Interactive Physics Textbooks

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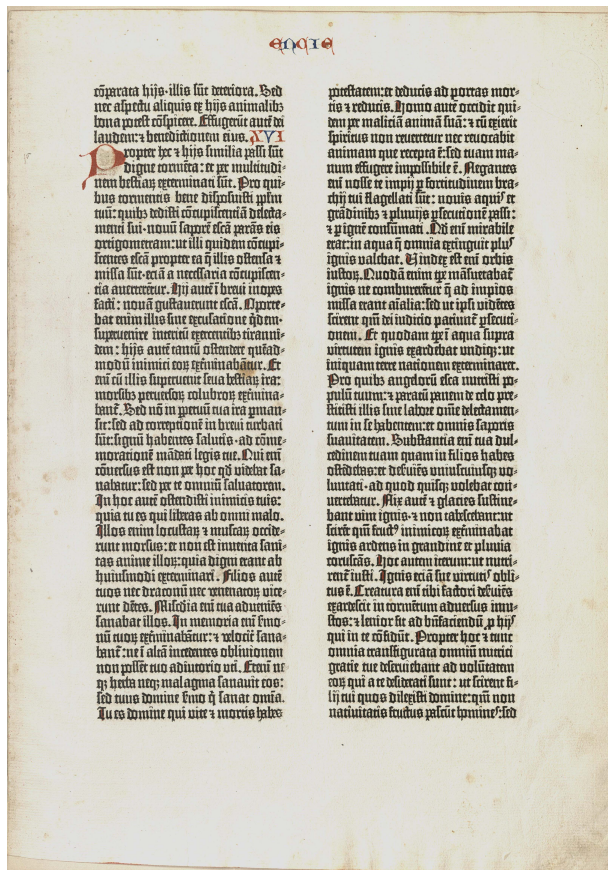
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Interactive Teaching for 20+ Years

- Group Problem Solving (Heller, et. al. 1992)

- Physics by Inquiry (McDermott, et. al. 1996).

- Peer Instruction (Mazur 1997).

- Lecture Demonstrations (Sokoloff 1997).

- Just in Time Teaching (Novak, et. al. 1999)

- Socratic Dialog.

- Flipped Classroom.

- Etc. Your favorite method.
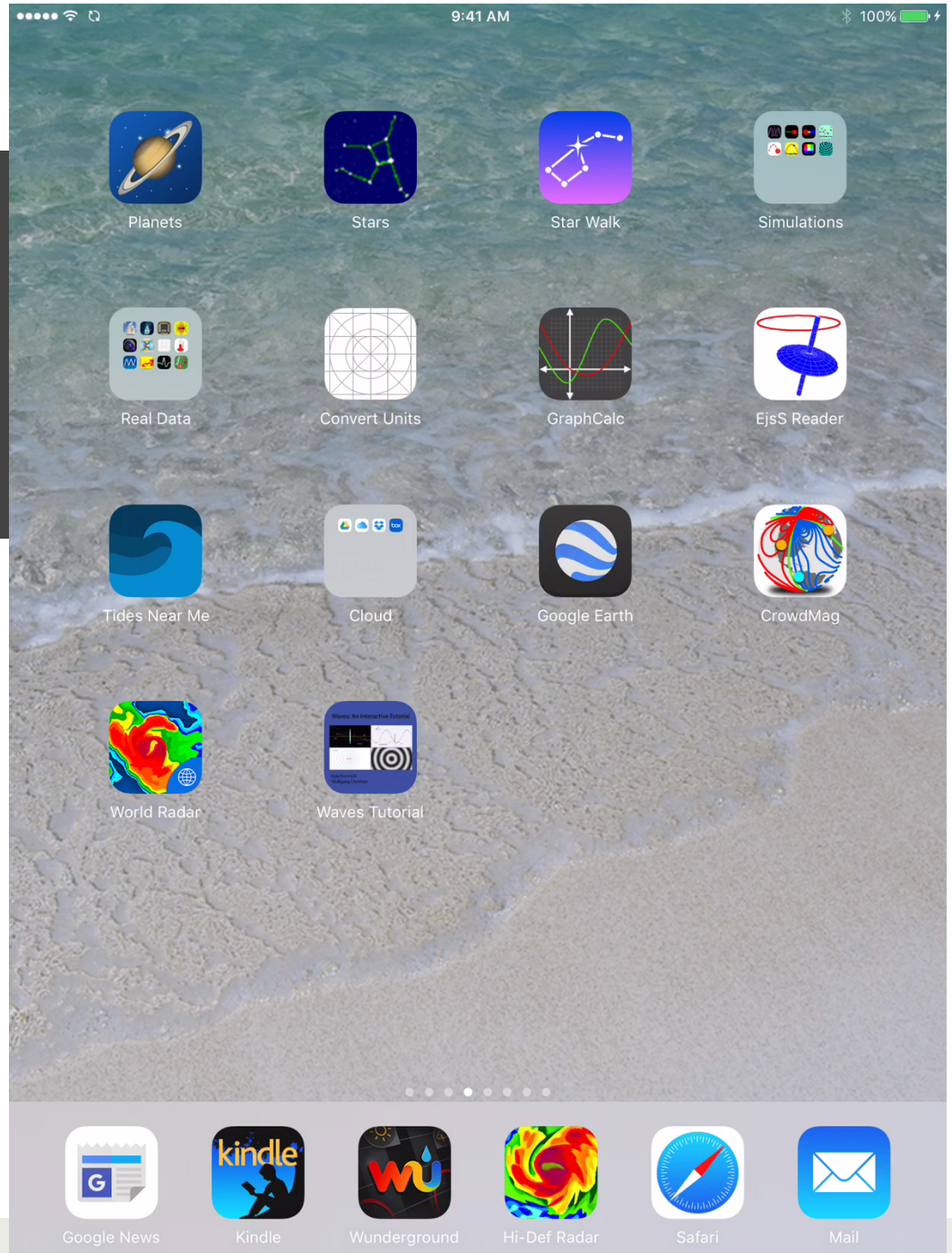
But What about Books?

Gutenburg 1439

Interactive Books?

- Free PDF (OpenStax). Customized PDF (FlatWorld).

- Free WORD (Jeff Schnick: Calculus Based Physics).

- Wiki (PrettyGoodPhysics).

- Hypertext (HyperPhysics -Georgia State).

- Kinetic Books (Perfection Learning).

Wave Tutorial

on ITunes
2016

Now also Available for Free!

- ☐ On AAPT-ComPADRE in English

- ☐ On AAPT-ComPDRE en Español

Ondas: Tutorial Interactivo *by Kyle Forinash and Wolfgang Christian*

1.Propiedades básicas | 2.La combinación de las ondas | 3.Interacciones externas | 4.Aplicaciones

Ondas: Tutorial Interactivo

Este libro en línea utiliza una serie de tutoriales basados en simulaciones interactivas y animaciones para explorar la física de las ondas. Los estudiantes desarrollan su comprensión de las ondas a través de preguntas y ejercicios guiados sobre la base de estas simulaciones.

- 1.Propiedades básicas
- 2.La combinación de las ondas
- 3.Interacciones externas
- 4.Aplicaciones

About this book

Este libro en línea utiliza una serie de tutoriales basados en simulaciones interactivas y animaciones para explorar la física de las ondas. Los estudiantes desarrollan su comprensión de las ondas guiados a través de cuestiones y ejercicios basados en las simulaciones.
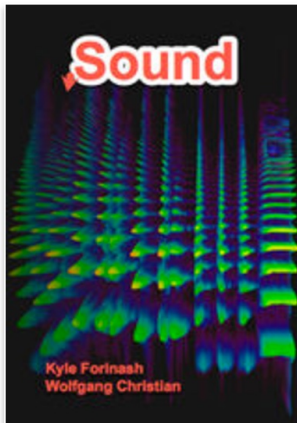

Sound

Sound

An Interactive Tutorial

Kyle Forinash

View More by This Author

This book is available for download with iBooks on your Mac or iOS device, and with iTunes on your computer. Books can be read with iBooks on your Mac or iOS device.

Description

Sound is an interactive textbook that contains 33 interactive simulations which require the reader to click buttons, move sliders, etc. in order to answer questions about the behavior of waves and sound in particular. There are also links to videos and other online resources that pertain to the topics being covered as well as suggestions for laboratory exercises and sound clips for understanding the fascinating subject of sound and music. The goal is to create an engaging text that integrates the strengths of printed, static textbooks and the interactive dynamics possible with simulations to engage the student in actively learning the physics of sound.

View in iBooks

$3.99

Available on iPhone, iPad, iPod touch, and Mac.

Category: Physics
Published: **Jan 11, 2017**
Publisher: **Open Source Physics**

Screenshots
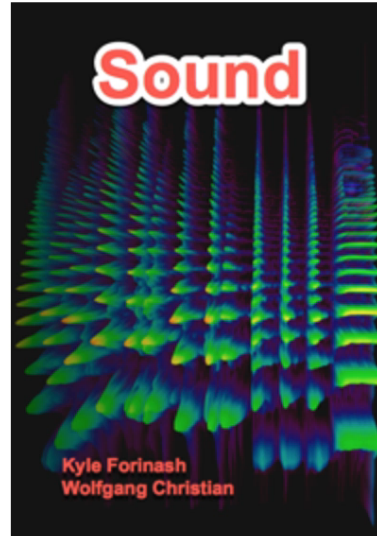
Sound: An Interactive eBook

This book consists of 33 interactive simulations which require the reader to click buttons, move sliders, etc. in order to answer questions about the behavior of waves and sound in particular. There are also dozens of links to YouTube videos and other online resources that pertain to the topics being covered as well as suggestions for laboratory exercises and sound clips for understanding the fascinating subject of sound and music. The goal was to create an engaging text that integrates the strengths of printed, static textbooks and the interactive dynamics possible with simulations to engage the student in actively learning the physics of sound.

- 1.Physics of Vibrations
- 2.Waves
- 3.Sound and Perception
- 4.Electromagnetism and Sound Reproduction

About this book

This online book uses a series of tutorials based on interactive simulations and animations to explore the physics of sound. Students develop their understanding of waves through guided questions and exercises based on these simulations.

An EPub edition is also available in the Apple iTunes store: ISBN-13: 978-0-9905805-5-3.

Introduction to Sound

The physics of sound lends itself particularly well to examples, demonstrations and student participation in experiments. There are thousands of YouTube videos of interesting sound phenomena and dozens of simulations related to the physics of sound and music. This book was created from trying to provide access to these resources in a single source, first from a web page, then as interactive simulations on web pages and finally as this interactive textbook.

ready-to-run - details

Was this Hard to Do?

- YES! But not as hard as you think!

- Easy Java/JavaScript Simulations by Francisco Esquembre:

  www.um.es/fem/EjsWiki/

Make Books Interactive!

Interactive Physics Textbooks

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