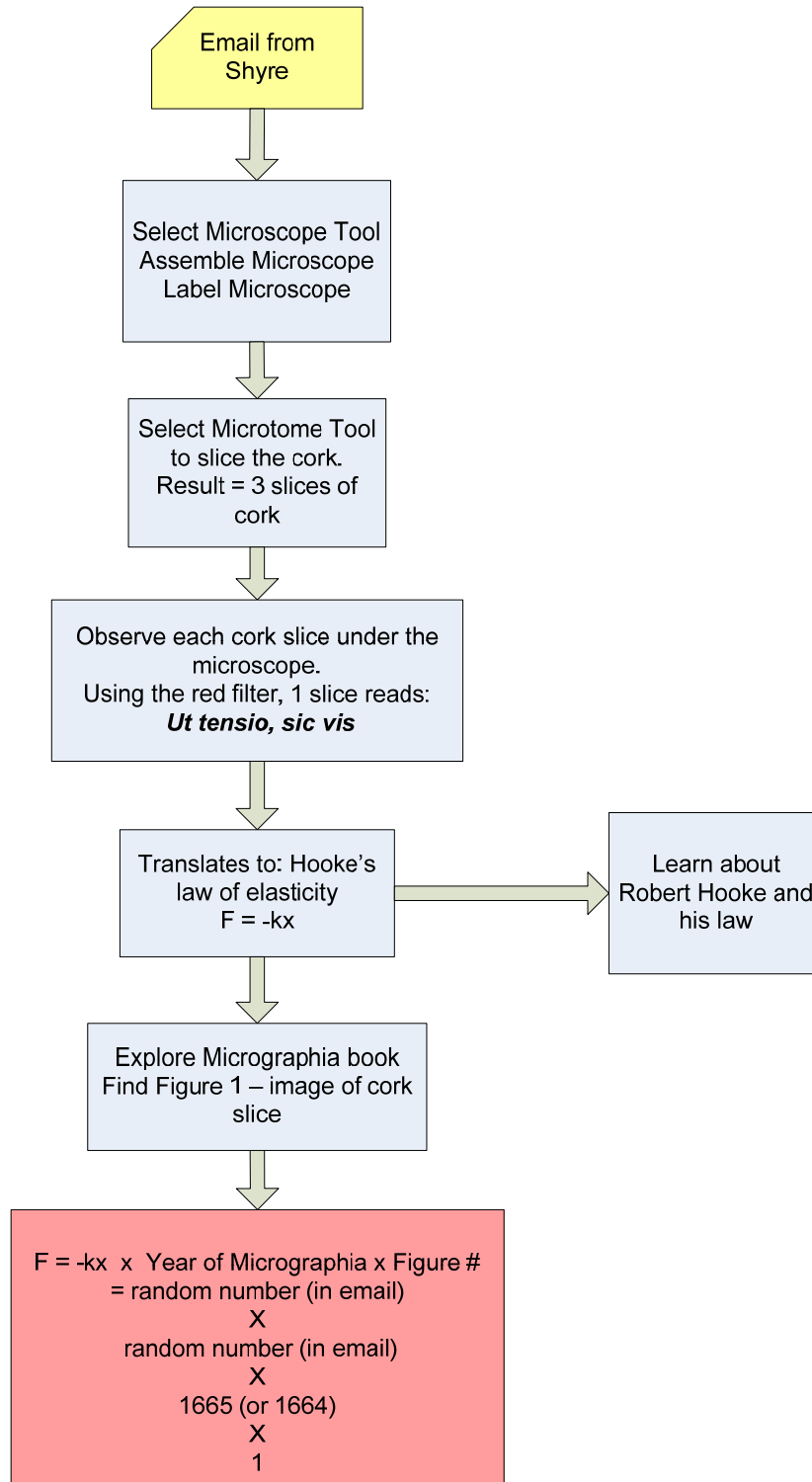


HISTORY OF BIOLOGY

■ Teacher's Walkthrough

MISSION 2: FORCING DISCOVERY

A) WORKFLOW



HISTORY OF BIOLOGY

■ Teacher's Walkthrough

B) EMAILS, CLUES, OBJECTS

	Contents	Explanation
EMAIL CLUES	<p>M02: INTRO EMAIL From: Dr. Walden Shyre Subject: Is anyone watching you?</p> <p>Dear User, I have left this message to the one who is meant to find my great discovery. I cannot say much, since this message can easily fall into the wrong hands. This item in your possession contains a microscopic clue. Numerous findings of some of history's greatest minds were stolen, obscured or destroyed by those who harboured jealousy, greed or were unknowingly misguided. That is why my work is buried deep, for only those who wish to better humankind will be able to find it.</p> <p>You must look with great intensity at this object that bares hidden words of wisdom. An illustration of the first in-depth look at this object lies in a renowned book that now sits in the National Library of Medicine: http://archive.nlm.nih.gov/proj/ttp/flash/hooke/hooke.html</p> <p>Most of the illustrations in this book were created with help of the tool this scientist created, which you must use to see his hidden words. The phrase you will find represents a formula. Use the formula to find the value of the force, if $x = v \text{force}_x v$, and $k = v \text{force}_k v$.</p> <p>Once you determine the value for the force (F), you must then multiply it by the Figure # that the object is found in the Micrographia book and by the year of this renowned book's date of publication.</p> <p>I'm sorry I cannot be more direct, but my mission is all too important. You will get more clues when it is safe for me to send them. Know that things will get more dangerous from now on, and my clues will not be as obvious as they are now.</p> <p>Good luck, WS p.s. be careful - they are watching you too....</p>	<p>= cork from a winery</p> <p>Cork contains the formula for Hooke's law, but needs to be sliced with the microtome first before it can be viewed under the microscope</p> <p>= compound microscope</p> <p>Formula = Hooke's law $F = -xk$</p> <p>Figure #1 Year is 1664 or 1665</p>
OBJECT	Cork – contains a hidden message, but needs to be sliced with the microtome before it can be viewed under the microscope	1. From the Tools tab, select the Microtome, then select the Cork

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		from the Objects Tab. 2. Turn the handle to create 3 slices. Each of these slices will appear as new objects
OBJECT	Compound Microscope – once assembled it is interactive. -rotate the lenses: 10x, 40x, 100x -use the blue or red filter Hint – when assembling the microscope, add pieces to the base	1. Select the Microscope from the Tool tab 2. Assemble the Microscope (use the internet for reference images). 3. Label the microscope
OBJECT	Cork Slices – examine each slice under the assembled microscope	Correct conditions: red filter with 40x objective lens. <i>'Ut tension sic vis'</i>
WEBSITE	Link to Micrographia. Users need to find Figure 1, which is a picture of a cork slice.	
EMAIL	M02: VICTORY EMAIL From: Dr. Walden Shyre Subject: Congratulations Dear User, Congratulations, you have correctly identified the amount of force required for my next clue. Hooke's work around his law of elasticity led to the invention of the balance spring, which was a key part in allowing the mechanical watch to keep time accurately. Micrographia contained the first pictures of cork cells and Hooke himself was the first to come up with the word 'cell' for describing biological organisms. He thought the walled-in region of cork cells looked similar to monks' rooms, known in latin as 'cellula' for small rooms. Stay safe, WS	