

What's New in iBooks Author

Session 605

Charles Migos

Design Manager, iBooks

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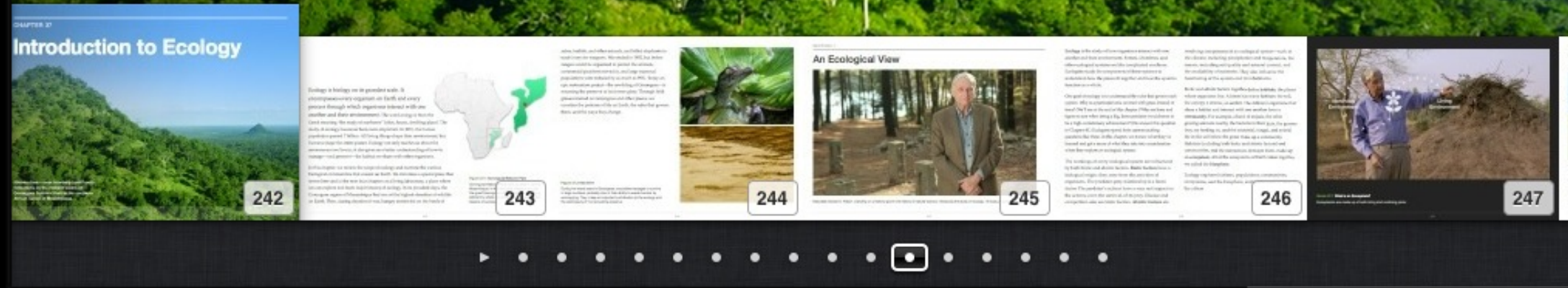
Today's Agenda

- Demo iBooks for Mac
- Demo iBooks Author 2.0 interface and features
- Learn how to create interactive books for iPad and Mac
 - Construct your own template
 - Build interactive content
 - Discover the new widgets
- See how to publish books from within iBooks Author
- Learn shortcuts to speed up the creation of your book

CHAPTER 37

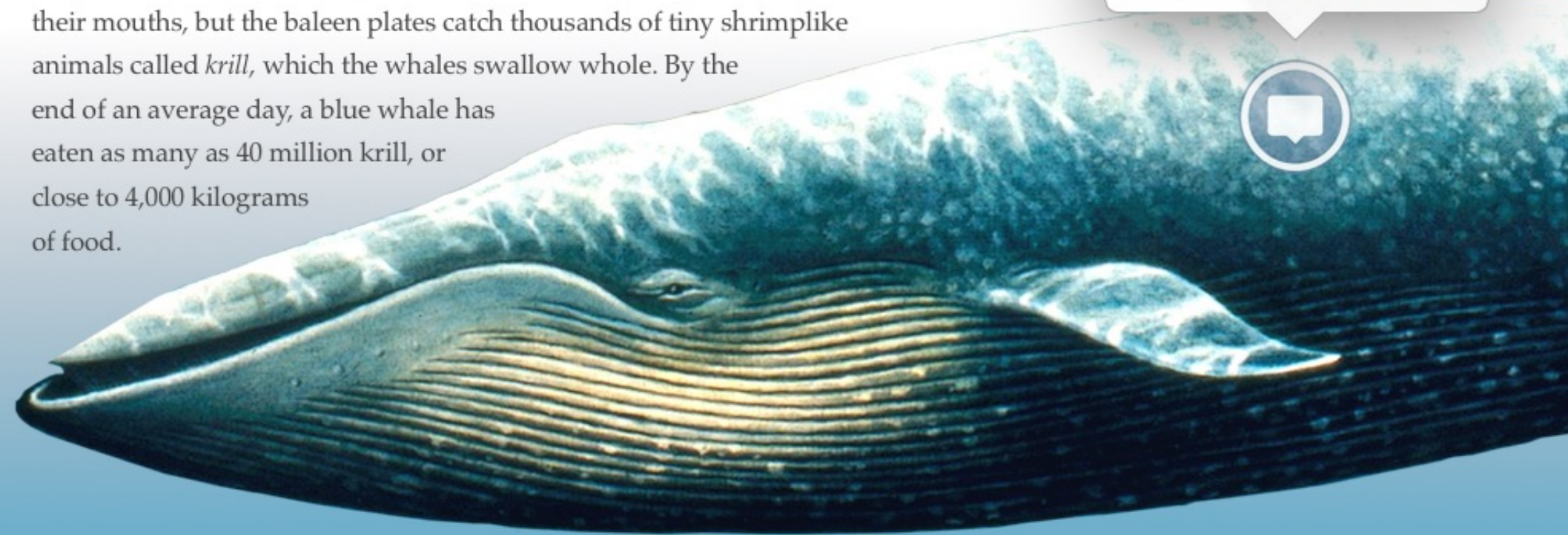
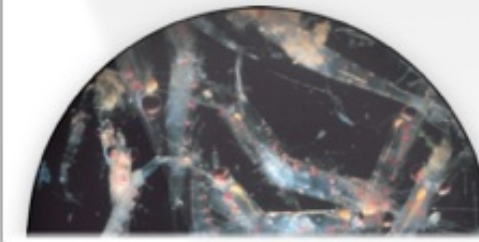
Introduction to Ecology

- 37.1 An Ecological View
- 37.2 The Biology of Place: Biomes and Landscapes
- 37.3 The Living Web
- 37.4 A Guided Tour of a Dynamic Landscape: Gorongosa
- 37.5 Review
- 37.6 Project-Based Learning: Plant Wars

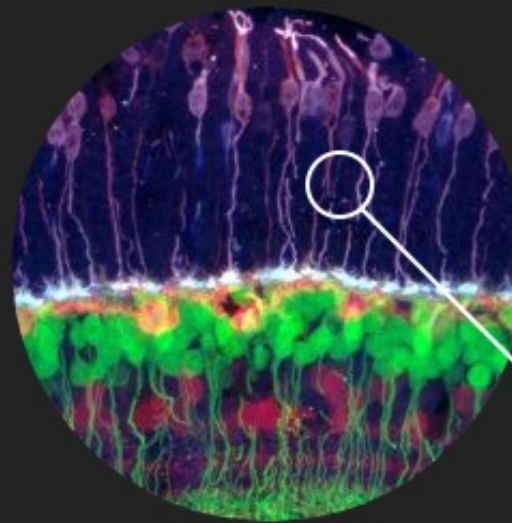


Think about the last meal you ate. Was it breakfast this morning? Lunch at noon? Dinner this evening? Most of us eat at regular times during the day, and most of us eat foods that require biting, chewing, and slurping. For blue whales, the entire day is mealtime, and they don't chew their food so much as gulp it. These creatures, each the length of the two city buses and weighing as much as 40 African elephants, don't have teeth. Instead their upper jaws are lined with 300 or so hairy plates, each roughly a yard long, called *baleen plates*. When they feed, the animals take in huge amounts of seawater. Their tongues force the water out of their mouths, but the baleen plates catch thousands of tiny shrimplike animals called *krill*, which the whales swallow whole. By the end of an average day, a blue whale has eaten as many as 40 million krill, or close to 4,000 kilograms of food.

The blue whale, *Balaenoptera musculus*, is the largest animal in the world, yet it feeds almost exclusively on krill, consisting of small crustaceans of several species. The morsel is small but the meal is large—up to 40 million krill a day, adding up to well over a million calories.

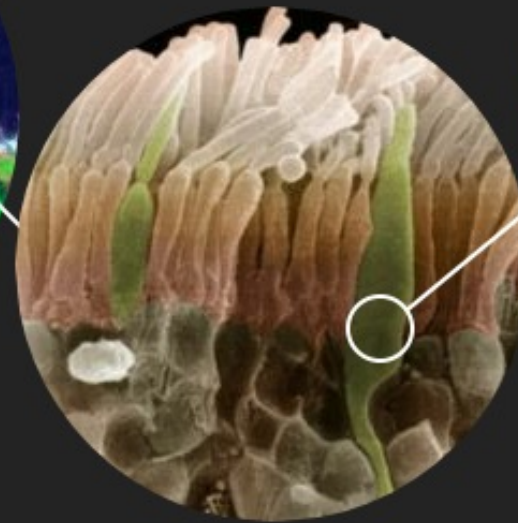


The Events of Vision



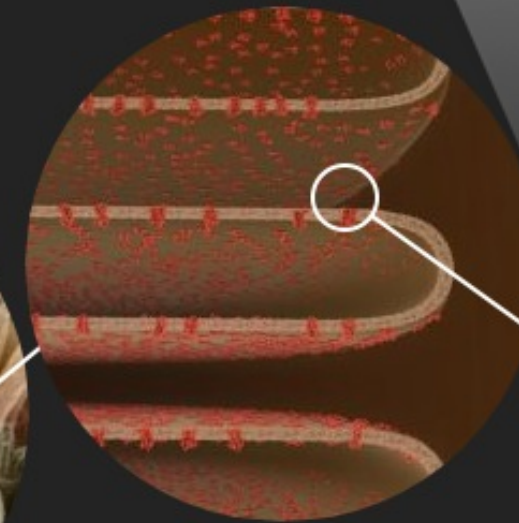
Retina

The retina contains millions of photoreceptor cells called *rods* and *cones* that are specialized to convert light into action potentials. The action potentials are passed to layers of interneurons that process the information, performing such neural computations as detecting edges and motion. This information is transferred to the brain, where it is perceived as a visual image of the scene projected on the retina.



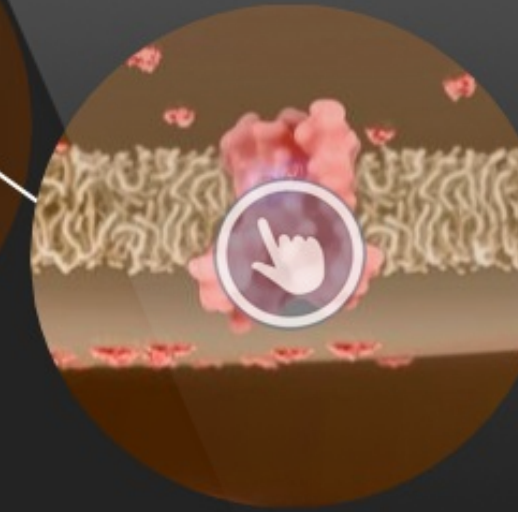
Rod and cone cells

Rod cells are taller and thicker and about 100 times more sensitive to light than cone cells. A rod cell can trigger an action potential in response to a single photon of light. However, rod cells have little or no role in color vision. Shorter cone cells need more light but are sensitive to color and their response time is faster than that of rod cells.



Interior membrane of photoreceptor

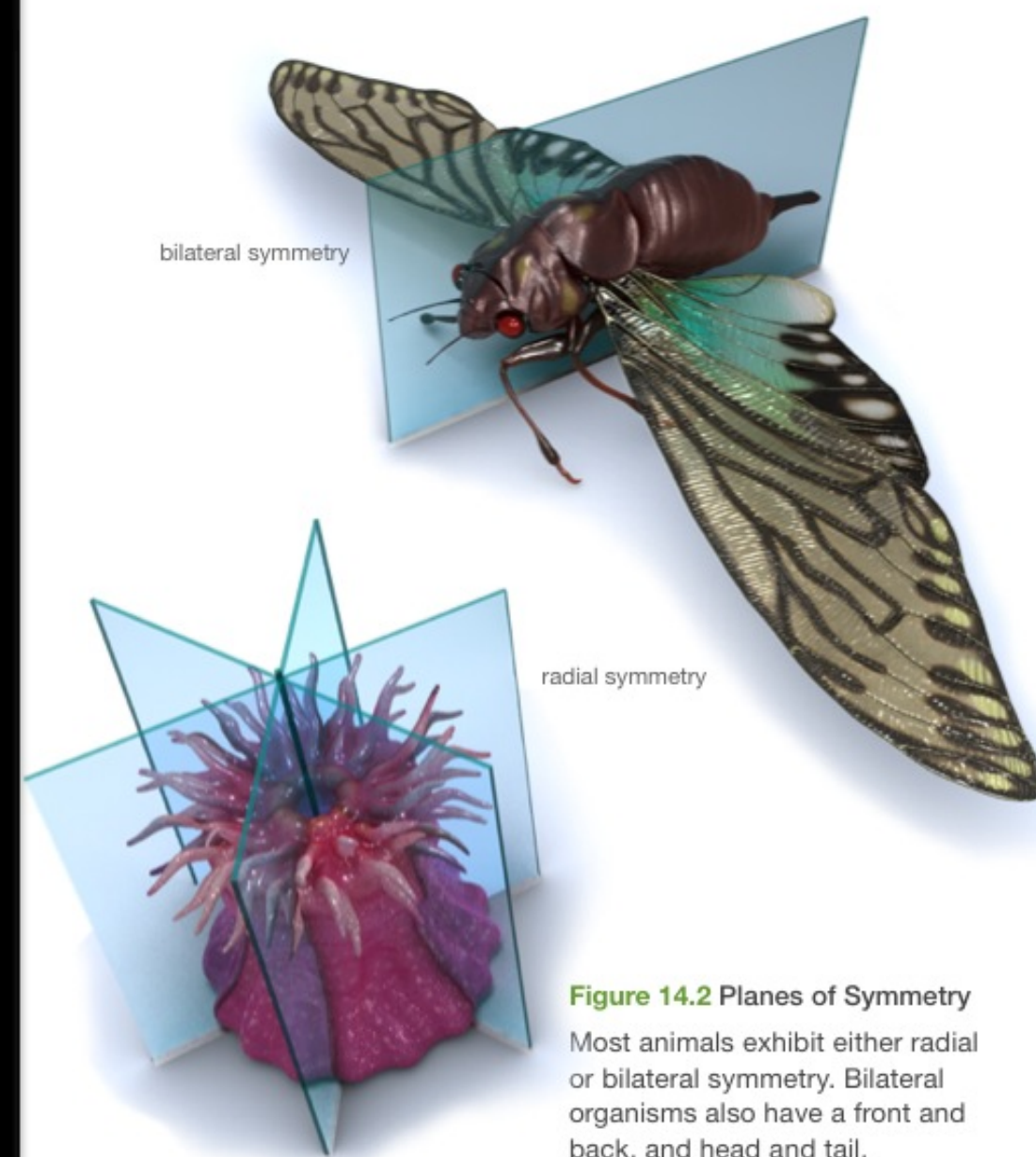
In both rods and cones, thousands of pancake-like stacks of membranous disks host many millions of copies of a protein called *opsin*. Opsin containing a molecule of light-sensitive retinal is called *rhodopsin*. Cone cells have three types of rhodopsins that are sensitive to different frequencies of light. Information from many color-sensitive rhodopsins is processed to arrive at accurate information about color, which is passed along through the visual system.



Interactive 15.6

Rhodopsin

The fundamental event of vision involves the interaction of light and matter. A photon of light is absorbed by retinal, which changes shape in response. This shape change affects the shape of rhodopsin, leading to a rapid change in polarization of the photoreceptor cell and transmission of action potential to surrounding interneurons.



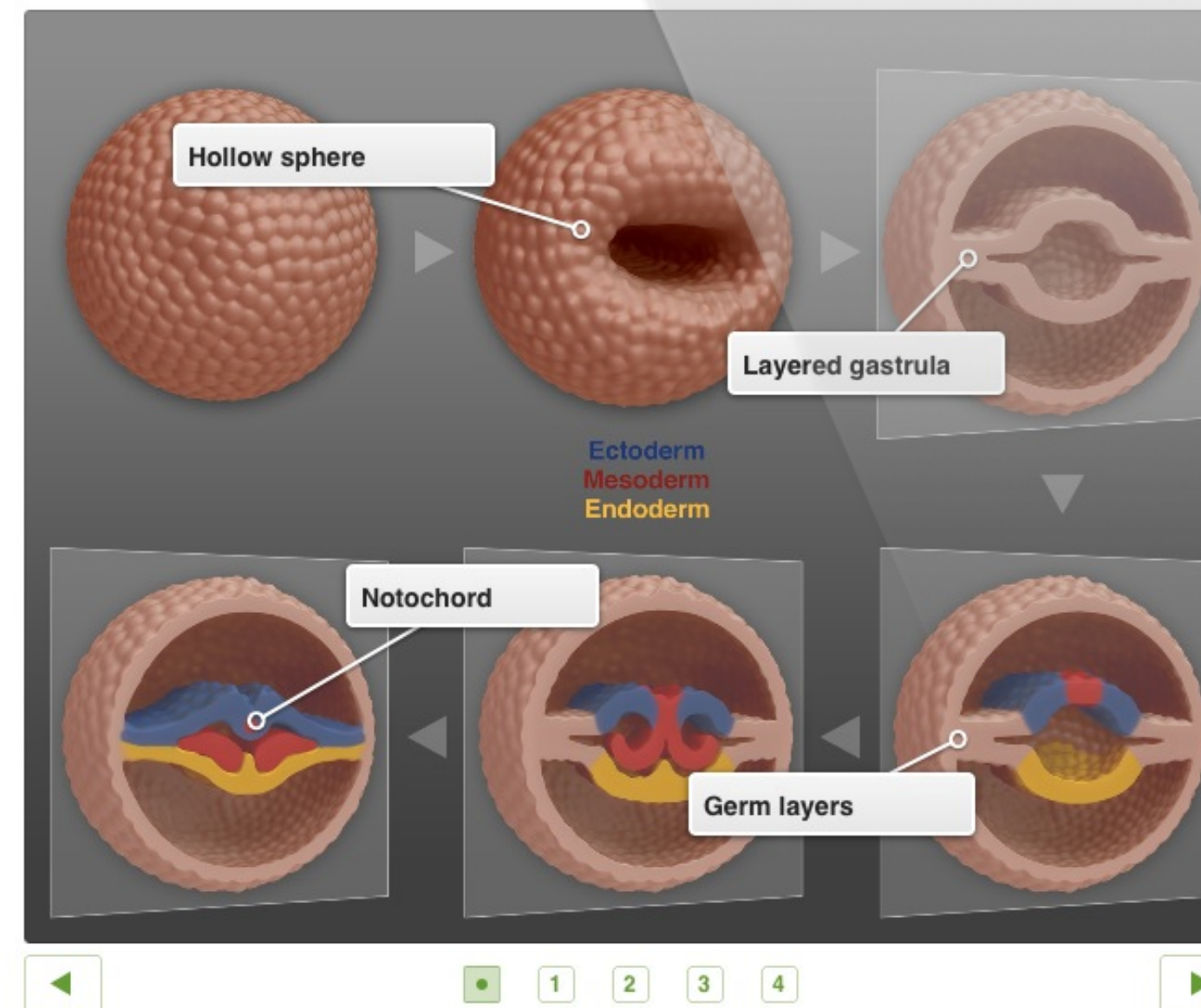
Symmetry

Categorizing body plans is more meaningful for more complex animals. Is the animal symmetrical? In animals with **radial symmetry**, there is no left or right. Symmetry extends from the center of the organism, like the slices of a pie. Starfish have **pentameric symmetry**, with parts arranged around the center in five equal sections.

In **bilateral symmetry**, a plane through the axis of the body divides the animal into mirror halves. Humans have bilateral symmetry—our right and left sides are mirror images. With the plane of bilateral symmetry established, we can also specify the back or **dorsal** side of the animal and the front or **ventral** side. Similarly, bilaterally symmetric animals have a head or **anterior** end and a tail or **posterior** end. It may be confusing to think of the feet of a human as the posterior end; it is more obvious if you think of the posterior of a dog. Humans and dogs are both *tetrapods*, vertebrate animals with body plans having four limbs.

approximates the layout of the adult body. The inner layer, or **endoderm**, forms the digestive system; the external layer, or **ectoderm**, forms the outer layer of the skin and the nervous system; and the middle layer, or **mesoderm**, forms the connective tissue, muscle, and many of the body's internal tissues and organs.

One key structure that arises during gastrulation is the **notochord**, a narrow column of mesodermal cells that elongates the body axis and acts as the embryo's backbone. When gastrulation is complete, the ectoderm that lies above the notochord begins to shift, forming a groove with raised edges. These edges gradually roll up into a tube and pinch off from the rest of the ectoderm, a process



Interactive 21.7 Three Layers from One

The formation of distinct cell layers from a single sheet can be seen in a cutaway view of the folding gastrula. Different gene activation in each layer determines the tissue type for each germ layer.

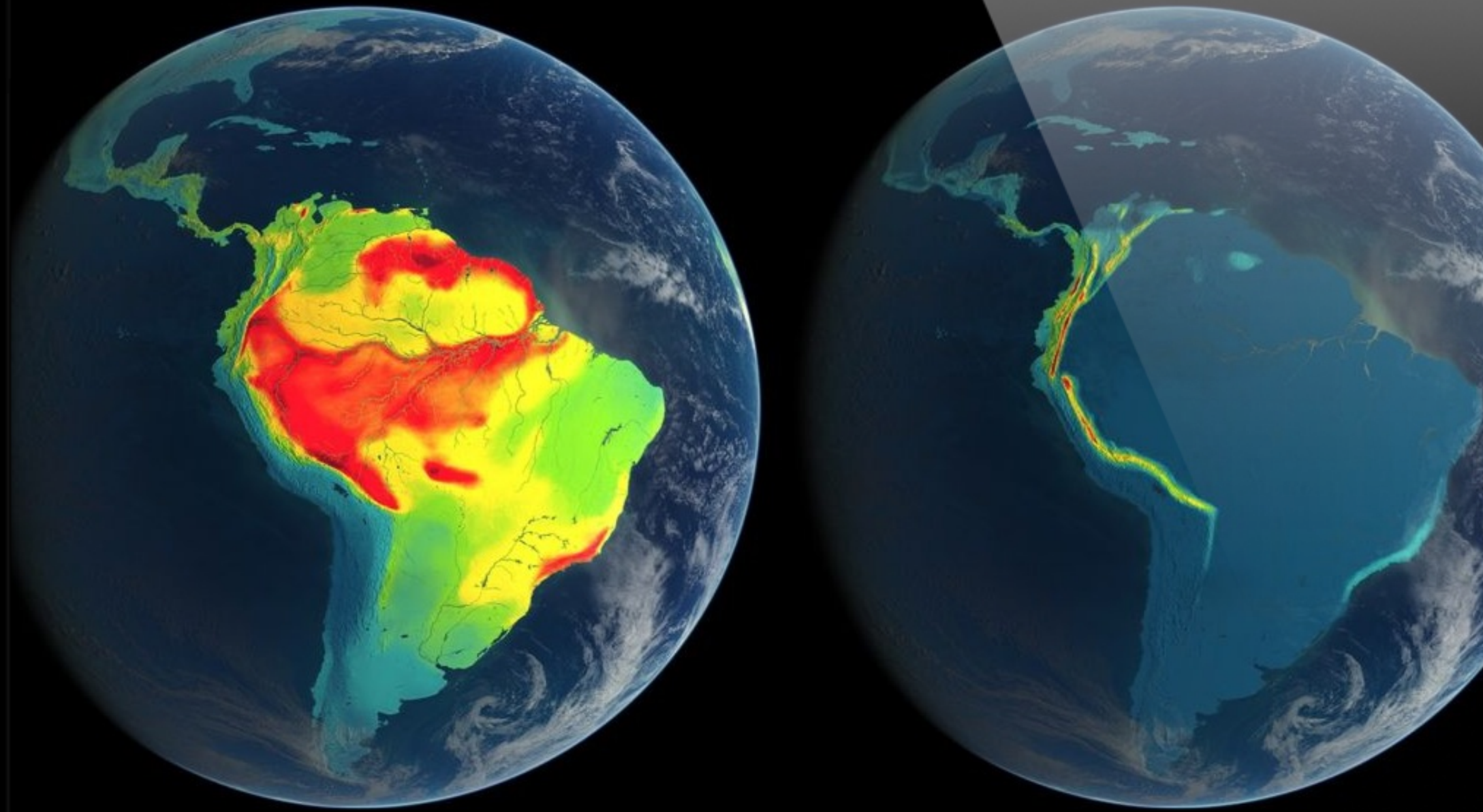
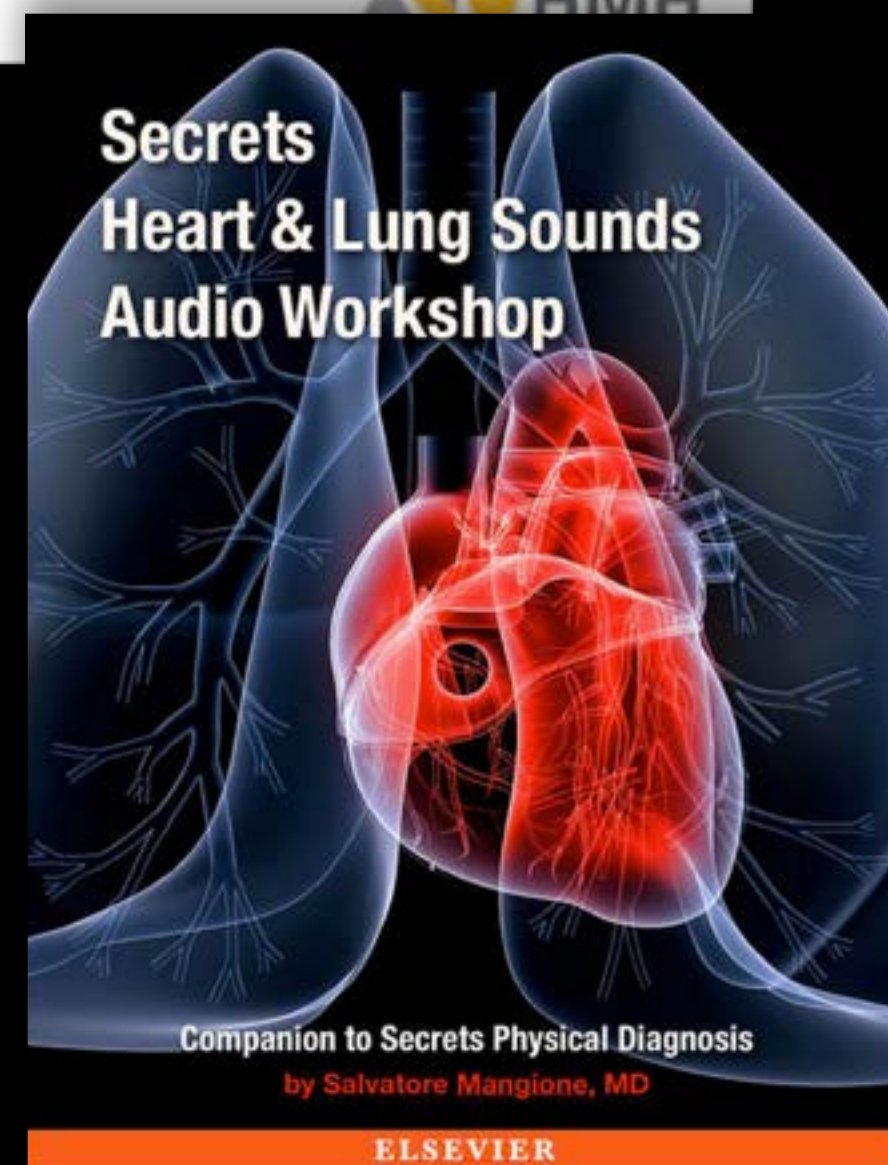
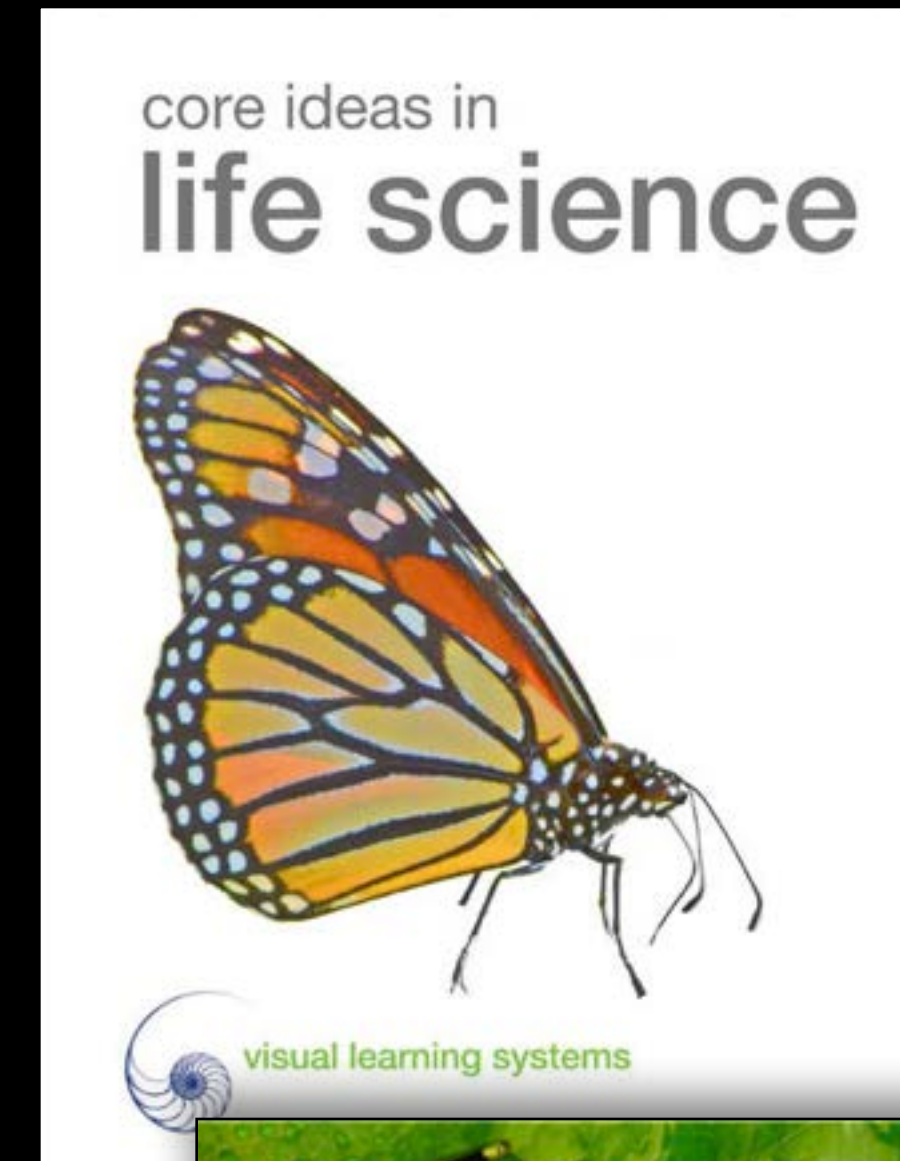
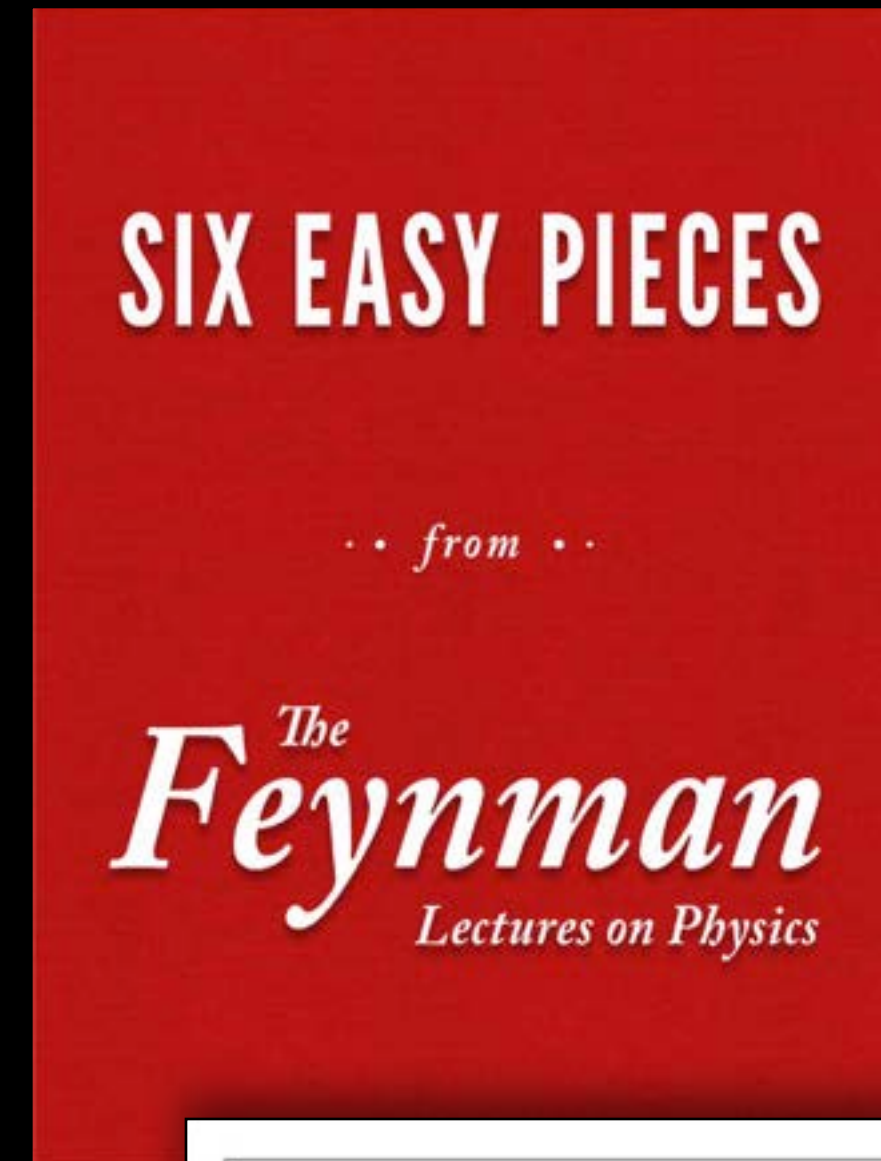
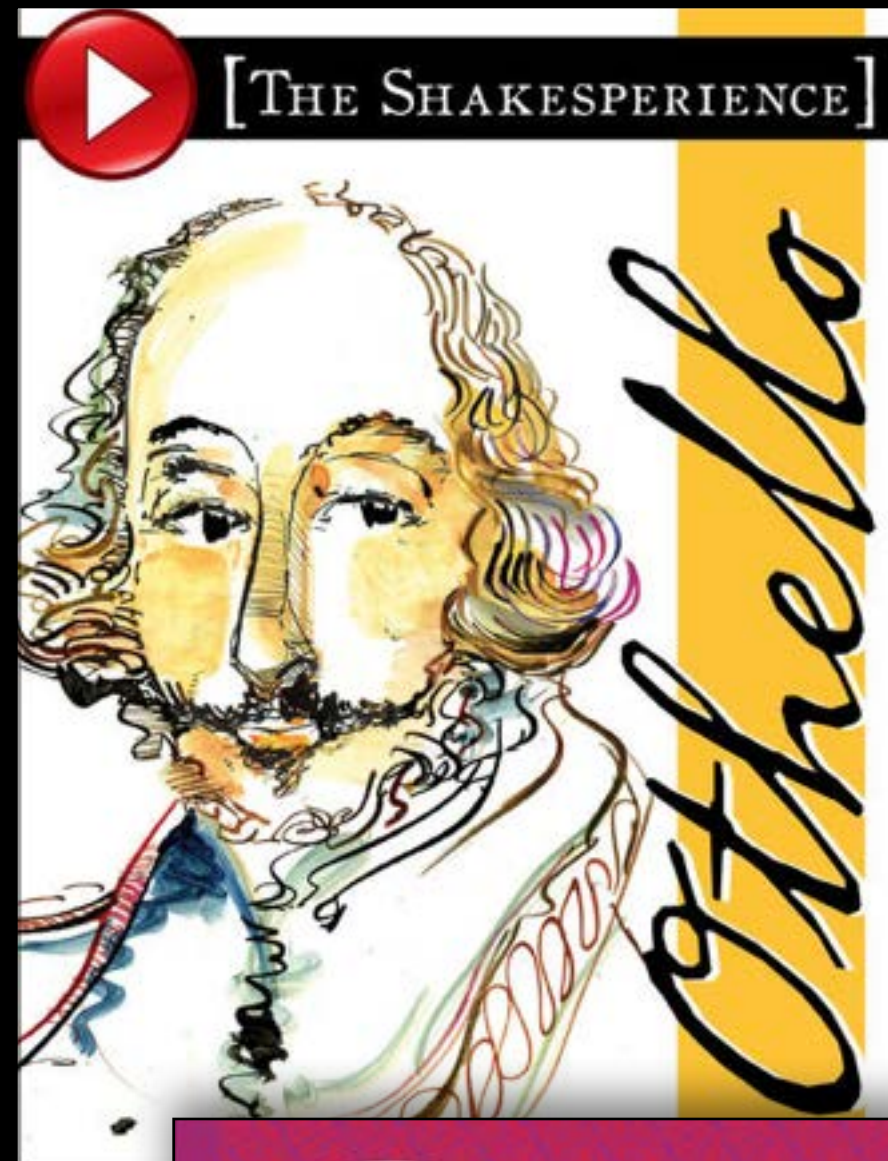


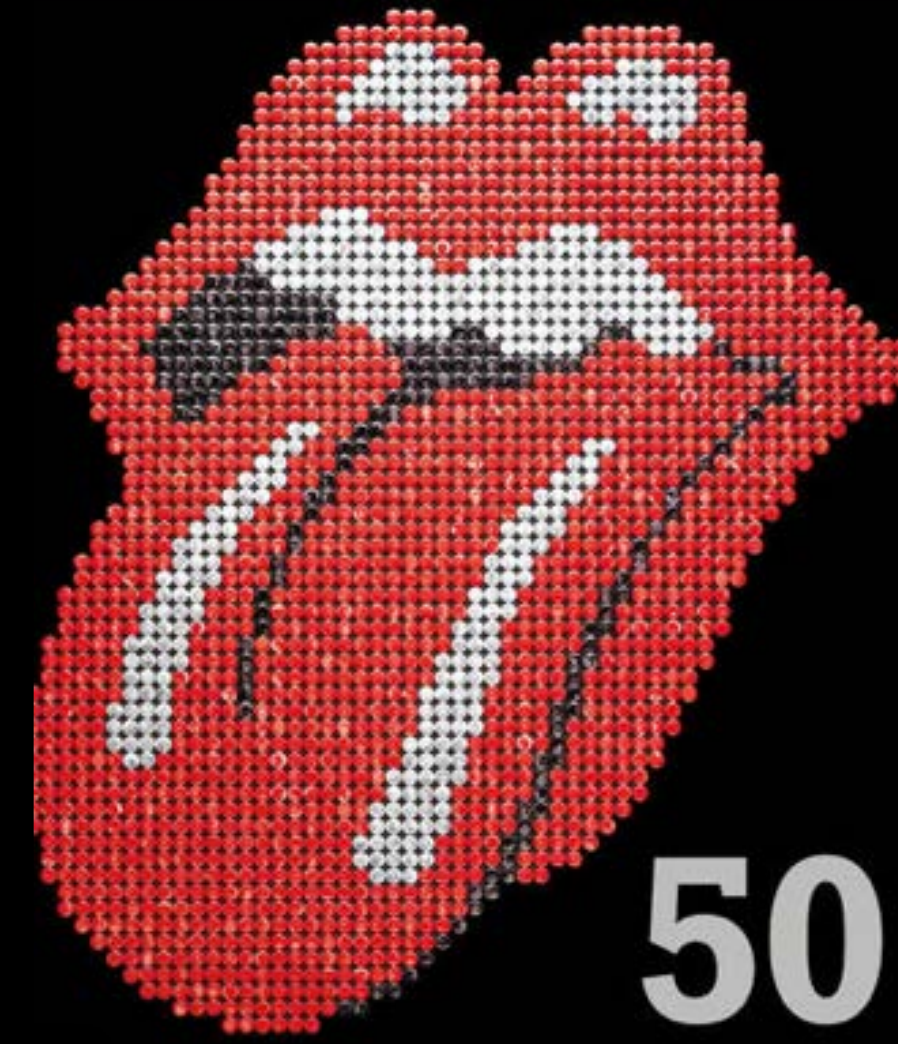
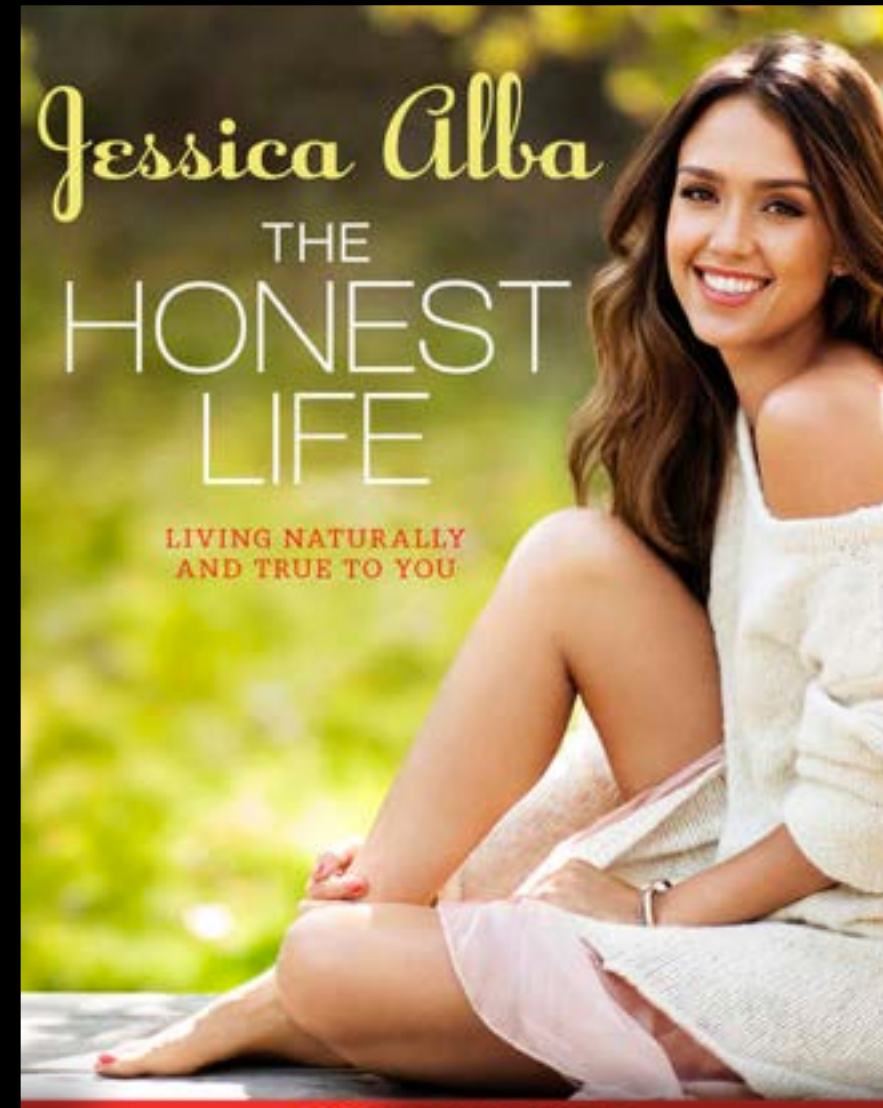
Figure 41.11 Irregular Life

Biodiversity is not spread evenly over Earth. The map at left shows areas of South America, in red, with the largest number of bird species. But endemic bird species, those that are prevalent only in one region, cluster near the Andes Mountains.

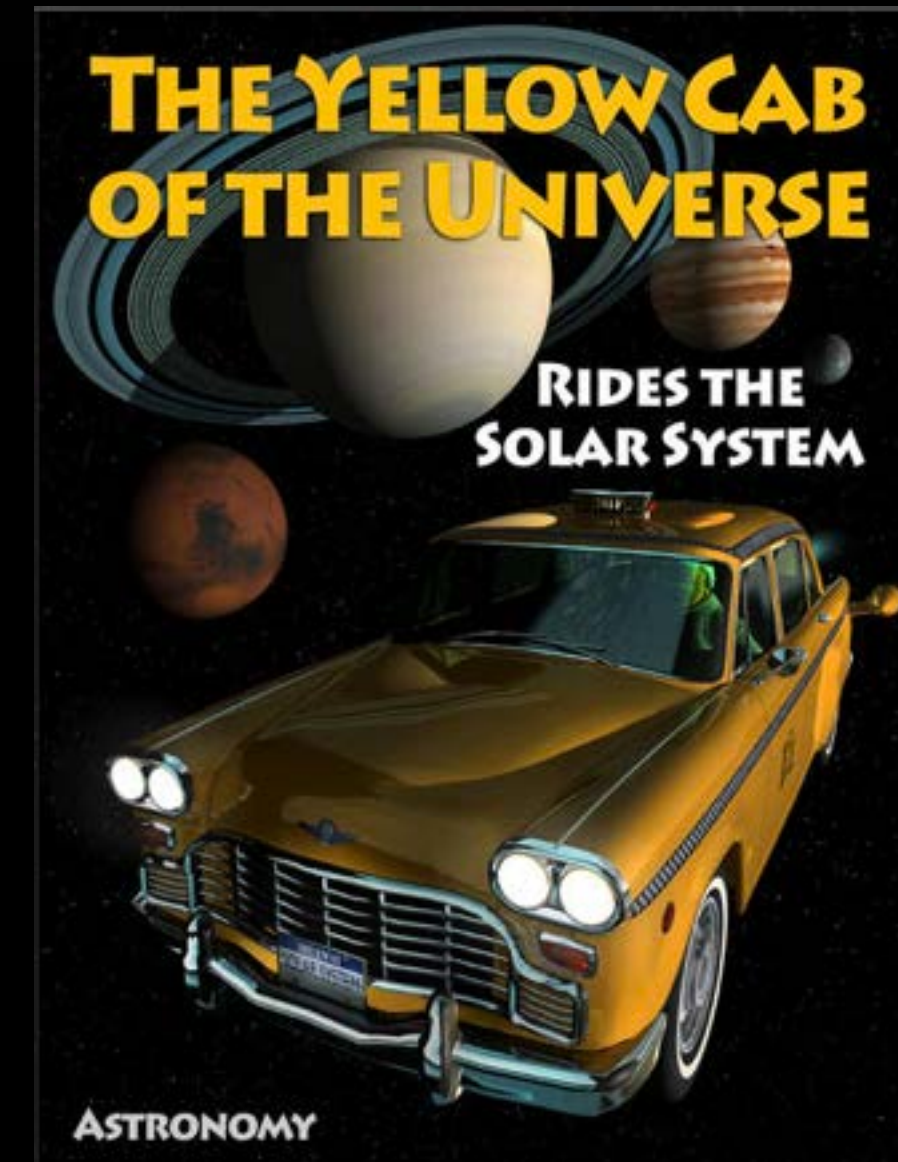
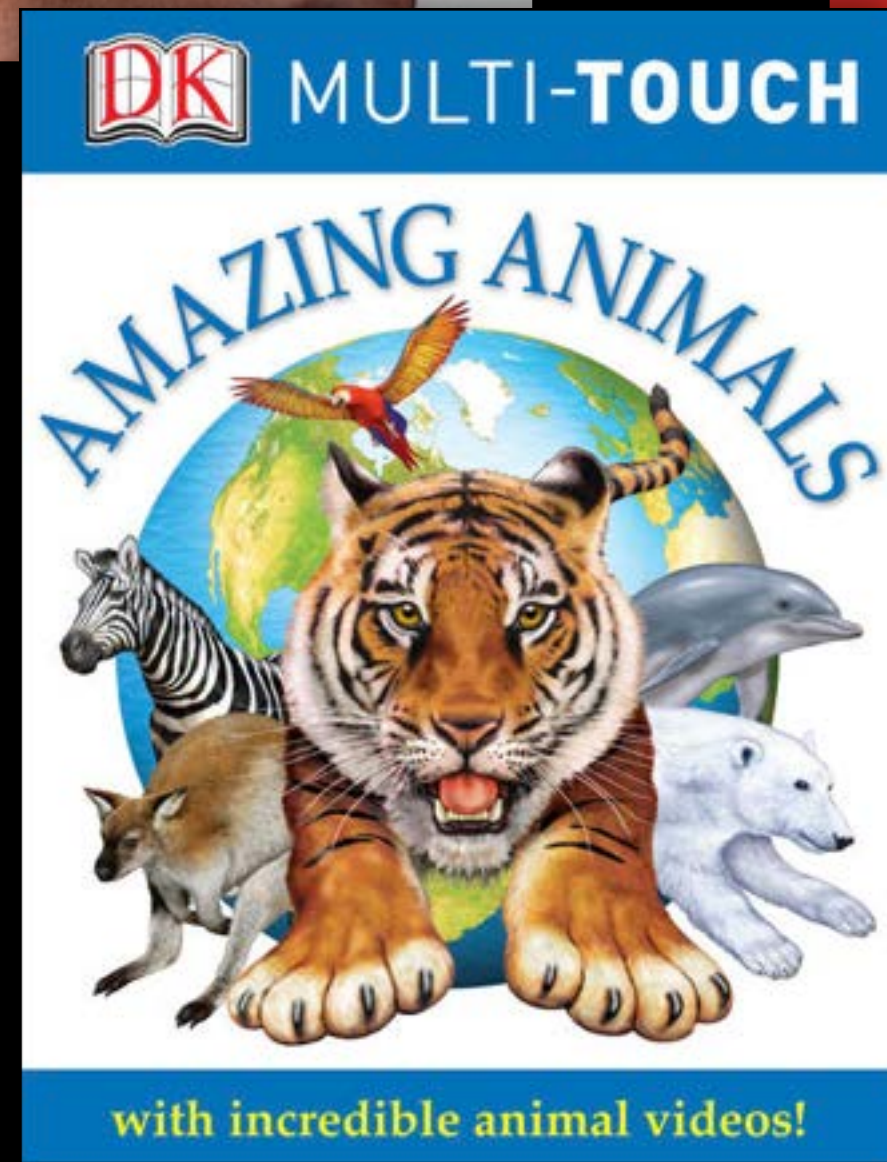
Education Recap

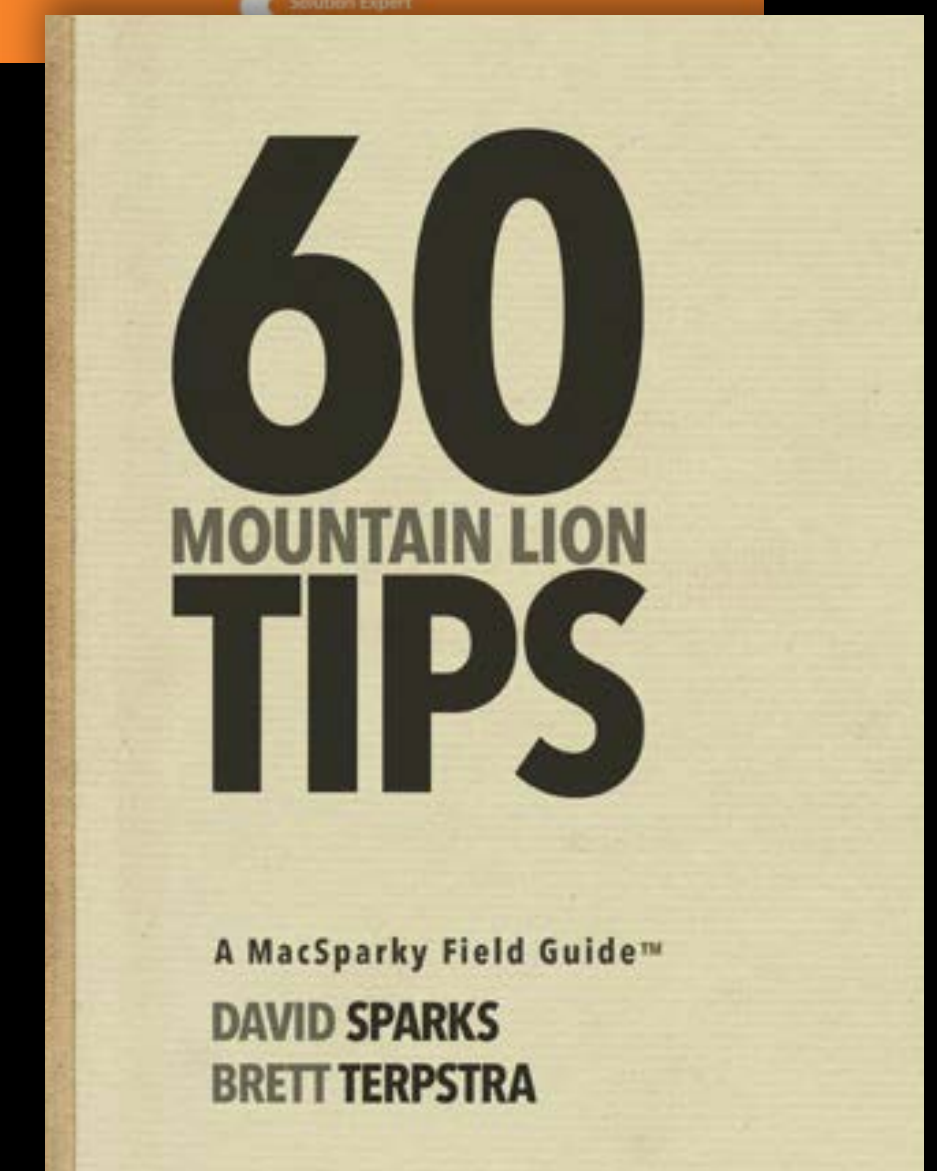
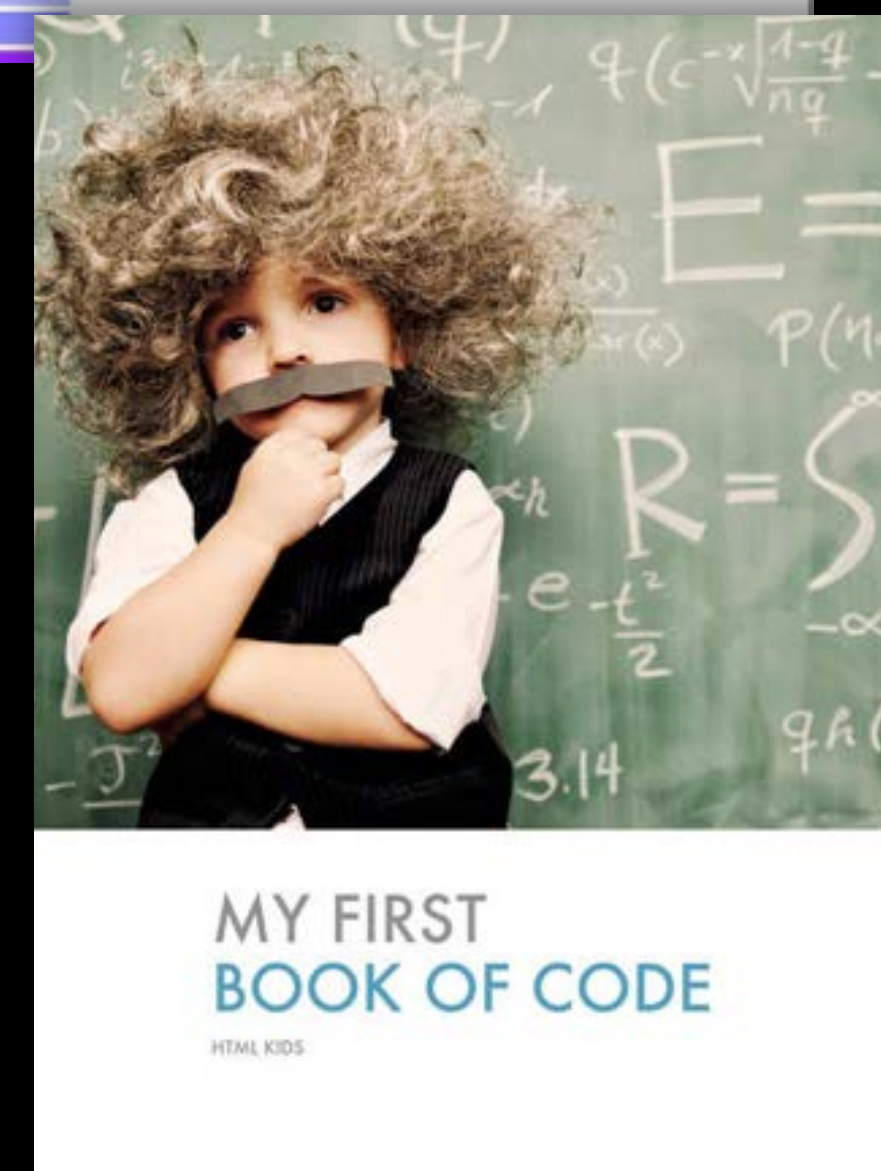
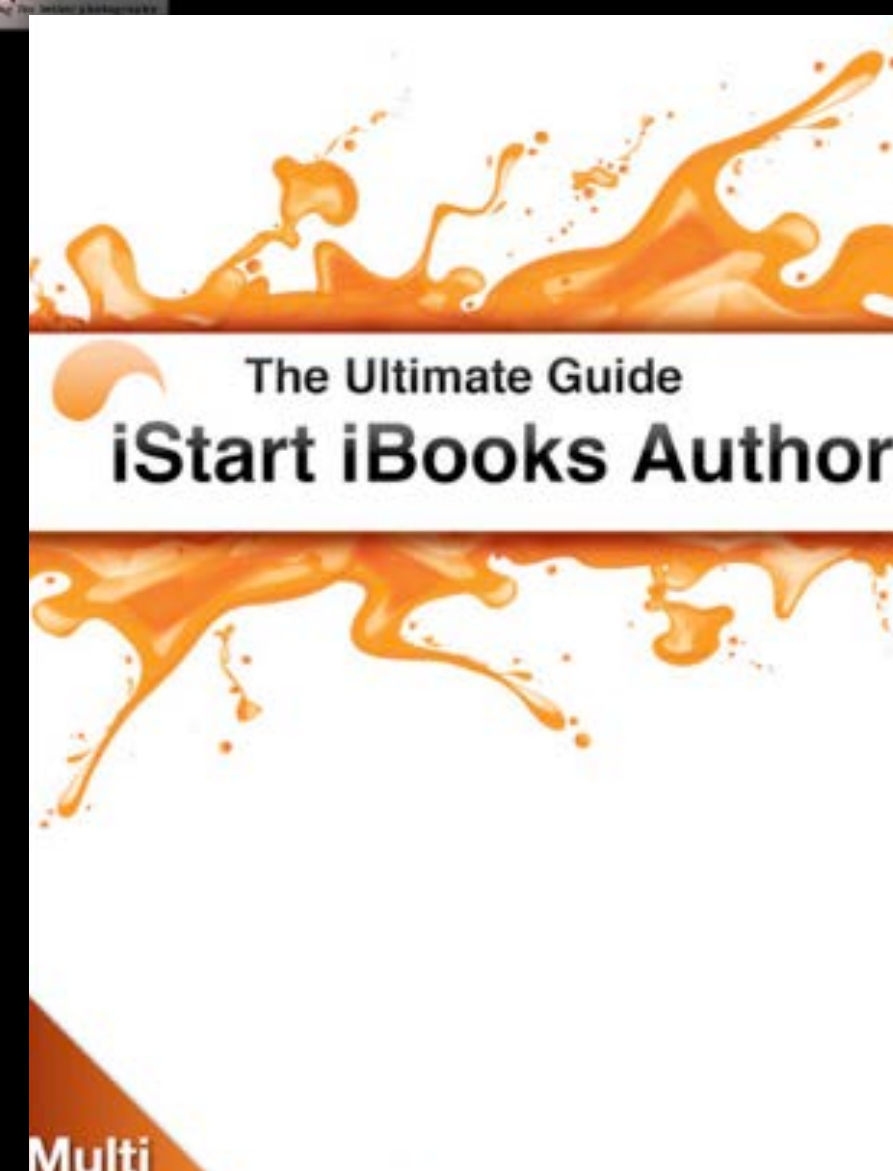
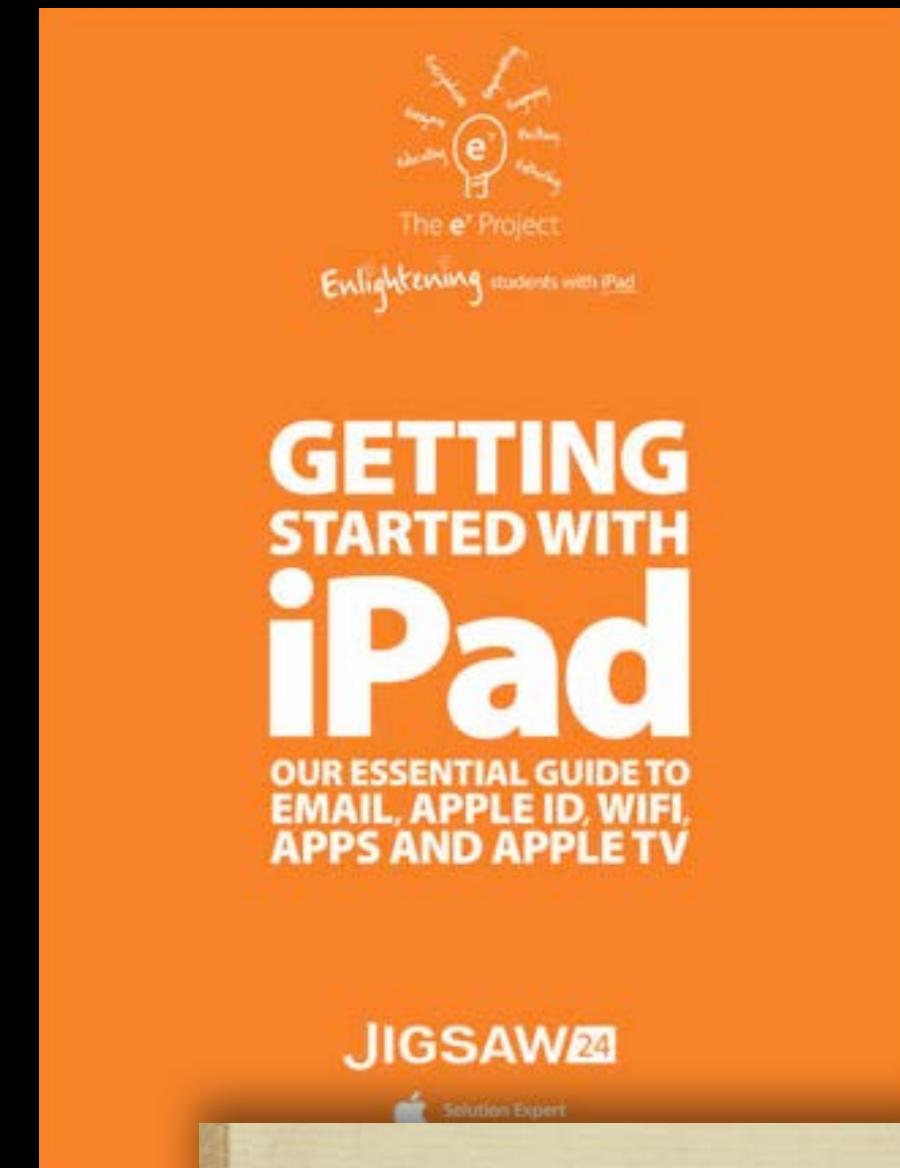
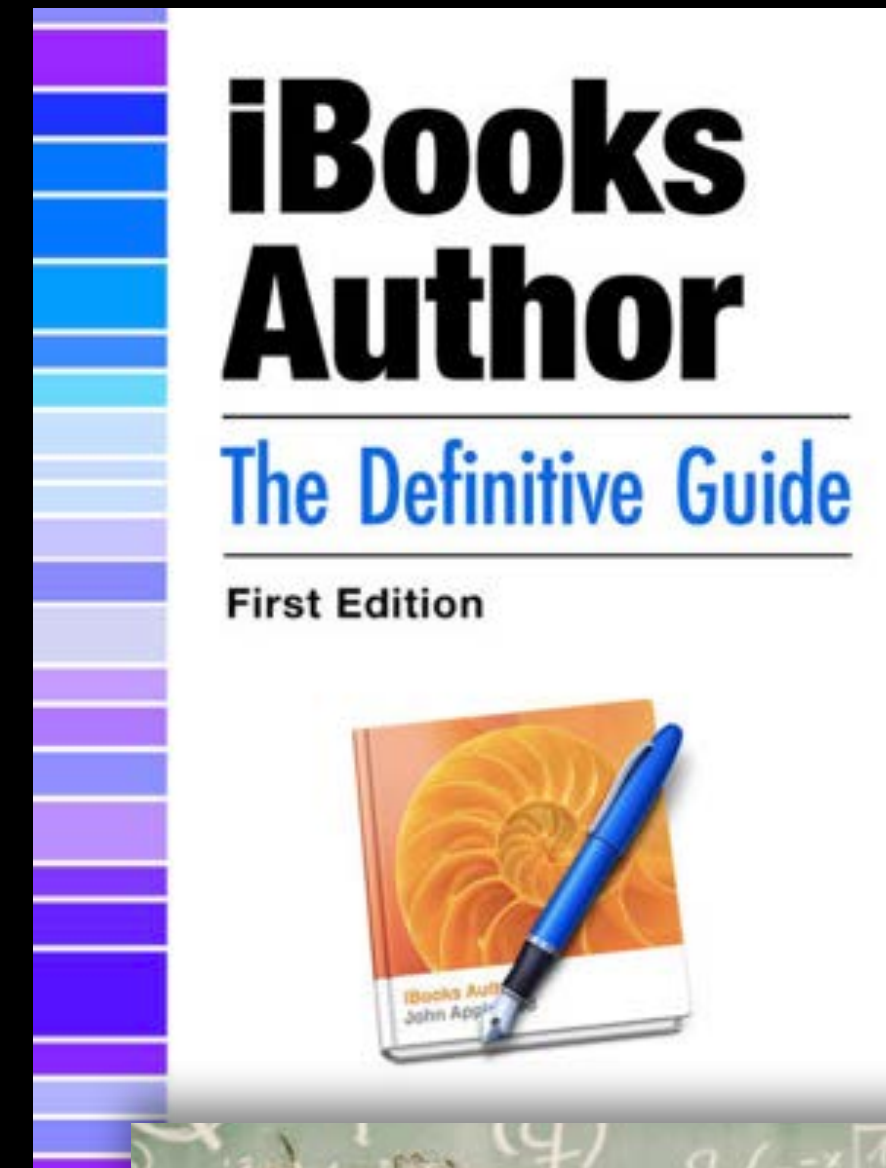
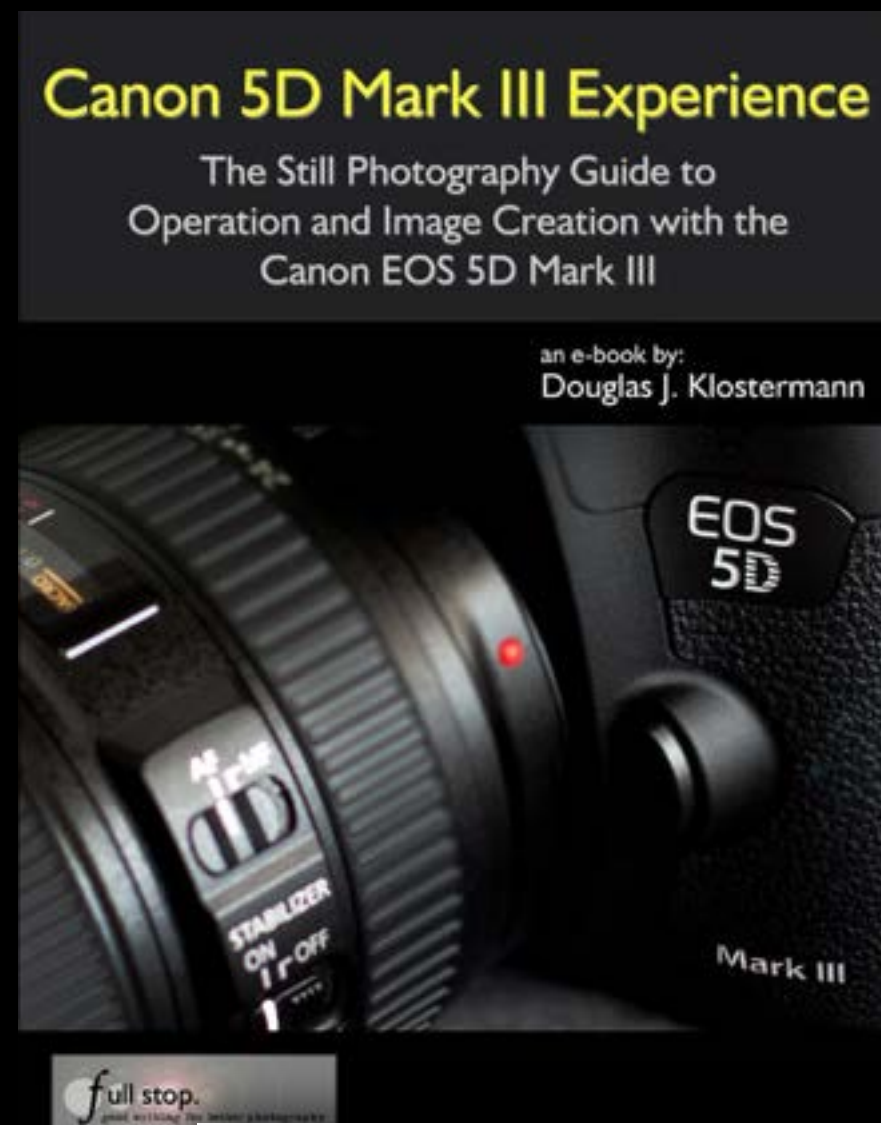
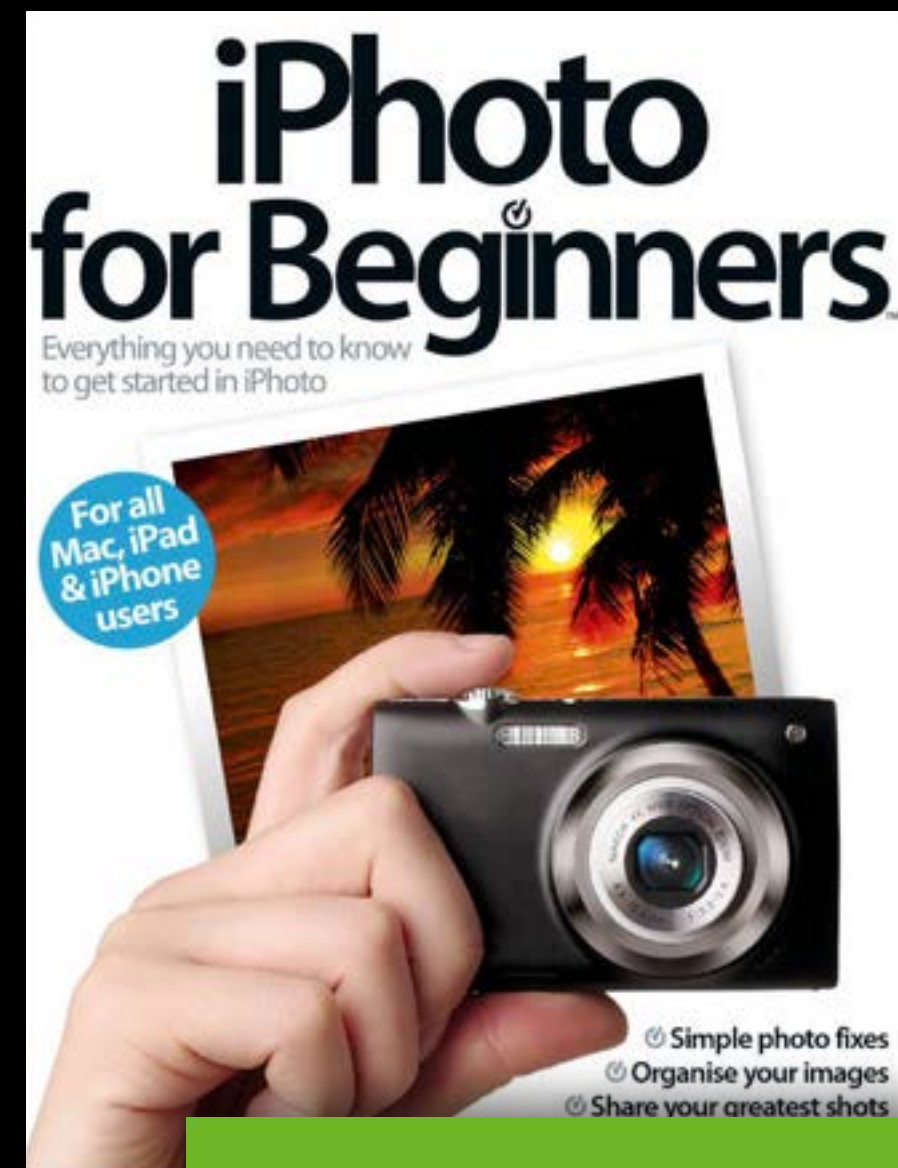
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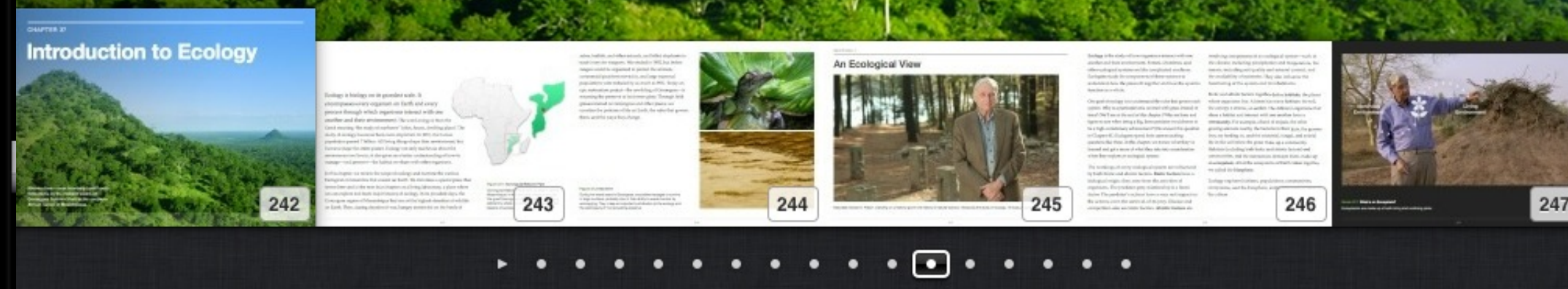


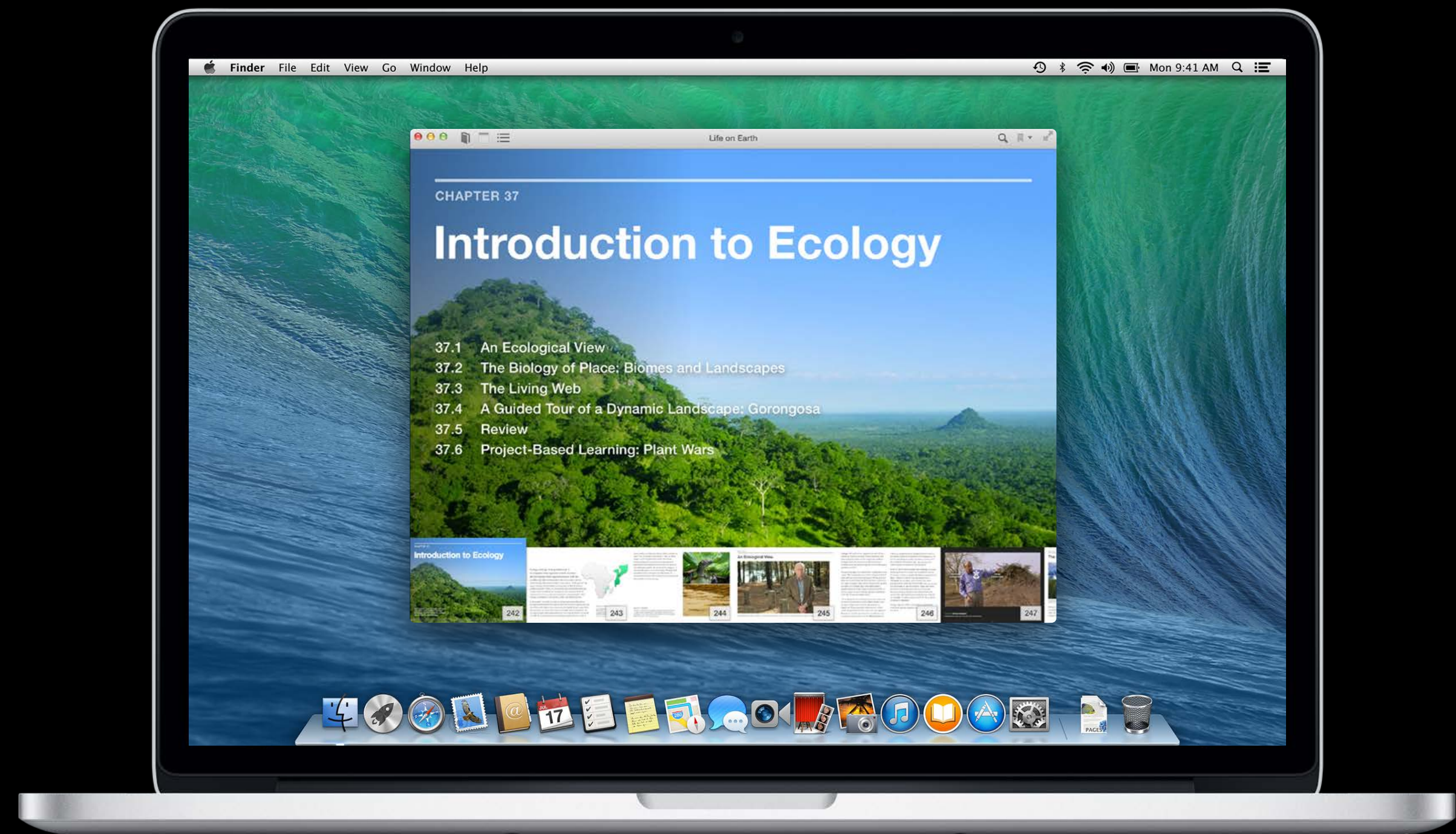


CHAPTER 37

Introduction to Ecology

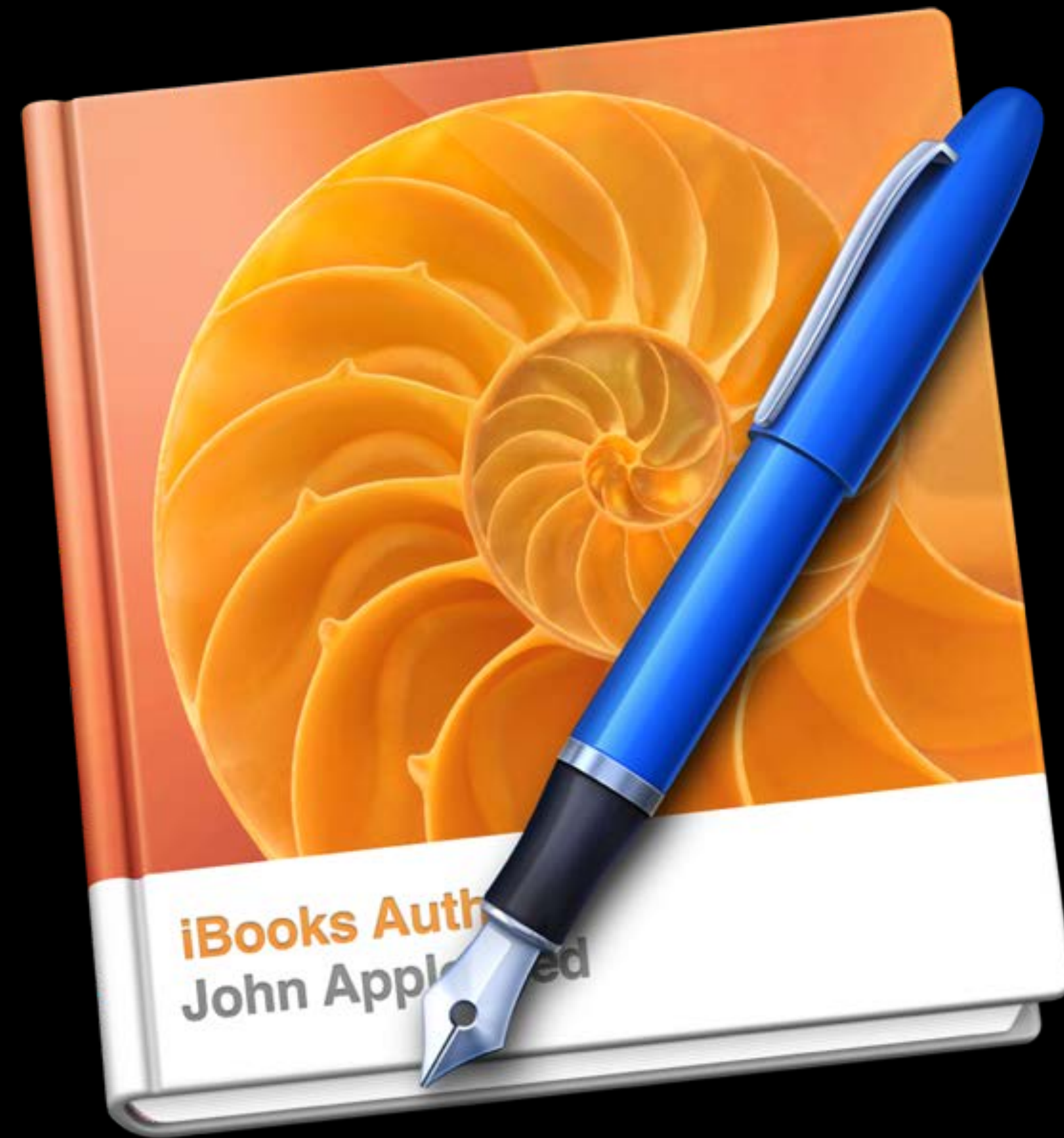
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iBooks for Mac

For developers and readers



iBooks Author
John Appleseed

What Is iBooks Author?

- The tool for creating interactive experiences for iBooks
- WYSIWYG, drag-and-drop editor for creating books
 - Write, import, and edit text
 - Add graphics and page layouts
 - Create interactive experiences using simple drag-and-drop techniques
- For single users to professional publishing pipelines
- ... It's free

Why iBooks Author?

- Immersive iPad experiences without code
- Flexibility to create unique interactive experiences with HTML
- Designed and engineered to work perfectly on the iPad, and the Mac
- True layout and typesetting
- The best platform for interactive, rich-media books

What's New in iBooks Author 2.0

- Portrait-fixed layout books
- True math typesetting using LaTeX and MathML
- Automatic media optimization
- New widgets!
 - Pop-over widget
 - Scrolling sidebar widget
 - Audio widget modes
- Enhanced publishing workflow
- Embedded fonts
- Versioning

Using iBooks Author

Building a template and making your book

Using iBooks Author

Five takeaways

- It's easier than ever to create beautiful books for iPad, and now Mac
- Coding is optional (...but there if you need it)
- New features give you full control over the design of your book
 - Portrait layouts
 - Math typesetting with LaTeX and Math ML
 - Embedded fonts
- Publish and make updates to your books within iBooks Author
- Anyone can be a published author

More Information

Paul Marcos

Application Services Evangelist
pmarcos@apple.com

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Introduction to iBooks Author Widget and iAd Rich Media Ad
Development with iAd Producer 4

Russian Hill
Wednesday 11:30AM

Labs

iBooks and iBookstore Lab

Media Lab A
Wednesday 9:00AM

iBooks and iBookstore Lab (Afternoon)

Media Lab A
Wednesday 3:15PM

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