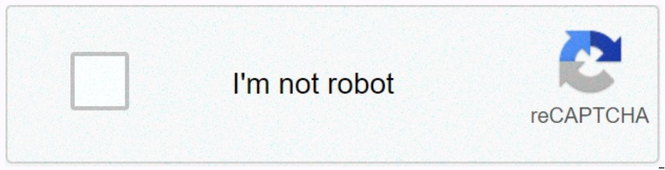

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Phylum cnidaria worksheet answers biology 11

Kunidaria-> Nettle bearings appear about 580 million years ago (although new genetic evidence suggests that kunidarians are old) most have a life cycle that includes two stages: 1.Sessile polyps (non-motil - stuck in one place) 2. Motil Medusa (free swimming) Hydro figure 1: Nunidarian Nunidarian diversity has two body plans: polyp: Cecil foam with mouth and tentails up. For example, coral, imone) medusa: free floating (planktonic) foam. The tentas and mouth look like a face-down bell. The (jelly) body is considered to be this primitive tissue with two cell layers (outer and inner germ) separated by a layer of jelly-like mesogrea. Hull -> Hull. Endothelum -> Inner skin. Figure 3: Comparison of body plan radial symmetry – Symmetry around the central axis Figure 4: Radial symmetry B. Feeding and excretive food that depends on prey in contact with the sting tentament. Tentacles surround the mouth – leading to the gastric vascular cavity for digestion. Bidirectional digestive system - which means the entry and exit of food and waste from the same opening Figure 5: How hydra's bidirectional digestive tentacles catch prey? Figure 6: Cnidocyte and nematodes process: Tenta untouched hands come into contact with prey. Physical and chemical cues shoot through nematodes to pierce prey, feed poison, cram prey into tentacle contracts, and bring prey into the mouth Figure 7: Nidosite action like a sponge C. Process of breathing and circulation, organs/ systems do not work. Gas exchange is done through diffusion (O2 in, CO2 out). Based on the outer/inner concentration of cells – transfer from higher concentrations to lower concentrations.D. Replicate both sexual and asexual reproduction! Sexual reproduction: external fertilization. Men and women broadcast their tets (sex cells) into the ocean. Eggs and sperm meet and develop into praulas (larvae). These planknic planulas adhere to the surface and develop into polyps or stay freely floating medusas. Asexual reproduction 1. Asexual reproduction through budding. Figure 8: Budding strobilation A polyps in Hydra 2 grow stacks of swimming Medusa clones (jelly) Figure 9: Life cycle with stobilation notes: Most kunidarian cycles between medusa and polyp body plan. Polyps usually reproduce adity. Strobilation lead to free swimming medusas. Medusa reproduces sexually. Praula develops on the surface and attaches to the surface (Polyp) Figure 10: Typical Kunidarian life cycle – sexual/asexual reproduction with Medusa andForm E. Main Group Figure 11: The main class of Kunidarian class kbozoa (box jelly) active/deadly hunters – a powerful poison that can usually kill humans. They have a special flap called Verum that helps them swim quickly. The box shape has a special eye that helps them hunt the general free swimming medusa foam of reduced or absent polly stage sexual reproduction in class Scyphozoa (true jelly) solitude (not colony) Medusa. Krasantzoa (anemones and corals) solitary or colonial adults are not Cecil (non-movable) the only polyp phase, Medusa. Polyps do jellyfish as food: sexual reproduction class hydrozoa (hydra/Portuguese o'war) extra: our oceans become more acidic as we release more CO2. Animals (such as mollusks) struggle and are in trouble in this environment. Jellyfish dominate the oceans! jellyfish numbers are increasing in many places! Figure 12: Ocean acidification - future problems jellyfish are plentiful and may be coming to dinner plates near your jellyfish salad - basics (ask for the full recipe? Check out some others ☺! Follow the recipe: Below is a fast breakdown. Cut the jellyfish into strips - pour boiling water, pour cold water. Mix in the sauce. Add the vegetables to the jellyfish. Source (or whatever - just chill sauce?ok!) Soy sauce only? Go for it! Save the sea and eat mesogrea! (Tip: Think about their name and the type of cell they use for hunting) draw and label a diagram of the typical life cycle of a Kunidarian. Including medusa and polyp phase. (include terminology: strobilization, external fertilization, plamenra, medusa, polyps) How many cell layers are cnidarians? Compare the sponge to a kunidarian. What do they have in common, what differences do they have? explains the complete feeding process of the kunidarian (from catching to eating to removing waste). Make sure to include as many details as possible, including the cells involved and their mechanisms. Quizlet: Term Learning Set! By the end of this section, you can do the following: compare the structure and tissue characteristics of polyfera and Cnidaria Explain the relationship between progressive development of tissues and animal complexity Figure 1.Philam kunidaria animals have stinging cells called cyndsites. Cnidocytes contain large organelles called (a) nematodes that preserve coiled threads and barbs. When the hairy protrusions on the cell surface come into contact, (b) threads, barbs, and toxins are fired from the organelle. Phylum Cnidaria indicates radial or vira radial symmetry and includes animals that are biplane-forming, i.e. theyFrom two embryonic layers. Almost all (about 99%) of kunidarians are marine species. Kunidarian contains special cells called kunidcytes (stinging cells), which contain organelles called nematodes. These cells are present around the mouth and tentas, which help im im im im im im im im im im im im im im im im im im im im im im im im im im immulsification of prey with toxins contained in the cells. Nematodes contain coiled threads that can bear barbs. The outer walls of the cells have a hairy projection called cnidocils that are sensitive to touch. When touched, cells are known to penetrate prey meat or kunidarian predators (see FIG. 1) or fire coiled threads that can attract it. These coiled threads release toxins into the target, often fixing prey or scaring off predators. Link to Learning This video animation shows two anemones engaged in combat. Animals of this lineage display two different morphological body plans: polyps or stems and medusas or bells (Fig. 2). An example of the form of polyps is hydra spp. Perhaps the best known Meduside animal is jelly (jellyfish). The form of polyps contracts like an adult, a single opening to the digestive system (mouth) surrounding the tentatrics. The shape of Medusa is motelin, with its mouth and tenta feel hanging from an umbrella-shaped bell. Figure 2. Kunidarian has two different body plans: Medusa (a) and Polyp (b). All cnidarins have two membrane layers with jelly-like mesogrea between them. Some cnidarins are multi-shaped, i.e. they have two body plans during their life cycle. One example is colonial watering called Oberia. This Cecil polyp form has two types of polyps shown in FIG. The first is gastric animals, because they capture and feed their prey. Other types of polyps are gonozooids adapted to the admedication of medusa. When the germs mature, they break down and become free-swimming medusas that are male or female (delusional). Male medusas make sperm, female medusas make eggs. After fertilization, zigote develops into brasseries and into praula larvae. The larvae swim for free for a while, but eventually adhere, forming new colonial reproductive polyps. Figure 3. There are two types of polyps in the Oberia proto-Cecil form: gastric animals adapted to the capture of prey and gonozooids that sprout to produce aless medusa. Link to Learning Click here to follow oberia's life cycle. All kunidarians indicate the presence of two membrane layers in the body derived from the embryo's inner and outer embryos. The outer layer (from the outer germ) is called the epidermis, and the inner layer (from the endoderm) is called the gastric peel, lining the digestive cavity. Between theseThe membrane layer is a lively jelly-like mesogrea binding layer. In terms of cell complexity, cnidarins indicate the presence of differentiation cell types in each tissue layer, such as nerve cells, contractive epithelial cells, enzyme secretory cells, and nutrient absorption cells, as well as the presence of cell-to-cell connections. However, the development of the organ and the organ system does not advance in this filam. The nervous system is primitive, with nerve cells scattered throughout the body. This neural network can indicate the presence of a group of cells in the form of plexus (single plexus) or neural cords. Neurons show the mixed properties of motor and sensory neurons. The main signaling molecules of these primitive nervous systems are chemical peptides that perform both excitability and inhibitory functions. Despite the simplicity of the nervous system, it coordinates tenta control movements, drawing of captured prey into the mouth, digestion of food, expulsion of waste. This center performs extracellular digestion in which food is taken into the gastric cavity, enzymes are secreted in the cavity, and cells covering the cavity absorb nutrients. The gastric vascular cavity has the only opening that functions as both the mouth and annus, called the imperfect digestive system. Cnidarian cells exchange oxygen and carbon dioxide by diffusion between cells in the epidermis and water in the environment, and between water in the gastric cavity and cells in the gastric skin. The lack of a circulatory system for moving dissolved gases limits the thickness of the body walls and requires non-living mesogrea between layers. There are no excretion systems or organs, and nitrogen waste only diffuses from cells into water outside the animal or in the gastric vascular cavity. Since there is also no circulatory system, nutrients need to move from one cell to another, which absorbs them in the inner layer of the gastric vascular cavity through the septum. Filam Kunidaria contains about 10,000 species divided into four classes: Antozoa, Sifozoa, Kbozoa and Hydrozoa. Antozoans, anemones and corals are all Cecil species, while sifozoan (jellyfish) and ambozoan (box jelly) are swimming forms. The worm contains Cecil forms and swimming colonial forms like the Portuguese Man o'War. Anthozoa in the class includes all the kunidarians who only show polyp body plans. In other words, there is no Medusa stage in the life cycle. Examples include anemones (Figure 4), umipenes, corals, and an estimated number of 6,100 species. Anemones are usually bright colors, 1.8 to 10 cm in diameter. These animals are usually cylindrical and attached to the substrate. The opening of the mouthby tenta hand with nidosite. Fig. 4. Inemone is shown in a photograph and (b) in a figure showing its form. (Credit a: Dancing with Ghosts / Changes to the work by Flickr; Credit b: Changes to the work by NOAA) Inacio Monet's mouth is surrounded by tentapats with crab sites. The slit-shaped mouth and pharynx are lined with grooves called siphonophore. The pharynx is a muscular part of the digestive system that works to consume food, which can extend the length of the body by up to two-thirds before opening into the gastric vascular cavity. This cavity is divided into several chambers by a longitudinal septum called the mesotoneus. Each mesomemble consists of a mesogrea sandwiched between one outer germ and one endothelitis cell layer. The mesotoneus does not completely divide the gastric vascular cavity, and smaller cavities combine at the pharyngeal opening. The adaptive benefits of the mesodenum appear to be an increase in surface area for nutrient absorption and gas exchange. Anemones usually eat small fish or shrimp by fixing their prey using crab sites. Some anemones establish a reciprocal relationship with the yaniga by adhering to the shell of the crab. In this relationship, the ineguin obtains food particles from the prey captured by the crab, and the crab is protected from predators by the stinging cells of the ineguin. Anemone fish, or clownfish, are immune to toxins found in nematodes, so they can live in inemones. Anthozoans remain polypoids throughout their life and can reproduce adity through budding and fragmentation, or breed sexually with athe. Both gametes are produced by polyps and can be fused to produce free-swimming planula larvae. The larva settles on a suitable skin layer and develops into Cecil polyps. Class Scyphozoa is an animal marine class that contains all jellies and has about 200 known species. A characteristic feature of this class is that the polyp stage exists, but Medusa is a remarkable stage in the life cycle. Members of this species range in length from 2 to 40 cm, but the largest rhinophozoan species, cyaneacapilata, can reach a total size of 2 meters. Sifozoan shows a characteristic bell-like form (Fig. 5). FIG. 5. The jelly is shown in a diagram showing (a) taking a photograph and (b) its form. (Credit a: Changes to the work by Jimg944/Flickr. Credit b: Changes to the work by Mariana Luis Villarreal) In jellyfish, there is a mouth opening on the under side of the animal surrounded by tentaults with nematosists. Scyphozoans live most of their life cycle as free-swimming, solitary foodies. The mouth leads to the gastric vascular cavity, which is separated into four interconnected sacs and calledIn some species, the digestive system may branch further into radial canals. Like anthozoan septa, branched gastric vascular cells serve two functions: increasing the surface area for nutrient absorption and diffusion. Therefore, more cells are in direct contact with nutrients in the gastric vascular cavity. In sifozoan, nerve cells are scattered throughout the body. Neurons can even be present in clusters called loparias. These animals have muscular rings lining the body's dome that provide the constrictor force needed to swim in the water. Sifozoans are of the same sex, that is, men and women are separate. Gonads are formed from the skin of the stomach, and contingencies are drained from the mouth. The larvae of the planula are formed by external fertilization. They settle subcutaneously, in a porous form known as syphistoma. These forms may produce additional polyps by budding or may be transformed into medsword shapes. The life cycle of these animals (FIG. 6) can be expressed as polymassoids because they show both medusal and polypoid body design at some point in their life cycle. Figure 6. There are two stages of the jellyfish life cycle: the Medusa stage and the polyp stage. Polyps are reproduced alessly by budding, and Medusa reproduces sexually. (Credit Medusa: Changes to Francesco Crippa's Work) Link to Learning Use this video animation quiz from the New England Aquarium to identify the life cycle stages of jelly. This class includes jellies with boxy medusas, or square bells with cross sections. Therefore, it is known as box jellyfish in a mouth-watering way. These species can achieve a size of 15-25 centimeters. Evozoans display overall morphological and anatomical properties similar to cyphozoan properties. A noticeable difference between the two classes is the placement of the tentas. This is the most toxic group of all kunidarians (Figure 7). The Kbozoan contains a muscle pad called a pedalia at the corner of the square bell canopy, with one or more tentacles attached to each pedarium. These animals are further classified into orders based on the presence of a single or multiple tentarides per pedarium. In some cases, the digestive system may spread to pedaria. Nematodes may be arranged in a spiral configuration along the tentaular. This arrangement effectively helps to suppress and capture predation. Evozoans are present in polypoid form, which develops from planula larvae. These polyps show limited mobility along subcutaneously and, like sifozoans, may sprout to form more polyps to colonize the habitat. The polyp then converts to the form of a medaloid. Figure 7. (a) Small Cuban Zoan Jelly Malrokingi is tymble shaped and, like all evozoan jellies, has (b) four muscular pedarias to which tentacles adhere. M. Kingi is one of two types of jelly known as the causeThe syndrome is a condition characterized by muscle pain, vomiting, increased heart rate and psychological symptoms. Two australians most commonly found with ilkunji jelly are believed to have died from ilkinji stings. (c) A sign on a northern Australian beach warns swimmers of the danger. (Credit c: Changes to the work of Peter Shanks) Hydrozoa contains almost 3,200 species. Most are marine, but several freshwater species are known (Figure 8). Animals of this class are polych shape, and most animals show both polypoid and medusid forms in their life cycle, which is variable. Polyp forms in these animals often indicate a cylindrical shape with a central gastric vascular cavity lined by the gastric skin. The stomach and epidermis have a simple layer of mesogrea sandwiched between them. An opening in the mouth, surrounded by tentadies, is present at the end of the animal's oral cavity. Many waterworms form colonies consisting of branch colonies of special polyps that share gastric vascular cavities, such as the colonial hiddroid Oberia. The colony may also float freely and include medusoids and polypoid individuals in the colony, such as Fisalia (Portuguese Great War) and Verella (by wind sailors). Even other species are solitary polyps (hydra) or solitary medusae (goni nemus). A true feature common to all of these diverse species is that the gonads for sexual reproduction originate from epidermal tissue, whereas in all other kunidarians they originate from gastric tissue. Figure 8. (a) Oberia, (b) Fisalia Physaris, known as the Portuguese Man o'War, (c) Verella Bae and (d) Hydra have different body types, but all belong to hydrozoa families. (Credit b: Work changes by NOAA, Matt Russell's scale bar data) Kunidarian represents a more complex level of organization than polyfera. They have an outer and inner tissue layer sandwiching non-celled mesogrea. Cnidarins have a well-formal digestive system and perform extracellular digestion. Nitsites are specialized cells for sending toxins to prey on predators and alerting predators. Cnidarins have separate males and females and have a life cycle that includes morphologically different forms. These animals also show two different morphological forms - medusoids and polypoids - at different stages of their life cycle. Lifecycle.