Albatross life cycle

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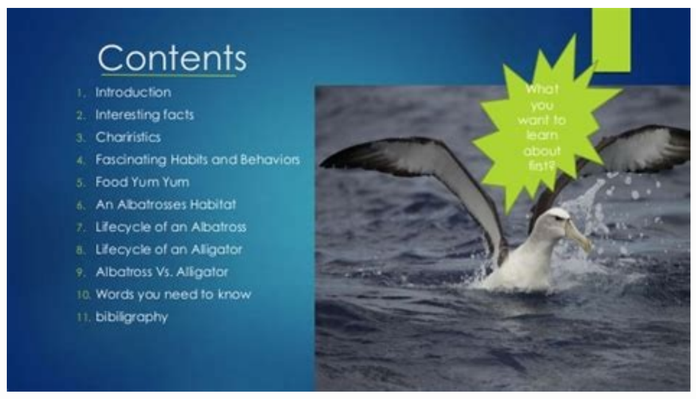

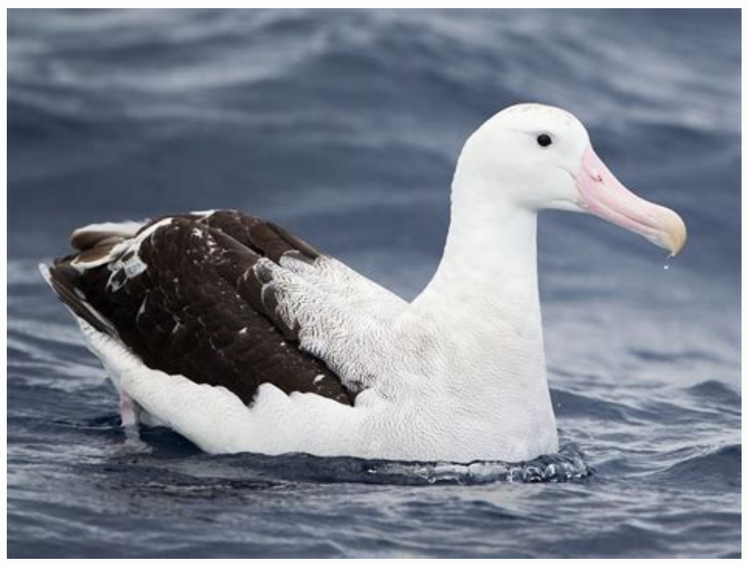

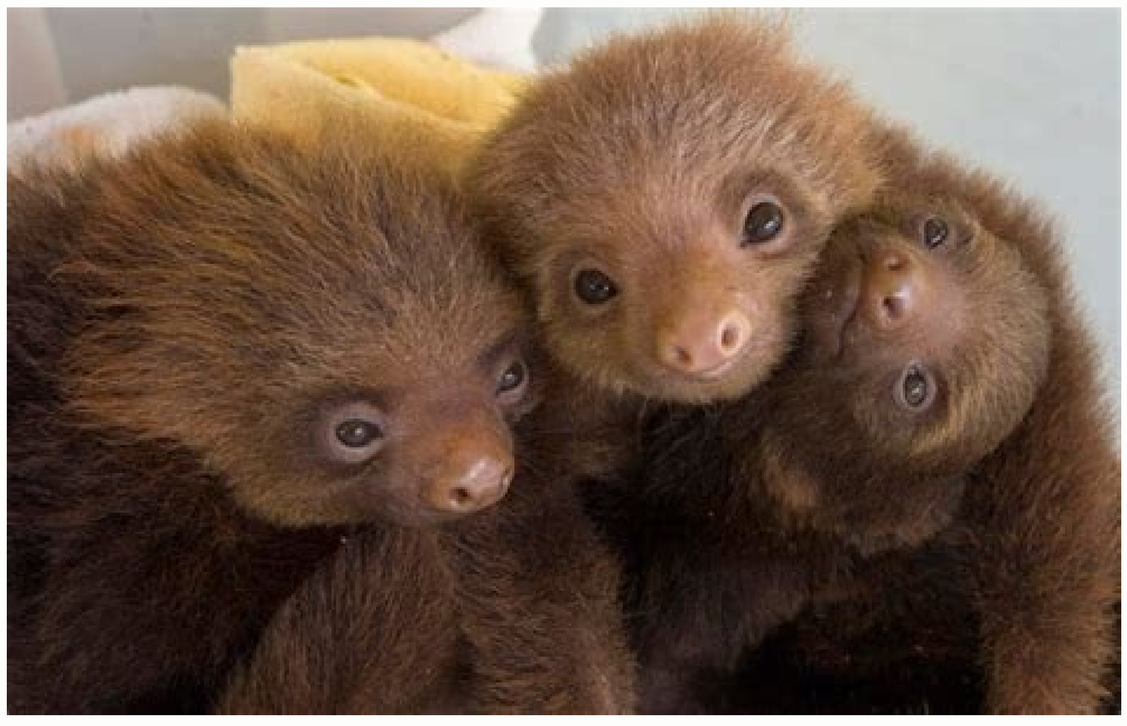

Life cycle of a northern royal albatross. Albatross life cycle diagram. Why do albatross fly for 3 years. Do albatross fly for 5 years. Laysan albatross life cycle. Wandering albatross life cycle. How long do albatross fly. Royal albatross life cycle.

A mature thunderstorm, with anvil top. NOAA National Weather Service Whether you happen to be a spectator or a "spook," chances are you've never mistaken the sight or sounds of an approaching thunderstorm. And it's no wonder why. Over 40,000 occur worldwide every day. Of that total, 10,000 occur daily in the United States alone. A map showing the average number of thunderstorm days each year in the U.S. (2010). NOAA National Weather Service In the spring and summer months, thunderstorms seem to occur like clockwork. But don't be fooled! Thunderstorms can occur at all times of the year, and at all hours of the day (not just afternoons or evenings). The atmospheric conditions only need be right. So, what are these conditions, and how do they lead to storm development? In order for a thunderstorm to develop, 3 atmospheric ingredients must be in place: lift, instability, and moisture. Lift is responsible for initiating the updraft--the migration of air upward into the atmosphere--which is necessary in order to produce a thunderstorm cloud (cumulonimbus). Lift is achieved in a number of ways, the most common being through differential heating, or convection. As the Sun heats the ground, the warmed air at the surface becomes less dense and rises. (Imagine air bubbles that rise from the bottom of a boiling water pot.) Other lifting mechanisms include warm air overriding a cold front, cold air undercutting a warm front (both of these are known as frontal lift), air being forced upward along the side of a mountain (known as orographic lift), and air that comes together at a central point (known as convergence. After air is given an upward nudge, it needs something to help it continue its rising motion. This "something" is instability. Atmospheric stability is a measure of how buoyant air is. If air is unstable, it means that it is very buoyant and once set in motion will will follow that motion rather than return to its starting location. If an unstable air mass is pushed upward by a force then it will continue upward (or if pushed down, it will continue downward). Warm air is generally considered to be unstable because regardless of force, it has a tendency to rise (whereas cold air is more dense, and sinks). Lift and instability result in rising air, but in order for a cloud to form, there must be sufficient moisture within the air to condense into water droplets as it ascends. Sources of moisture include large bodies of water, like oceans and lakes. Just as warm air temperatures aid lift and instability, warm waters aid the distribution of moisture. They have a higher evaporation rate, which means they more readily release moisture into the atmosphere than cooler waters do. In the U.S., the Gulf of Mexico and the Atlantic Ocean are major sources of moisture for fueling severe storms. Diagram of a multicell thunderstorm consisting of individual storm cells - each in a different development stage. Arrows represent the strong up-and-down motion (updrafts and downdrafts) which characterize thunderstorm dynamics. NOAA National Weather Service All thunderstorms, both severe and non-severe, go through 3 stages of development: the towering cumulus stage,the mature stage, andthe dissipating stage. The initial stage of thunderstorm development is dominated by the presence of updrafts. These grow the cloud from a cumulus to a towering cumulonimbus. NOAA National Weather Service Yes, that's cumulus as in fair weather cumulus. Thunderstorms actually originate from this non-threatening cloud type. While at first this may seem contradictory, consider this: thermal instability (which triggers thunderstorm development) is also the very process by which a cumulus cloud forms. As the Sun heats the Earth's surface, some areas warm faster than others. These warmer pockets of air become less dense than the surrounding air which causes them to rise, condense, and form clouds. However, within minutes of forming, these clouds evaporate into the drier air in the upper atmosphere. If this happens for a long enough period of time, that air eventually moistens and from that point on, continues cloud growth rather than stifling it. This vertical cloud growth, referred to as an updraft, is what characterizes the cumulus stage of development. It works to build the storm. (If you've ever watched a cumulus cloud closely, you can actually see this happen. (The cloud begins burgeoning upward higher and higher into the sky.) During the cumulus stage, a normal cumulus cloud can grow into a cumulonimbus having a height nearly 20,000 feet (6km). At this height, the cloud passes the 0°C (32°F) freezing level and precipitation begins to form. As precipitation accumulates within the cloud, it becomes too heavy for updrafts to support. It falls inside of the cloud, causing drag on the air. This, in turn, creates a region of downward directed air referred to as a downdraft. In a "mature" thunderstorm, an updraft and downdraft co-exist. NOAA National Weather Service Everyone who has experienced a thunderstorm is familiar with its mature stage--the period when gusty winds and heavy precipitation are felt at the surface. What may be unfamiliar, however, is the fact that a storm's downdraft is the underlying cause of these two classic thunderstorm weather conditions. Recall that as precipitation builds within a cumulonimbus cloud, it eventually generates a downdraft. Well, as the downdraft travels downward and exits the base of the cloud, the precipitation is released. A rush of rain-cooled dry air accompanies it. When this air reaches the Earth's surface, it spreads out ahead of the thunderstorm cloud--an event known as the gust front. The gust front is the reason why cool, breezy conditions are often felt at the onset of a downpour. With the storm's updraft occurring side-by-side with its downdraft, the storm cloud continues to enlarge. Sometimes the unstable region reaches as far up as the bottom of the stratosphere. When the updrafts rise to that height, they begin to spread sideways. This action creates the characteristic anvil top. (Because the anvil is located very high up in the atmosphere, it is comprised of cirrus/ice crystals.) All the while, cooler, drier (and therefore heavier) air from outside of the cloud is introduced into the cloud environment simply by the act of its growth. Diagram of a dissipating thunderstorm - its third and final stage. NOAA National Weather Service In time, as the cooler air outside of the cloud environment increasingly infiltrates the growing storm cloud, the storm's downdraft eventually overtakes its updraft. With no supply of warm, moist air to maintain its structure, the storm begins to weaken. The cloud begins to lose its bright, crisp outlines and instead appears more ragged and smudged--a sign that it is aging. The full life cycle process takes about 30 minutes to complete. Depending on thunderstorm type, a storm may go through it only once (single cell), or multiple times (multi-cell). (The gust front often triggers the growth of new thunderstorms by acting as a source of lift for neighboring moist, unstable air.) Mosquito control professionals from local government departments or mosquito control districts use this information about mosquito biology and their life cycles to develop plans for controlling mosquitoes. All types of mosquitoes have similar life cycles. A mosquito egg hatches into a larva. A larva becomes a pupa. An adult mosquito emerges from the pupa. Some mosquitoes lay eggs in water, others on soil. Some mosquitoes lay their eggs singly on the surface of water, others lay several eggs at a time in rafts that float on water, others lay eggs on moist ground, and others lay eggs inside containers above the water line. Watch a video to see a female Aedes aegypti mosquito laying eggs. Historians and academics have observed that organizations, like living organisms, have life cycles. They are born (established or formed), they grow and develop, they reach maturity, they begin to decline and age, and finally, in many cases, they die. Study of the organizational life cycle (OLC) has resulted in various predictive models. These models, which have been a subject of considerable academic discussion, are linked to the study of organizational growth and development. Organizations at any stage of the life cycle are impacted by external environmental circumstances as well as internal factors. We're all aware of the rise and fall of organizations and entire industries. Products too have life cycles, a fact that has been long recognized by marketing and sales experts. It seems reasonable to conclude that organizations also have life cycles.Students of this subject agree for the most part that predictable patterns can be seen when viewing the life span of a business organization. These patterns can be characterized by stages, often referred to as development stages. These development stages tend to be sequential, occur as a hierarchical progression that is not easily reversed, and involve a broad range of organizational activities and structures. The number of life cycle stages identified by any particular researcher will vary with the finds of other researchers depending on the granularity of his or her study. Some analysts have delineated as many as ten different stages of an organizational life cycle, while others have flattened it down to as few as three stages. Most models, however, hold to a view that the organizational life cycle is comprised of four or five stages that can be summarized simply as startup, growth, maturity, decline, and death (or revival).While a number of business and management theorists alluded to developmental stages in the early to mid-1900s, Mason Haire's 1959 work Modern Organization Theory is generally recognized as one of the first studies that used a biological model for organizational growth and argued that organizational growth and development followed a regular sequence. The study of organizational life cycles intensified, and by the 1970s and 1980s it was well-established as a key component of overall organizational growth.Organizational life cycle is an important model because of its premise and its prescription. The model's premise is that requirements, opportunities, and threats both inside and outside the business firm will vary depending on the stage of development in which the firm finds itself. For example, threats in the start-up stage differ from those in the maturity stage. As the firm moves through the developmental stages, changes in the nature and number of requirements, opportunities, and threats exert pressure for change on the business.Organizations move from one stage to another because the fit between the organization and its environment is so inadequate that either the organization's efficiency and/or effectiveness is seriously impaired or the organization's survival is threatened. The OLC model's prescription is that the firm's managers must change the goals, strategies, and strategy implementation devices to fit the new set of issues. Thus, different stages of the company's life cycle require alterations in the firm's objectives, strategies, managerial processes (planning, organizing, staffing, directing, controlling), technology, culture, and decision-making. Five growth stages are observable: birth, growth, maturity, decline, and revival. They traced changes in the organizational structure and managerial processes as the business proceeds through the growth

stages. At birth, the firms exhibited a very simple organizational structure with authority centralized at the top of the hierarchy. As the firms grew, they adapted more sophisticated structures and decentralized authority to middle- and lower-level managers. At maturity, the firms demonstrated significantly more concern for internal efficiency and installed more control mechanisms and processes.Most scholarly works focusing on organizational life cycles have been conceptual and hypothetical in content. Only a small minority have attempted to test empirically the organizational life cycle model. One widely-cited conceptual work, however, was published in the Harvard Business Review in 1972 by L. Greiner. He used five growth phases: growth through creativity; growth through direction; growth through delegation; growth through coordination; and growth through collaboration. Each growth stage encompassed an evolutionary phase ("prolonged periods of growth where no major upheaval occurs in organization practices"), and a revolutionary phase ("periods of substantial turmoil in organization life"). The evolutionary phases were hypothesized to be about four to eight years in length, while the revolutionary phases were characterized as the crisis phases. At the end of each one of the five growth stages listed above, Greiner hypothesized that an organizational crisis will occur, and that the business's ability to handle these crises will determine its future:Phase 1-;Growth through creativity eventually leads to a crisis of leadership. More sophisticated and more formalized management practices must be adopted. If the founders can't or won't take on this responsibility, they must hire someone who can, and give this person significant authority.Phase 2-;Growth through direction eventually leads to a crisis of autonomy. Lower level managers must be given more authority if the organization is to continue to grow. The crisis involves top-level managers' reluctance to delegate authority.Phase 3-;Growth through delegation eventually leads to a crisis of control. This occurs when autonomous employees who prefer to operate without interference from the rest of the organization clash with business owners and managers who perceive that they are losing control of a diversified company.Phase 4-;Growth through coordination eventually leads to a crisis of red tape. Coordination techniques like product groups, formal planning processes, and corporate staff become, over time, a bureaucratic system that causes delays in decision-making and a reduction in innovation.Phase 5-;Growth through collaboration, is characterized by the use of teams, a reduction in corporate staff, matrix-type structures, the simplification of formal systems, an increase in conferences and educational programs, and more sophisticated information systems. While Greiner did not formally delineate a crisis for this phase, he guessed that it might revolve around "the psychological saturation of employees who grow emotionally and physically exhausted by the intensity of team work and the heavy pressure for innovative solutions."Entrepreneurs who are involved in the early stages of business creation are unlikely to become preoccupied with life cycle issues of decline and dissolution. Indeed, their concerns are apt to be in such areas as securing financing, establishing relationships with vendors and clients, preparing a physical location for business operations, and other aspects of business start-up that are integral to establishing and maintaining a viable firm. Basically, these firms are almost exclusively concerned with the very first stage of the organization life cycle. Small business enterprises that are well-established, on the other hand, may find OLC studies more relevant. Indeed, many recent examinations of organization life cycles have analyzed ways in which businesses can prolong desired stages (growth, maturity) and forestall negative stages (decline, death). Certainly, there exists no timeline that dictates that a company will begin to falter at a given point in time. "Because every company develops at its own pace, characteristics, more than age, define the stages of the cycle," explained Karen Adler and Paul Swiercz in Training & Development.Small business owners and other organization leaders may explore a variety of options designed to influence the enterprise's life cycle-;from new products to new markets to new management philosophies. After all, once a business begins to enter a decline phase, it is not inevitable that the company will continue to plummet into ultimate failure; many companies are able to reverse such slides (a development that is sometimes referred to as turning the OLC bell curve into an "S" curve). But entrepreneurs and managers should recognize that their business is always somewhere along the life cycle continuum, and that business success is often predicated on recognizing where your business is situated along that measuring stick and adopting strategies best suited to that position in the cycle. Adizes, Ichak. 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