of driving a motor vehicle afterwards, although it has not been studied on elderly populations.

857c9393cc9f1438f3dc5a08f512226abc414e87-Power naps of fewer than 30 minutes—even those as brief as 6 and 10 minutes—restore wakefulness and promote performance and learning. A 30-minute nap may also be able to reverse the hormonal impact of a night of poor sleep or reverse the damage of sleep deprivation. A University of Düsseldorf study found superior memory recall once a person had reached 6 minutes of sleep, suggesting that the onset of sleep may initiate active memory processes of consolidation which—once triggered—remains effective even if sleep is terminated.

Requested query is: whale vocalization production of sound

8e2821b4d1948204788a311bb15a0989577aa8df-Cetacean sound production differs markedly from this mechanism. The precise mechanism differs in the two major suborders of cetaceans: the Odontoceti (toothed whales—including dolphins) and the Mysticeti (baleen whales—including the largest whales, such as the blue whale).

35a73dca142e7e4ceb6716d9583b3486e2c19051-Most baleen whales make sounds at about 15-20 hertz. However, a team of marine biologists, led by Mary Ann Daher of the Woods Hole Oceanographic Institution, reported in New Scientist in December 2004 that they had been tracking a whale in the North Pacific for 12 years that was "singing" at 52 Hz. The scientists are unable to explain this dramatic difference from the norm; however, they believe the whale is baleen and unlikely to be a new species, suggesting that currently known species may have a wider vocal range than previously thought. There is disagreement in the scientific community regarding the uniqueness of the whale's vocalization and whether it is a member of a hybrid whale such as the well documented Blue and Fin Whale hybrids.

52d1827627d2fdb8271eed24f71a424769595951-Researchers use hydrophones (often adapted from their original military use in tracking submarines) to ascertain the exact location of the origin of whale noises. Their methods also allow them to detect how far through an ocean a sound travels. Research by Dr. Christopher Clark of Cornell University conducted using military data showed that whale noises travel for thousands of kilometres. As well as providing information about song production, the data allows researchers to follow the migratory path of whales throughout the "singing" (mating) season. An important finding is that whales, in a process called the Lombard effect, adjust their song to compensate for background noise pollution. Moreover, there is evidence that blue whales stop producing foraging D calls once a mid-frequency sonar is activated, even though the sonar frequency range (1-8 kHz) far exceeds their sound production range (25-100 Hz).

750b53d8441e81fd9f87e3a41dee7c8fdd7be9ca-The multiple sounds odontocetes make are produced by passing air through a structure in the head called the phonic lips. This structure functions like the human nasal cavity. As the air passes through this narrow passage, the phonic lip membranes are sucked together, causing the surrounding tissue to vibrate. These vibrations can, as with the vibrations in the human larynx, be consciously controlled with great sensitivity. The vibrations pass through the tissue of the head to the melon, which shapes and directs the sound into a beam of sound useful in echolocation. Every toothed whale except the sperm whale has two sets of phonic lips and is thus capable of making two sounds independently. Once the air has passed the phonic lips it enters the vestibular sac. From there, the air may be recycled back into the lower part of the nasal complex, ready to be used for sound creation again, or passed out through the blowhole.

fbff039e5c107c9f8be00da48add3995428773d7-Humpback whales may also make stand-alone sounds that do not form part of a song, particularly during courtship rituals. Finally, humpbacks make a third class of sound called the feeding call. This is a long sound (5 to 10 s duration) of near constant frequency. Humpbacks generally feed cooperatively by gathering in groups, swimming underneath shoals of fish and all lunging up vertically through the fish and out of the water together. Prior to these lunges, whales make their feeding call. The exact purpose of the call is not known, but research suggests that fish know what it means. When the sound was played back to them, a group of herring responded to the sound by moving away from the call, even though no whale was present.

a3c550c198a78e23bbee44b25db74e7b743b573e-Baleen whales (formally called mysticetes) do not have phonic lip structure. Instead, they have a larynx that appears to play a role in sound production, but it lacks vocal cords, and scientists remain uncertain as to the exact mechanism. The process, however, cannot be completely analogous to humans, because whales do not have to exhale in order to produce sound. It is likely that they recycle air around the body for this purpose. Cranial sinuses may also be used to create the sounds, but again researchers are currently unclear how.

711eb45bef2339ddc2cd090e60899c756feb493d-Two groups of whales, the humpback whale and the subspecies of blue whale found in the Indian Ocean, are known to produce a series of repetitious sounds at varying frequencies known as whale song. Marine biologist Philip Clapham describes the song as "probably the most complex in the animal kingdom."

c4c746a886f0c06688bad3d9419cd5fb56fc1ffb-Interest in whale song was aroused by researchers Roger Payne and Scott McVay after the songs were brought to their attention by a Bermudian named Frank Watlington who was working for the US government at the SOFAR station listening for Russian submarines with underwater hydrophones off the coast of the island. Payne released the best-selling Songs of the Humpback Whale in 1970, and the whale songs were quickly incorporated into human music by among others singer Judy Collins.

776ad7a0fdb5a50aac95f0a44468aa6a5310a41b-Prior to the introduction of human noise production, Clark says the noises may have travelled right from one side of an ocean to the other, agreeing with a thirty-year-old concept blaming large-scale shipping. His research indicates that ambient noise from boats is doubling with each decade. This has the effect of reducing the range at which whale noises can be heard. Environmentalists fear that such boat activity is putting undue stress on the animals as well as making it difficult to find a mate.

33f7ccf51ab0c242135ce906c6a26328a17d9308-While the complex sounds of the humpback whale (and some blue whales) are believed to be primarily used in sexual selection, the simpler sounds of other whales have a year-round use. While toothed whales are capable of using echolocation to detect the size and nature of objects, this capability has never been demonstrated in baleen whales. Further, unlike some fish such as sharks, a whale's sense of smell is not highly developed. Thus, given the poor visibility of aquatic environments and that sound travels so well in water, sounds audible to humans may play a role in navigation. For instance, the depth of water or the existence of a large obstruction ahead may be detected by loud noises made by baleen whales.

Requested query is :pokemon puzzle league

80f928fd3ba87a70411de560d51b93abf2c6bb66-Pokémon Puzzle League is a puzzle game for the Nintendo 64 console. It is based on Nintendo's Puzzle League puzzle games, but with Pokémon likenesses. It was only available in North America starting in 2000, and in Europe in 2001, making it the first Pokémon game produced for North America. It is one of several Pokémon games to be based on the Pokémon anime, and features Ash Ketchum and other characters featured from the anime. The game was released on the Virtual Console on May 5, 2008, in the North America region, and on May 30, 2008, in the European region.

5df575da5cd13dd1d045119ae9aef434c7875707-Pokémon Puzzle League received generally positive reviews from the media, scoring 81/100 on Metacritic, and 82.65% on GameRankings. Electronic Gaming Monthly gave the game a 9.2/10, noting its similarity to Tetris Attack, and calling it "highly addictive". IGN rated the game 8.9/10, stating "I'm totally addicted and thrilled with Pokémon Puzzle League."

4a98bf4038f1cb4bf44e91953a52bd51f6c527aa-Unlike its predecessors, Pokémon Puzzle League features a 3D mode in addition to the traditional 2D mode. In this mode, gameplay takes place on a cylinder with an effective width of 18 blocks, compared to the six-block width of the flat 2D field. It also features the original block design from Panel de Pon and Tetris Attack, as well as a Pokémon-oriented design (which is selected by default).

29495dcc618b43427fd2f5920a5dc9decce54049-Pokémon Puzzle League features the same gameplay as in Panel de Pon. The objective is to clear blocks from the playfield by arranging them in horizontal or vertical lines of three or more blocks. A continuous stream of new blocks pushes up from the bottom of the playfield, causing the entire playfield to rise continuously. If the blocks reach the top of the playfield, the player loses. The player can temporarily stop the progression of blocks by scoring combos and chains, and in two-player battles, these actions also cause garbage blocks to stack on top of the opponent's playfield.

3f28912fb9c6b2fa4377414a348275e59b7d90f5-There is currently a women's league playing six-(wo)man football. It is the Independent Women's Football League.

c1ebc5e2ad12505f150b8949a56c774bb7720183-The characters in Pokémon Puzzle League either come from the anime and were once exclusive to it, like Ash Ketchum, Tracey Sketchit, and Gary Oak or have appeared in previous Pokémon games but appear in the game as they do in the anime like Misty, Brock, and Giovanni. There are 16 playable characters in the game. In the 1P Stadium, only Ash is playable and Gary's Pokémon, a Nidoran♀, Growlithe, and Krabby, will fully be evolved into Nidoqueen, Arcanine, and Kingler, respectively, in Hard mode, Very Hard mode, and Super Hard mode when challenging him the second time. These fully evolved Pokémon are not playable with Gary. The final opponent of each difficulty setting varies. Giovanni is the last opponent of Easy mode, Bruno is the last opponent of Normal mode, and Gary with his evolved Pokémon is the last opponent of Hard mode. In Very Hard mode and Super Hard mode, Mewtwo is the final opponent, and beating him gives the player the true ending of the story in 1P Stadium.

122d144c144f20998d6c8a48c91a0af7bc81ac04-Coors Field was the first major league park with an underground heating system.

6e296b55cad6d942cef7e68097d2c29eb6d446c6-The Duchy of Pomerania joined the Schmalkaldic League, but did not actively participate in the Schmalkaldic War.

d75ff7b28136f10a94889bcdcf2f6c3200dcc3e7f-John Perry "Jack" Pardee (April 19, 1936 – April 1, 2013) began his football career as a teenager in Christoval Texas, where he excelled as a member of the six-man football team. He was an All-American linebacker at Texas A&M University and a two-time All-Pro with the Los Angeles Rams (1963) and the Washington Redskins (1971). He was one of the few six-man players to ever make it to the NFL, and his knowledge of that wide-open game would serve him well as a coach. Pardee was inducted into the College Football Hall of Fame as a player in 1986. Following his playing career, Pardee went on to coach becoming the only head coach to helm a team in college football, the National Football League, the United States Football League, the World Football League, and the Canadian Football League.

6d3fff9a7a74078c5b68a6f63e1fc7691f81d50e-The 1998 Major League Baseball All-Star Game took place in Coors Field.

3. Graduate students: Identify which scoring function is being used and provide the formula.

BM25 is used as scoring function. We get to know this using SetSimilarity function

Formula provided in Google (Wikipedia) is:

$$\text{score}(D, q) = \sum_{i=1}^n \log \frac{N - n(q_i) + 0.5}{n(q_i) + 0.5} \cdot \frac{f(q_i, D) \cdot (k_1 + 1)}{f(q_i, D) + k_1(1 - b + b \cdot \frac{|D|}{\text{avgdl}})}$$

Q is the query and q_i is the keywords in the query

Where $f(q_i, D)$ is q_i 's term frequency in document D . $|D|$ is length of document and avgdl is average document length, k_1 and b are free parameters.

N is total number of documents and $n(q_i)$ is number of documents containing q_i .

4. Graduate students: Instruct Lucene to use the scoring function used in class (see below) then rerun the three queries and list the top 10 results.

Scoring function: $\text{score}(D, q) = \sum_i \# \{q_i \in D\}$, where $\# \{q_i \in D\}$ refers to the number of times the i 'th query term q_i appears in document D —also called the term frequency.

Using custom scoring function

Requested query is: power nap benefits

9fe0ea9205e708269ec2cf437aa23360c5805a8b-A Flinders University study of individuals restricted to only five hours of sleep per night found a 10-minute nap was overall the most recuperative nap duration of various nap lengths they examined (lengths of 0 min, 5 min, 10 min, 20 min, and 30 minutes): the 5-minute nap produced few benefits in comparison with the no-nap control; the 10-minute nap produced immediate improvements in all outcome measures (including sleep latency, subjective sleepiness, fatigue, vigor, and cognitive performance), with some of these benefits maintained for as long as 155 minutes; the 20-minute nap was associated with improvements emerging 35 minutes after napping and lasting up to 125 minutes after napping; and the 30-minute nap produced a period of impaired alertness and performance immediately after napping, indicative of sleep inertia, followed by improvements lasting up to 155 minutes after the nap.

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suggested that it was like a "double shot of energy" from the stimulating boost from caffeine plus better alertness from napping. This procedure has been studied on sleep-deprived humans given the task of driving a motor vehicle afterwards, although it has not been studied on elderly populations.

76cae6cb9749c647ae52077d6fd535f3ccdb41a2-Some companies have nap rooms to allow employees to take a power nap. This may be in a form of a nap room with a recliner, or chairs specially designed for power napping installed in a designated area. Companies with nap rooms claim that employees are happier and become more productive at work.

ce4a8c314abedae1def1b2ae93655f43dc902717-In 2007, the first commercially operated solar tower power plant, the PS10 solar power tower, was commissioned. It has a capacity of eleven megawatt and it is located near Sevilla, in Sanlúcar la Mayor (Spain). DLR is prominently involved in developing the technology for this type of power plant. In solar tower power plants, sun-tracking mirrors (heliostats) redirect the solar radiation onto a central heat exchanger (receiver) on top of a tower. This generates high-temperature process heat, which can then be used in gas or steam turbine power plants to generate electrical power for the public electricity grid. In the future, solar thermal tower plant technology could also be used to generate solar fuels, such as hydrogen, without emissions.

0bb27470730936e60db6de54836ef6700c58e53f-Similar nap rooms and stations also exist in higher education institutions. Many colleges and universities provide napping furnitures such as cots and giant bean bags in libraries for students to take a nap after a long study. At least one university has a nap room set up in a gym. Some medical schools also set up nap rooms at the teaching hospitals. The nap rooms may include sleeping pods or cots, white noise machines, and antimicrobial pillows.

1b470a36adea668e666acefd8b82ba1336620315-Various durations are recommended for power naps, which are very short compared to regular sleep. The short duration of a power nap is designed to prevent nappers from sleeping so long that they enter a normal sleep cycle without being able to complete it. Going beyond sleep stages I and II but failing to complete a full sleep cycle can result in a phenomenon known as sleep inertia, where one feels groggy, disoriented, and even more sleepy than before beginning the nap. Brief naps (10–15 minutes) can improve alertness directly after awakening without the detrimental effects of sleep inertia associated with longer naps.

a39ab68fcfbbaa9baad1533a5b2ea6d0f9bfff5744-Investigations for harnessing the Narmada waters started around the time of independence, when Central Waterways, Irrigation and Navigation Commission (CWINC) identified several storage schemes and in 1948 the Khosla Committee prioritised the proposals and named Tawa, Bargi, Punasa and Bharuch projects (the last three on the main stem of the river) for preparation of reports. The reports were ready by 1963. A parallel study of hydropower potential identified 16 sites with a potential of 1300 MW. While the project in Gujarat, the Baruch Weir project (for which Jawaharlal Nehru laid the foundation stone in 1961) went through a series of modifications and improvements with a reformed scheme at Navagam village to extend benefits up to the Rann of Kutch, following the bifurcation of the erstwhile Bombay state into Maharashtra and Gujarat states and Gujarat's intent to raise the height of the dam at Navagam to maximise storage benefits at the cost of submergence of potential hydropower sites in Maharashtra and Madhya Pradesh, there was a dispute between the states. It resulted in an impasse in the implementation of the agreed projects at Navagam in Gujarat, Punasa in Madhya Pradesh and Bargi Dam in Madhya Pradesh and power benefit sharing among the states; with Madhya Pradesh refusing to ratify the agreements. To break the logjam, a high level Committee was appointed by

the Government of India (GOI) in September 1964. In 1965, the Committee prepared a Master Plan for the basin, which involved construction of 12 major projects in MP and the Navagam Dam in Gujarat. It provided priority to irrigation over power; irrigation of in MP, in Maharashtra, in Gujarat and in Rajasthan. The storages it recommended in MP involved Bargi, Tawa and Narmadasagar (Punasa) while its proposed Navagam high dam would submerge the hydelpower project sites of Jalasindhi (in Maharashtra) and Harinphal (MP) but without any more submergence than would be caused by the three dams if separately constructed. Gujarat endorsed the proposal, but Maharashtra was not willing to go by it. After intense parleys failed to resolve the problem, the GOI decided to set up the Narmada Water Disputes Tribunal (NWDT) in 1969 under the Interstate River Water Disputes Act 1956 to adjudicate on the dispute relating to sharing of water of the interstate Narmada and its valley.

bf2d3d9fab4e234bcf4ce753f9e99a8c90e9cea9-People who regularly take power naps may develop a good idea of what duration works best for them, as well as what tools, environment, position, and associated factors help induce the best results. Some may prefer to take power naps regularly even if their schedules allow a full night's sleep. Mitsuo Hayashi and Tadao Hori have demonstrated that a nap improves mental performance even after a full night's sleep. New sleep sensors and sleep timers available on several mobile devices allow advocates of power naps to sleep for exactly as long as they would like to.

0567e33b74e0d52f31987415dc93ed41816bb4cd-Because of the longer cooking time, there is greater danger with slow cookers of having an extended power outage during cooking without the cook's knowledge; for example, the power may go out for several hours while the cook is away at work in places with unreliable power supply.

05ee98915108d6fea8b95d4aefd51acadf85bb3a-For several years, scientists have been investigating the benefits of napping, both the power nap and much longer sleep durations as long as 1-2 hours. Performance across a wide range of cognitive processes has been tested. Studies demonstrate that naps are as good as a night of sleep for some types of memory tasks.

Requested query is :whale vocalization production of sound

52d1827627d2fdb8271eed24f71a424769595951-Researchers use hydrophones (often adapted from their original military use in tracking submarines) to ascertain the exact location of the origin of whale noises. Their methods also allow them to detect how far through an ocean a sound travels. Research by Dr. Christopher Clark of Cornell University conducted using military data showed that whale noises travel for thousands of kilometres. As well as providing information about song production, the data allows researchers to follow the migratory path of whales throughout the "singing" (mating) season. An important finding is that whales, in a process called the Lombard effect, adjust their song to compensate for background noise pollution. Moreover, there is evidence that blue whales stop producing foraging D calls once a mid-frequency sonar is activated, even though the sonar frequency range (1-8 kHz) far exceeds their sound production range (25-100 Hz).

fe53859fc48049c4024adff3d175fca54f84b6e4-Peak oil as a proper noun, or "Hubbert's peak" applied more generally, refers to a predicted event: the peak of the entire planet's oil production. After Peak Oil, according to the Hubbert Peak Theory, the rate of oil production on Earth would enter a terminal decline. On the basis of his theory, in a paper he presented to the American Petroleum Institute in 1956, Hubbert correctly predicted that production of oil from conventional sources would peak in the continental United States around 1965-1970. His prediction of inevitable decline has been incorrect, but the 1970 peak has yet not been surpassed. Hubbert further

predicted a worldwide peak at "about half a century" from publication and approximately 12 gigabarrels (GB) a year in magnitude. In a 1976 TV interview Hubbert added that the actions of OPEC might flatten the global production curve but this would only delay the peak for perhaps 10 years. The development of new technologies has provided access to large quantities of unconventional resources, and the boost of production has largely discounted Hubbert's prediction. In the future, pressure to limit the use of fossil fuels (and so reduce the release of greenhouse gasses) will curb production, not exhaustion of resources.

35a73dca142e7e4ceb6716d9583b3486e2c19051-Most baleen whales make sounds at about 15-20 hertz. However, a team of marine biologists, led by Mary Ann Daher of the Woods Hole Oceanographic Institution, reported in New Scientist in December 2004 that they had been tracking a whale in the North Pacific for 12 years that was "singing" at 52 Hz. The scientists are unable to explain this dramatic difference from the norm; however, they believe the whale is baleen and unlikely to be a new species, suggesting that currently known species may have a wider vocal range than previously thought. There is disagreement in the scientific community regarding the uniqueness of the whale's vocalization and whether it is a member of a hybrid whale such as the well documented Blue and Fin Whale hybrids.

72644204bbcd7fe9b443bcf12052684f12c93374-Choosing a particular curve determines a point of maximum production based on discovery rates, production rates and cumulative production. Early in the curve (pre-peak), the production rate increases due to the discovery rate and the addition of infrastructure. Late in the curve (post-peak), production declines because of resource depletion.

750b53d8441e81fd9f87e3a41dee7c8fdd7be9ca-The multiple sounds odontocetes make are produced by passing air through a structure in the head called the phonic lips. This structure functions like the human nasal cavity. As the air passes through this narrow passage, the phonic lip membranes are sucked together, causing the surrounding tissue to vibrate. These vibrations can, as with the vibrations in the human larynx, be consciously controlled with great sensitivity. The vibrations pass through the tissue of the head to the melon, which shapes and directs the sound into a beam of sound useful in echolocation. Every toothed whale except the sperm whale has two sets of phonic lips and is thus capable of making two sounds independently. Once the air has passed the phonic lips it enters the vestibular sac. From there, the air may be recycled back into the lower part of the nasal complex, ready to be used for sound creation again, or passed out through the blowhole.

a83dbce81b525478ec6111e959f4e24f0040289f-Hubbert's upper-bound estimate, which he regarded as optimistic, accurately predicted that US oil production would peak in 1970, although the actual peak was 17% higher than Hubbert's curve. Production declined, as Hubbert had predicted, and stayed within 10 percent of Hubbert's predicted value from 1974 through 1994; since then, actual production has been significantly greater than the Hubbert curve. The development of new technologies has provided access to large quantities of unconventional resources, and the boost of production has largely discounted Hubbert's prediction. In the future, pressure to limit the use of fossil fuels (and so reduce the release of greenhouse gasses) will curb production, not exhaustion of resources.

fbff039e5c107c9f8be00da48add3995428773d7-Humpback whales may also make stand-alone sounds that do not form part of a song, particularly during courtship rituals. Finally, humpbacks make a third class of sound called the feeding call. This is a long sound (5 to 10 s duration) of near constant frequency. Humpbacks generally feed cooperatively by gathering in groups, swimming underneath shoals of fish and all

lunging up vertically through the fish and out of the water together. Prior to these lunges, whales make their feeding call. The exact purpose of the call is not known, but research suggests that fish know what it means. When the sound was played back to them, a group of herring responded to the sound by moving away from the call, even though no whale was present.

064722811a80b660bd940184e7ac3d1629334f39-During the 20th century, *L. vannamei* was an important species for Mexican inshore fishermen, as well as for trawlers further offshore. In the late 20th century, the wild fishery was overtaken by the use of aquaculture; this began in 1973 in Florida using prawns captured in Panama. In Latin America, the culture of *L. vannamei* showed peaks of production during the warm El Niño years, and reduced production during the cooler La Niña years, due to the effects of disease. Production of *L. vannamei* is limited by its susceptibility to various diseases, including white spot syndrome, Taura syndrome, infectious hypodermal and haematopoietic necrosis, baculoviral midgut gland necrosis and *Vibrio* infections. By 2004, global production of *L. vannamei* approached 1,116,000 t, and exceeded that of *Penaeus monodon*.

44dbf787f368875787080558435c0392b99b8357-After the failure of the Nivelles Offensive, Schneider understood more capable designs had to be manufactured if the tank were to remain a viable weapon system. On 1 May 1917 it discussed a range of possible options, numbered one to five. All had in common that basically the same mechanical components were used as with the Schneider CA, though often improved, and that the suspension was only partially changed: elongated by the addition of an eighth road wheel and using thirty-five instead of thirty-three wider, forty-five centimetres broad, track links. However, all were also strongly modernised: the hull overhang had disappeared, the hull front formed as a sloped wedge, and the inner space was compartmentalised, with an engine room, protruding behind the sprocket, at the back and the driver in front. The armour base was about sixteen to twenty millimetres. The first two proposals were probably identical to the April 1917 projects and discarded by the company as inferior. The last three, favoured by Schneider itself, were all turreted vehicles: design No 3 had a 47 mm gun in the hull and a single machine-gun turret; No 4 differed in having two machine-gun turrets and No 5 in having the gun moved to a turret. During discussions about these proposals, Estienne pointed out that the intended long 47 mm gun had not entered production yet and that no high performance explosive charge was available to give it a sufficient effect on soft targets. Therefore, he insisted on fitting the standard 75 mm field gun, even if this would raise weight to 14.5 tonnes. A week later Schneider presented proposal No 6, which envisaged a vehicle weighing fourteen tonnes and having a shortened 75 mm gun in the turret. On 5 July 1917 drawings were ready of the type, which was now called the Schneider CA3. However, these included an alternative version with a shortened 75 mm gun in the hull. Estienne had misgivings about this project, questioning its trench-crossing capacity and predicting engine power would be insufficient, given a weight that had by now reached 16.6 tonnes. Also he demanded a gun sight allowing some fire-on-the-move capability. Nevertheless, on 24 July the Consultative Committee of the Artillerie Spéciale decided that the four hundred vehicles of the Schneider Modèle 1917 ordered on 10 May 1917, were to be of the CA3 type. These had to be delivered from May 1918 onwards. A prototype was ordered of each version – the mechanical parts in May and the armour hulls in July – but the company itself limited its construction activities to the one with the gun in the hull, probably because a cannon turret was judged to be "absurd" given the lack of enemy tanks and a machine gun turret was seen as necessary for close defence against infantry assault. Later that year, in an official answer to an inquiry by parliamentarian Paul Doumer regarding the progress achieved within French tank development, the designation "Schneider CA4" is used to indicate a design studied

within the context of a larger order for two prototypes, weighing twenty tonnes and fitted with a cannon turret armed with the shortened 75 mm gun, and of which Schneider is unable to predict when the single prototype to be constructed would be finished, though deliveries could start in April 1918. A mock-up was built of the Schneider CA3, and on 24 October the chassis was tested at SOMUA. During the summer however, Estienne and Pétain had become worried that the medium tank production might become an obstacle to the planned light tank mass production of the Renault FT. On 27 October the committee advised that the construction of the Schneider CA3 would be suspended in favour of light tank production. It argued that the type could probably not be delivered before August 1918 anyway, too late for the summer offensives of that year, and that an improved medium tank design should be taken into development instead. The ultimate decision not to produce the Schneider CA3 was only taken in February 1918. On 19 January 1918 it was proposed that the preproduced CA3 components would be used to construct a further two hundred Schneider artillery tractors. On 3 November 1917 the order for the Schneider CA4 prototype was annulled. The new medium tank project had already been started on 15 August 1917 and strived for a technically advanced seventeen tonne vehicle armed with a shortened 75 mm gun and benefiting from a much improved mobility. It remained a paper project.

8a370428f3b085e0d11c8c6390aef42536fc7337-Some believe that there is also little evidence to show that Afghan opium would be economically competitive in a global market place. Australia, France, India, Spain, and Turkey currently dominate the export market for licit opiates. Due to the high cost of production in countries where cultivation is undertaken on small landholdings, such as India and Turkey, licit production requires market support (the production costs for the equivalent of 1 kg of morphine in 1999 was US\$56 in Australia, US\$159.77 in India and US\$250 in Turkey). The current cost of production of one kilogram of morphine equivalent in Afghanistan is approximately US\$450. However, a poppy for medicine project in Afghanistan could provide a cheap pain relief option for pain sufferers who find morphine prices extremely elevated.

Requested query is: pokemon puzzle league

80f928fd3ba87a70411de560d51b93abf2c6bb66-Pokémon Puzzle League is a puzzle game for the Nintendo 64 console. It is based on Nintendo's Puzzle League puzzle games, but with Pokémon likenesses. It was only available in North America starting in 2000, and in Europe in 2001, making it the first Pokémon game produced for North America. It is one of several Pokémon games to be based on the Pokémon anime, and features Ash Ketchum and other characters featured from the anime. The game was released on the Virtual Console on May 5, 2008, in the North America region, and on May 30, 2008, in the European region.

5df575da5cd13dd1d045119ae9aef434c7875707-Pokémon Puzzle League received generally positive reviews from the media, scoring 81/100 on Metacritic, and 82.65% on GameRankings. Electronic Gaming Monthly gave the game a 9.2/10, noting its similarity to Tetris Attack, and calling it "highly addictive". IGN rated the game 8.9/10, stating "I'm totally addicted and thrilled with Pokémon Puzzle League."

d75ff7b28136f10a94889bcdcf2f6c3200dcc3e7f-John Perry "Jack" Pardee (April 19, 1936 – April 1, 2013) began his football career as a teenager in Christoval Texas, where he excelled as a member of the six-man football team. He was an All-American linebacker at Texas A&M University and a two-time All-Pro with the Los Angeles Rams (1963) and the Washington Redskins (1971). He was one of the few six-man players to ever make it to the NFL, and his knowledge of that wide-open game would serve him well as a coach. Pardee was inducted into the College Football Hall of Fame as a player in 1986. Following his playing career, Pardee went on to coach becoming the only head coach to

helm a team in college football, the National Football League, the United States Football League, the World Football League, and the Canadian Football League.

b8d505b181ac086b69cea67a65ba517491bd34e0-Coors Field twice broke the major league record for home runs hit in a ballpark in one season. The previous record, 248, had been set at the Angels' original home of Wrigley Field in Los Angeles in 1961, its only year for major league ball. In Coors Field's first year, the home run total fell just 7 short of that mark, despite losing 9 games from the home schedule (or 1/9 of the normal 81) due to the strike that had continued from 1994. The next season, 1996, with a full schedule finally, 271 home runs were hit at Coors Field. In 1999, the current major league record was set at 303. The annual home run figure dropped noticeably in 2002, and has dropped below 200 starting in 2005.

1513e4ccccf389f00cf99bcbe47bcb5dbfe9d5999-As of 2013, there are no longer any leagues (professional, semi-pro or amateur) that play the game past the high school level. The last one, the San Antonio, Texas based Texas Sixman Football League (TSFL), converted to eight-man football after the 2012 season. The Central Florida-based Southeastern Christian Association of Sixman Football (SCASF) ceased operations in the late 2000s, and the Pennsylvania 6-Man Football League also converted to eight-man around the same time.

29495dcc618b43427fd2f5920a5dc9decce54049-Pokémon Puzzle League features the same gameplay as in Panel de Pon. The objective is to clear blocks from the playfield by arranging them in horizontal or vertical lines of three or more blocks. A continuous stream of new blocks pushes up from the bottom of the playfield, causing the entire playfield to rise continuously. If the blocks reach the top of the playfield, the player loses. The player can temporarily stop the progression of blocks by scoring combos and chains, and in two-player battles, these actions also cause garbage blocks to stack on top of the opponent's playfield.

3f28912fb9c6b2fa4377414a348275e59b7d90f5-There is currently a women's league playing six-(wo)man football. It is the Independent Women's Football League.

40beb662b5ec81b519747c14fde3d23e746b7ba5-In its first decade, the above-average number of home runs earned Coors Field a reputation as the most hitter-friendly park in Major League Baseball, earning the critical nicknames "Coors Canaveral" (a reference to Cape Canaveral, from where NASA launches spacecraft) and "Williamsport" (referring to the site of the Little League World Series, which has been traditionally dominated by batters). Prior to the 2002 baseball season, studies determined that it was more the dry air rather than thin air which contributed to the more frequent home runs. It was found that baseballs stored in drier air are harder and therefore more elastic to the impact of the bat. A room-sized humidifier was installed in which to store the baseballs, and since its introduction the number of home runs at Coors Field has decreased and is now nearly the same as other parks.

4a98bf4038f1cb4bf44e91953a52bd51f6c527aa-Unlike its predecessors, Pokémon Puzzle League features a 3D mode in addition to the traditional 2D mode. In this mode, gameplay takes place on a cylinder with an effective width of 18 blocks, compared to the six-block width of the flat 2D field. It also features the original block design from Panel de Pon and Tetris Attack, as well as a Pokémon-oriented design (which is selected by default).

97924bab16d053e96ee70690b893b32559be8fa3-Although the number of home runs hit per season at Coors Field is decreasing, Coors Field still remains the most hitter friendly ballpark in the Major Leagues by a wide margin. From 2012-2015 the Colorado

Rockies led the league in runs scored in home games, while being last in the league for runs scored in away games. This demonstrates the extreme benefit that Coors Field's low air density provides to hitters.
