**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

80% 100%

|  |  |  |  |
| --- | --- | --- | --- |
| Introduction | | | |
| What drives this movement? |  | | |
| Swimming Things | | /32 /40 | |
| Hagfish | Craniates | | |
| Lamprays | Vertebrate | | |
| Sharks/Rays | Paired fin, Jaw | | |
| Ray Finned Fish | Bone | | |
| Lobe Finned Fish  - Fin types | Bone and lobe fins for walking | | |
| Tiktaalic   * Lungs/Neck/Limbs | Transition to land (Why)  better habitat in shallows  Low o2 water  Breath on land | | |
| Vertebrae & Skeleton | Support/structure/protection & Support/protection/Gravity | | |
| Jaws | Active Pred/From Gill arches | | |
| Amphibians | | /24 /30 | |
| Amphibians   * 4 legs * 3 chamb. Heart | (repro in water, live on land)  Deal with gravity  Poor separation of Ox/DeOx Blood – effect on life | | |
| Hylonomus | Tree dweller (amniotic Egg) | | |
| Reptiles | | | /24 /30 |
| [Odontochelys](http://en.wikipedia.org/wiki/Odontochelys) | Fossil Turtle – defend from attack from below | | |
| Amniotic Egg | Role – repro on land, no longer tied to water | | |
| 3.5 (septum)-cham. heart | Better 02 sep | | |
| Birds | | | /24 /30 |
| Archaeopteryx | Early bird, evolution of flight | | |
| Feathers (structure) | Use/structure | | |
| Flight (adaptations for flight) | Bone, lungs (air sacs, unidirectional), 4 chambered heart, keel | | |
| Mammals | | | /20 /25 |
| Morganucodon |  | | |
| Milk |  | | |
| Hair |  | | |
| 4-chambered heart |  | | |
| Marine Mammals | | | /20 /25 |
| Why return to water? |  | | |
| What evidence? |  | | |
| How do they manage? |  | | |
| Conclusion | | | /16 /20 |
| Why do they move from water to land? |  | | |
| Is it a cohesive story? |  | | |

/200