

Marine Science Website Project Vocab and Topic List

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Directions: You are to create a dynamic, engaging, fun, and interesting website that highlights the content from four of the units that were discussed in Marine Science this year. Each topic you choose will be assigned to a tab on your website.

You must choose 4 of the following 6 topics to cover. For each topic you choose, you must include the information outlined. All topics require at least one relevant labeled diagram and one relevant video. You must also include 5 interactive questions for each topic.

<u>Aquaria</u>	<u>Osteichthyes</u>	<u>Chondrichthyes</u>
<ul style="list-style-type: none"> -Steps to setting up the tank -do's and don'ts of cleaning the tank -substrate for FW and SW -how to set up a heater -temperature the tank should be kept at -density of FW and SW tanks -how to set up a drip line -how to acclimate a fish -parts of the filter (type of filtration and what it removes) -pH of SW and FW tanks -how to feed a starter fish -how/when to do a water change -how to cycle the tank 	<ul style="list-style-type: none"> -Kingdom, Phylum, Class for Bony Fish -labeled external anatomy diagram -body shape of the fish -shapes of caudal fins (define homocercal) -aspect ratio (what it measures and the formula) -fins (fin name and its function) <ul style="list-style-type: none"> *caudal *pectoral *pelvic *anal *dorsal -medial fins -paired fins -operculum -how fish breathe -scales -lateral line -gills <ul style="list-style-type: none"> *gill arch *gill rakers *gill filaments -counter current exchange -heart and pathway of blood through the body -ectothermic -myoglobin -hemoglobin -swim bladder -courtship -spawning and copulation -hermaphroditism -sex reversal 	<ul style="list-style-type: none"> -Kingdom, Phylum, Class of Cartilaginous fish -Nostrils/Nares -Eye -Ampullae of Lorenzini -Mouth -Spiracles -Gill Slits -Fins -Claspers vs Cloaca -Counter-shading -Denticles -Ways they stay afloat without a swim bladder (liver) -reproductive structures (cloaca and claspers) -development <ul style="list-style-type: none"> *oviparity *viviparity *ovoviviparity -shark attacks <ul style="list-style-type: none"> *number *reasons for attack -Human Encounters <ul style="list-style-type: none"> *how many sharks humans kill a year and how -How Sharks Hunt <ul style="list-style-type: none"> *sound/smell *vision *Ampullae of Lorenzini *touch *taste

<p>Properties of Water</p> <ul style="list-style-type: none"> -chemical formula -polar -cohesion and adhesion -surface tension -capillary action -viscosity -density (include explanation of density anomaly) -salinity -thermohaline layering -buoyancy -refraction -water pressure -heat capacity 	<p><u>Invertebrates</u></p> <p><u>Porifera</u></p> <ul style="list-style-type: none"> -examples -what it means -filter feeders -sessile -types of reproduction <p><u>Cnidarians</u></p> <ul style="list-style-type: none"> -examples -what it means -carnivores -most poisonous <p><u>Mollusks</u></p> <ul style="list-style-type: none"> -examples -what it means -how they breathe -list the classes, their characteristics, and one example from each -characteristics of an octopus vs a squid -labeled diagram of anatomy of the squid <p><u>Echinoderms</u></p> <ul style="list-style-type: none"> -examples -what it means -labeled diagram of the starfish <p><u>Arthropod</u></p> <ul style="list-style-type: none"> -examples -what it means -characteristics -class crustaceans: give characteristics and 3 examples -explain why the horseshoe crab is important to humans 	<p><u>Marine Mammals</u></p> <ul style="list-style-type: none"> -list the 9 characteristics that all mammals share (be sure to include the definitions of the following terms: endothermic, homeotherm, altricial, heterotrophic.) <p><u>Pinnipeds</u></p> <ul style="list-style-type: none"> -definition -characteristics of a seals -characteristics of sea lions -characteristics of walruses -how to tell the difference between them -what they all eat -predators -harem mating -copulation -viviparity -what are babies called -how is their milk content different from ours <p><u>Cetaceans</u></p> <ul style="list-style-type: none"> -definition -Kingdom, Phylum, Class, Order -characteristics of all whales -differences between toothed (odontoceti) and baleen (mysticeti) whales -structures used in Echolocation for dolphins -functions of each structure (example: air sacs-->create clicks) -structures used in echolocation for sperm whales -functions of each structure -reason why sperm whales need these special structures -function of the blow hole -function of the flukes -how to tell the size of the whale when you know the size of the flukes -diving adaptations -unique behaviors (spy hopping, lob tailing, pec-slapping, breaching, bubble-netting, singing)
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