**Biology 453 Jeopardy Game**

**Lab Practical 1**

**Round 1**

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| **“Shake & Spear”** |
| 100 | Substance that forms the rattle of a rattlesnake | Keratin |
| 200 | Porcupine defense | Quills |
| 300 | Bony head ornament of male elk/deer…. | Antler |
| 400 | Animal with horn(s) composed entirely of keratin | Rhinoceros |
| 500 | Spines in a teleost dorsal fin | Actinotrichia |

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| **All’s Well That Ends Well** |
| 100 | 1st mouth in embryo | Blastopore |
| 200 | Where water exits body of Amphioxus | Atriopore |
| 300 | Teleost tail type | Homocercal |
| 400 | Last, special vertebra in bird | Pygostyle |
| 500 | Marks the posterior of a very early amniote embryo | Hensen’s node |

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| **Measure for Measure** |
| 100 | Number of sacral vertebrae in a frog skeleton | 1 |
| 200 | Number of pairs of paired fins in a modern gnathostome | 2 |
| 300 | Number of phalanges in the toe of a horse | 3 |
| 400 | Number of different types of glands in the skin of a human | 4 |
| 500 | Vertebrate taxon with the highest number of cervical vertebrae | Aves |

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| **Much Ado About Nothing** |
| 100 | Skull opening for the exit of the spinal cord | Foramen magnum |
| 200 | Mammalian gland with a narrow tubular shape | Eccrine/Merocrine Sudoriferous |
| 300 | Type of skull with 1 temporal fossa | Synapsid |
| 400 | Cavity lined by hypomere mesoderm | Coelomic |
| 500 | Vertebral arteries travel through this opening | Transverse foramen |

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| **Comedy of Errors (Homologs or Analogs)** |
| 100 | Penguin wing & Whale flipper | Analog |
| 200 | Ceratotrichia & Lepidotrichia | Analog |
| 300 | Endostyle & Thyroid gland | Homolog |
| 400 | Fur & Feathers | Analog |
| 500 | Angular & Angular process | Analog |

**Round 2**

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| **As You Like It** |
| 200 | Cells that produce pigment in skin | Chromatophore, Melanocyte |
| 400 | Gland that keeps your hair shiny & bright | Sebaceous |
| 600 | Structure helps you swallow food & supports the tongue | Hyobranchial Apparatus |
| 800 | Type of fur that makes a lamb’s wool soft | Underfur |
| 1000 | Layer of skin that “renews” our faces | Stratum basalis |

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| **To be or not to be** |
| 200 | Shared derived trait of Chordata | Notochord, dorsal hollow neural tube, endostyle, post-anal tail |
| 400 | Shared derived trait of the head region in Vertebrata | Tripartite brain, cranium, complete sensory placodes, migr. neural crest  |
| 600 | Shared derived trait of skin of Tetrapoda | Stratum corneum |
| 800 | Shared derived trait of embryos in Amniota | Hensen’s node, primitive streak |
| 1000 | Shared derived trait of the skull in Mammalia | Dentary only in lower jaw, 3 ear ossicles, tympanic ring hold eardrum |

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| **Love’s Labour Lost** |
| 200 | Cavity lost during gastrulation | Blastocoel  |
| 400 | Replaces the shrinking or lost notochord | Centrum |
| 600 | Pectoral girdle bone present in birds but absent in alligators | Clavicle |
| 800 | Pectoral girdle bone lost in evolution of tetrapods | Cleithrum |
| 1000 | The non-dermal bone that is part of a snake’s compound bone | Articular |

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| **For my part it was greek to me** |
| 200 | “Whole cell” - type of cleavage | Holoblastic |
| 400 | “Cartilage fish” - taxon | Chondrichthyes |
| 600 | “Backwards cavity/hollow space” - on a vertebra | Opisthocoelous |
| 800 | “Head cord” - taxon | Cephalochordata |
| 1000 | “To dig” or “Shovel” - skeletal bone | Scapula |

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| **Sense(s) & Sensibility** |
| 200 | Region of neurocranium houses inner ear | Otic capsule/bones |
| 400 | Gland produces pheromones in humans | Apocrine Sudoriferous  |
| 600 | Special feature in mammal skulls helps you smell cookies | Turbinates |
| 800 | Tetrapod ear ossicle evolved from splanchnocranium arch 2 | Columella  |
| 1000 | Anatomical location of heart (relative to 2 features) in chick | Ventral to pharynx or notochord, anterior to gut or coelomic cavity |

**Final Jeopardy: Shared derived trait of skulls in Clade Theria: Auditory/Tympanic bulla**

**OR Skeletal bone absent in Eutheria: epipubic**