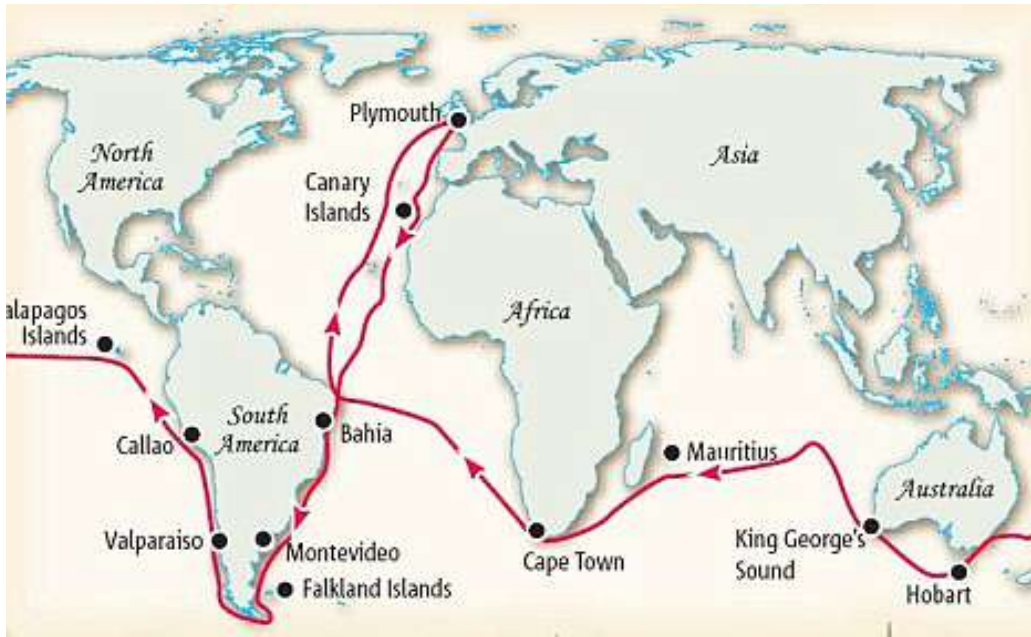


### ***Darwin's Secret Notebooks***

*Answer the following questions on a separate sheet of paper as you watch the two part video: Darwin's Secret Notebooks*

1. How old was Darwin when he boarded the HMS Beagle?
2. How long did Darwin spend in the Galapagos islands?
3. When did the ship leave England?
4. True/False Darwin left England planning to study evolution in the Galapagos.
5. Why did Darwin jump off of the HMS Beagle as much as possible?
6. The *Glyptodon* looks like an enormous\_\_\_\_\_.
7. Did Darwin always believe that the origin of life had a scientific explanation?
8. Describe the size of the fossil mammals that Darwin found compared to the ones that live today.
9. How are the common rhea and the lesser rhea isolated?
10. Darwin observed 3 birds that did not fly, but used their wings for other functions. What were the birds/functions? Is this an example of an exaptation? Explain.
11. Whose book did Darwin turn to for answers about geological processes (listen...they will say his name again)?
12. True/False At this time, Darwin no longer believed that species were the product of a creator and unchanging.
13. What conclusion did Darwin make based on the discovery of sea shells high atop the mountains?
14. How many years into the expedition did the HMS Beagle reach the Galapagos?
15. What were two errors Darwin made with the finches?
16. How does the variety of life on land in the Galapagos compare to what is in the sea?
17. Why do the islands have palm trees but no frogs?
18. How were the islands colonized?
19. What is a coral atoll?
20. What did Darwin study on the way home from the Galapagos?
21. How do those birds differ from each other?
22. How old was Darwin when he returned to England?
23. One major observation Darwin made was that different islands have \_\_\_\_species
24. What did Darwin sketch in his secret notebooks?
25. What was Malthus' idea that inspired Darwin?
26. What happens to favorable variations? What happens to unfavorable variations?
27. What is natural selection?
28. How old was Darwin when he figured out natural selection?
29. Did Darwin's conclusions make him less of a believer?
30. What made Darwin wait for more than 20 years to publish his work?
31. When did Darwin publish "On the Origin of Species"?



1. How old was Darwin when he boarded the HMS Beagle? **22**
2. How long did Darwin spend in the Galapagos islands? **5 weeks**
3. When did the ship leave England? **December 26, 1831**
4. True/False Darwin left England planning to study evolution in the Galapagos. **false**
5. Why did Darwin jump off of the HMS Beagle as much as possible? **Constant sea sickness**
6. The *Glyptodon* looks like an enormous \_\_\_\_\_. **armadillo**
7. Did Darwin always believe that the origin of life had a scientific explanation? **First thought life was made by a creator (studied theology)**
8. Describe the size of the fossil mammals that Darwin found compared to the ones that live today. **Gigantic, but similar to species still alive today**
9. How are the common rhea and the lesser rhea isolated? **Ostrich like (flightless) bird; Northern Argentina home to bigger, common rhea; Southern Argentina home to smaller, lesser rhea; divided by Rio Negro**
10. Darwin observed 3 birds that did not fly, but used their wings for other functions. What were the birds/functions? Is this an example of an exaptation? Explain.
11. Whose book did Darwin turn to for answers about geological processes (listen...they will say his name again)? **Charles Lyell – Principles of Geology - uniformitarianism**
12. True/False At this time, Darwin no longer believed that species were the product of a creator and unchanging. **true**
13. What conclusion did Darwin make based on the discovery of sea shells high atop the mountains? **Must have been part of sea floor; forces drove sea floor high above where it once was**
14. How many years into the expedition did the HMS Beagle reach the Galapagos? **Almost 4 years (Sept 1835)**
15. What were two errors Darwin made with the finches? **All of the birds were finches; Darwin lumped the specimens together and didn't record which island he found each specimen on**
16. How does the variety of life on land in the Galapagos compare to what is in the sea? **Large variety of species just off shore ("infinite"); comparatively, life "sparse" on land...few plants and animals**
17. Why do the islands have palm trees but no frogs? **Palms/coconuts could survive the voyage from land**
18. How were the islands colonized? **From organisms of distant continents**
19. What is a coral atoll? **Islands made of coral (often near volcanic seamount)**
20. What did Darwin study on the way home from the Galapagos? **Mocking birds**
21. How do those birds differ from each other? **Different beaks; some long and curved; others short and straight**
22. How old was Darwin when he returned to England? **27**
23. One major observation Darwin made was that different islands have \_\_\_\_ species. **different**
24. What did Darwin sketch in his secret notebooks? **"transmutation of species" ...tree**
25. What was Malthus' idea that inspired Darwin? **Struggle for existence; strong would survive**
26. What is natural selection? **Any trait that gives an advantage will be passed down – become common – the species will change; those best suited for surviving in their environment will survive**
27. What happens to favorable variations? What happens to unfavorable variations?
28. How old was Darwin when he figured out natural selection? **29**
29. Did Darwin's conclusions make him less of a believer? **Darwin was convinced that a "creator" was not responsible for the variety of species that he saw, but he still believed in a "higher power"**
30. What made Darwin wait for more than 20 years to publish his work? **Not accepted by public/peers**
31. When did Darwin publish "On the Origin of Species"? **Nov 1859**