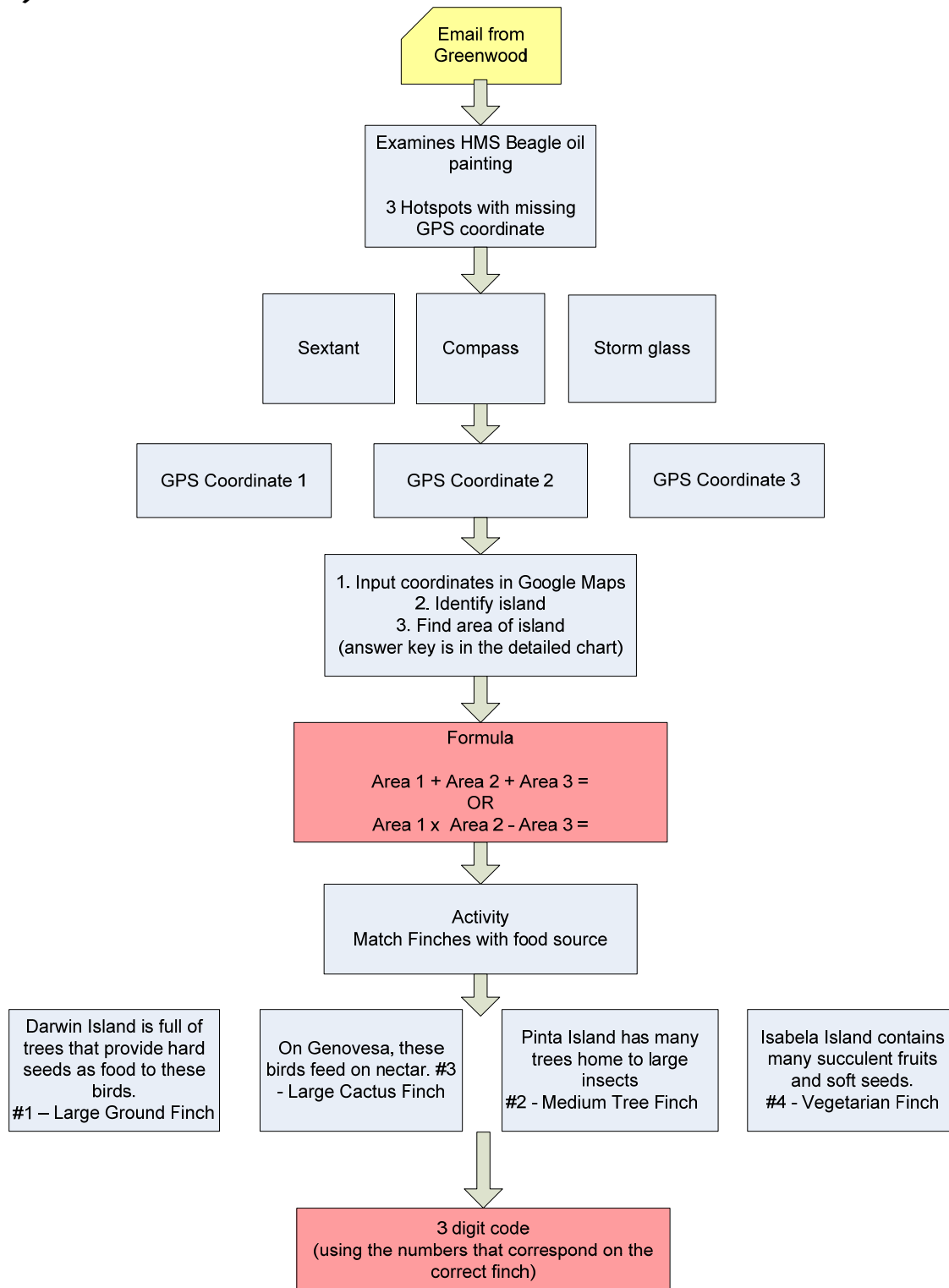


# HISTORY OF BIOLOGY

## Teacher's Walkthrough

### MISSION 6: X MARKS THE SPOT

#### A) WORKFLOW



# HISTORY OF BIOLOGY

## ■ Teacher's Walkthrough

### B) EMAILS, CLUES, OBJECTS

#### M06: INTRO EMAIL

	Contents	Explanation
EMAIL	<p><b>M06: INTRO EMAIL</b>  <b>From:</b> Dr. Jordan Greenwood  <b>Subject:</b> Mission 6</p> <p>Dear user,  Wasn't Linnaeus' work impressive? His binomial nomenclature system has been around for more than 250 years now. His work was also the basis of numerous scientists that followed, including Erasmus Darwin, who was the grandfather of Charles Darwin. Like Linnaeus, Charles Darwin also took a transforming journey where his observations would change how people understood the natural world. Darwin spent 5 years on the HMS Beagle exploring and describing new species.</p> <p>That's it! Charles Darwin. I remember Dr. Shyre working on a lab for one of his classes about Darwin's discoveries. Click <a href="#">here</a> to go to the lab.</p> <p>He also has a painting of the HMS Beagle – you might want to check the RNA gallery exhibit as well – it wouldn't surprise me if Shyre altered that painting too, just like with Leeuwenhoek! Click <a href="#">here</a> to visit the gallery.</p> <p>What are you waiting for? Go check it out – and please let me know what you find!</p> <p>Waiting patiently,  Dr. Greenwood</p>	
FORMULA	<p>Area of Island 1 + Area of Island 2 + Area of Island 3 (in square km)</p> <p style="text-align: center;">Or</p> <p>Area of Island 2 x Area of Island 1 - Area of Island 3 (in square km)</p>	Users need to visit both the RNA gallery and Shyre's Lab 2a page to solve the formula
WEBSITE	<p>RNA Gallery – HMS Beagle Painting</p> <p>The HMS Beagle painting has 3 hotspots for the: compass, sextant, and storm glass. Each item displays a number that is part of a GPS coordinate in Lab #2a</p>	

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WEBSITE	Shyre's University Site – Lab #2a Each user will be randomly assigned 3 islands to identify. Users will need the missing GPS coordinate from the HMS Beagle painting																																																										
ISLANDS ANSWER KEY	<p>Wikipedia is a great source for this as all the information is contained with a few pages</p> <table> <thead> <tr> <th>Island Name</th><th>Coordinates</th><th>Area</th></tr> </thead> <tbody> <tr> <td>Bartolome</td><td>-0° 17' 2.4", -90° 32' 52.8"</td><td>1.2</td></tr> <tr> <td>Darwin</td><td>1° 40' 1.2", -91° 59' 56.4"</td><td>1</td></tr> <tr> <td>Fernandina</td><td>-0° 22' 12", -91° 33' 0"</td><td>642</td></tr> <tr> <td>Floreana</td><td>-1° 17' 51", -90° 26' 3"</td><td>173</td></tr> <tr> <td>Genovesa</td><td>0° 19' 0", -89° 57' 0"</td><td>14</td></tr> <tr> <td>Isabela</td><td>-0° 45' 39", -91° 1' 22"</td><td>4640</td></tr> <tr> <td>Marchena</td><td>0° 21' 0", -90° 30' 0"</td><td>130</td></tr> <tr> <td></td><td>-0° 23' 29.4", -90° 17'</td><td></td></tr> <tr> <td>North Seymour</td><td>2.76"</td><td>1.9</td></tr> <tr> <td>Pinta</td><td>0° 36' 0", -90° 45' 0"</td><td>60</td></tr> <tr> <td></td><td>-0° 24' 46.8", -90° 42'</td><td></td></tr> <tr> <td>Rabida</td><td>32.4"</td><td>4.9</td></tr> <tr> <td></td><td>-0° 46' 55.43", -89° 22'</td><td></td></tr> <tr> <td>San Cristobal</td><td>33.02"</td><td>558</td></tr> <tr> <td>Santa Cruz</td><td>-0° 38' 0", -90° 22' 0"</td><td>986</td></tr> <tr> <td>Santa Fe</td><td>-0° 49' 12", -90° 3' 36"</td><td>24</td></tr> <tr> <td>Santiago</td><td>-0° 15' 0", -90° 42' 0"</td><td>585</td></tr> <tr> <td>Wolf</td><td>1° 23' 10", -91° 49' 11"</td><td>1.3</td></tr> </tbody> </table>	Island Name	Coordinates	Area	Bartolome	-0° 17' 2.4", -90° 32' 52.8"	1.2	Darwin	1° 40' 1.2", -91° 59' 56.4"	1	Fernandina	-0° 22' 12", -91° 33' 0"	642	Floreana	-1° 17' 51", -90° 26' 3"	173	Genovesa	0° 19' 0", -89° 57' 0"	14	Isabela	-0° 45' 39", -91° 1' 22"	4640	Marchena	0° 21' 0", -90° 30' 0"	130		-0° 23' 29.4", -90° 17'		North Seymour	2.76"	1.9	Pinta	0° 36' 0", -90° 45' 0"	60		-0° 24' 46.8", -90° 42'		Rabida	32.4"	4.9		-0° 46' 55.43", -89° 22'		San Cristobal	33.02"	558	Santa Cruz	-0° 38' 0", -90° 22' 0"	986	Santa Fe	-0° 49' 12", -90° 3' 36"	24	Santiago	-0° 15' 0", -90° 42' 0"	585	Wolf	1° 23' 10", -91° 49' 11"	1.3	
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EMAIL	<p><b>M06: FINCHES ACTIVITY</b>  <b>From:</b> Dr. Jordan Greenwood  <b>Subject:</b> Next part of the quiz</p> <p>Dear User,          Whew, Shyre definitely created quite the complicated labs for his students. I just received an email from him with the second part of the lab. I've uploaded it to his website, so it's ready for you now. Click <a href="#">here</a> to go to the lab.          It looks like Shyre wants you to select the correct finch that would live on the island that is described. Then use the number associated with the finches to enter your 3 digit code.</p> <p>Dr. Greenwood</p>																																																										
FINCHES ANSWER KEY	<p>Darwin Island is full of trees that provide hard seeds as food to these birds. #1 – Large Ground Finch</p> <p>On Genovesa, these birds feed on nectar. #3 - Large</p>	In this activity, users need to read about the different types of finches that Darwin																																																									

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	<p>Cactus Finch</p> <p>Pinta Island has many trees home to large insects. #2 - Medium Tree Finch</p> <p>Isabela Island contains many succulent fruits and soft seeds. #4 - Vegetarian Finch</p>	<p>discovered and match the description with the finch.</p>
EMAIL	<p><b>M06: VICTORY EMAIL</b> <b>From:</b> Dr. Jordan Greenwood <b>Subject:</b> Darwin</p> <p>Dear user,</p> <p>Darwin collected many specimens while exploring the Galapagos Islands, however it was his collection of finches that helped him formulate his theory of natural selection. The finches differ from one another based on their beak shape and size. The Ground Finches have hard short beaks, ideal for crushing seeds. The Tree Finches have sharper and longer beaks that are better suited for grasping insects. The Cactus Finches have long beaks that allow them to eat the insects in the cactus flowers, or the flowers themselves. The beaks of the Vegetarian Finches are not as hard, and their diet is primarily of fruits and soft seeds.</p> <p>Greenwood</p>	