Do You See What I See?

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Physics Toolbox
Vieyra Software

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What are we going to do?

Introductions

- Groups
- Apps
- Equipment

Challenges

- **Play** (Android)
- **Motion Visualizer** (iOS)
- **Magna AR** (Android/iOS)

Discussion

- Can smartphones support your physics teaching? If so, how?

Objectives

- Get familiar with smartphone sensors.
- Consider if/how smartphones can support your teaching.

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10 min

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25 min

Discussion

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10 min

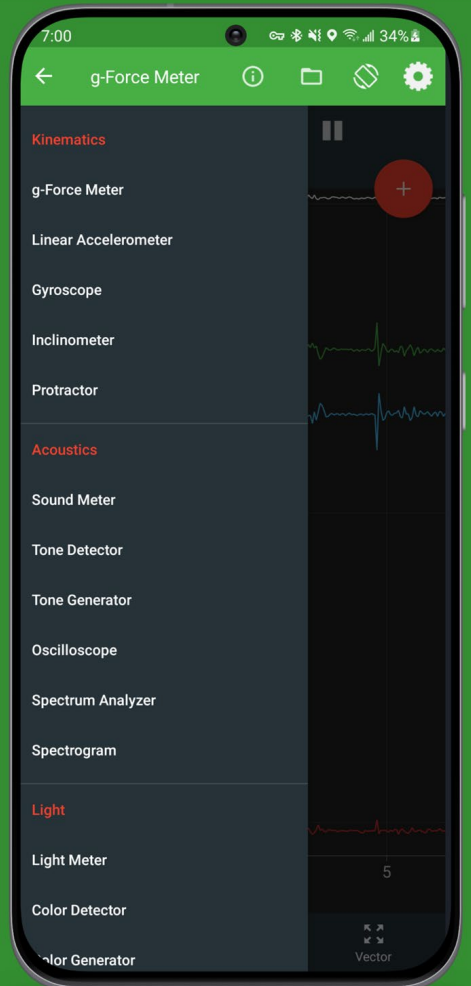
Groups

2-5 people

Ideally… at least 1 Android and 1 iPhone

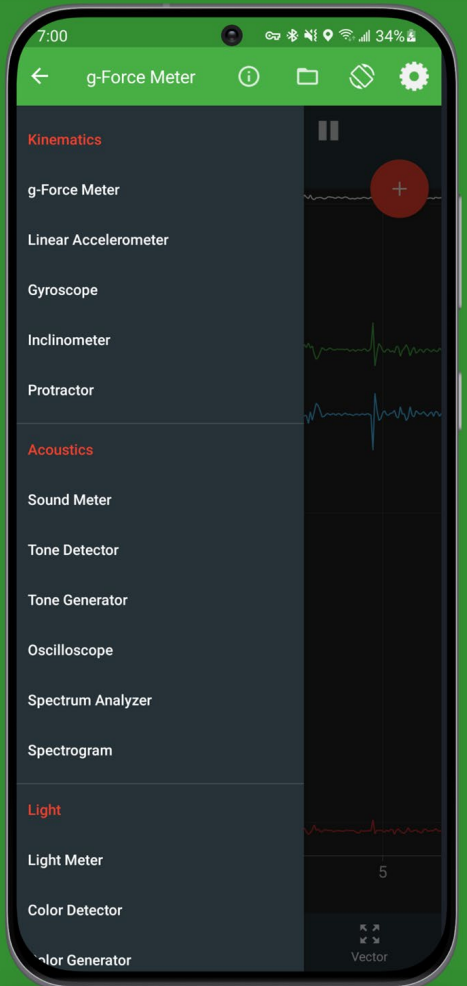
Apps

Physics Toolbox Sensor Suite



Apps

Physics Toolbox Sensor Suite



Challenges

- Play
- Motion Visualizer “Game” → only on iOS
- Magna AR

You can borrow a phone!

Equipment

Equipment

+ anything else you might have with you!

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10 min

Play (Android only)

4 challenges

Physics Toolbox Play

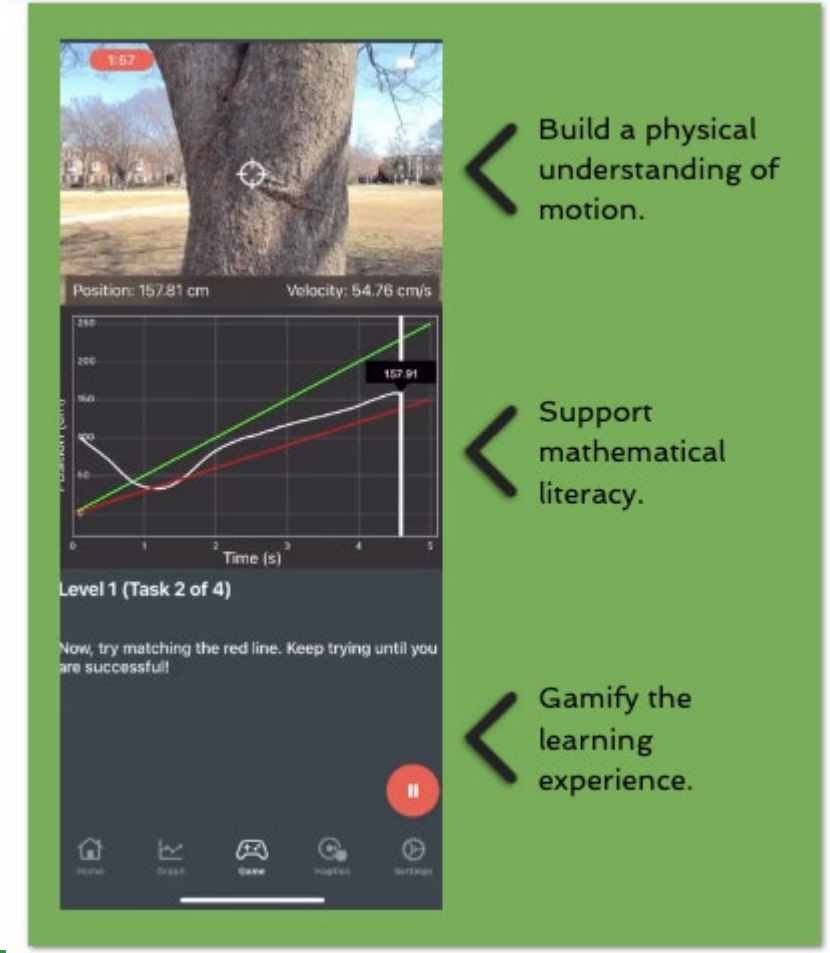
*This app is now only accessible as a mode in the Android version of Physics Toolbox Sensor Suite in the main menu. (However, those who previously downloaded the stand-alone app may still have it on their device).

User Guide

This app, designed for outreach programs to introduce children ages 8+ and their families to sensors, physics, and physics careers, was developed thanks to the award of a mini grant from the American Physical Society, as a sub-award from the National Science Foundation, grant NSF#1404843.

Motion Visualizer (iOS only)

4 challenges



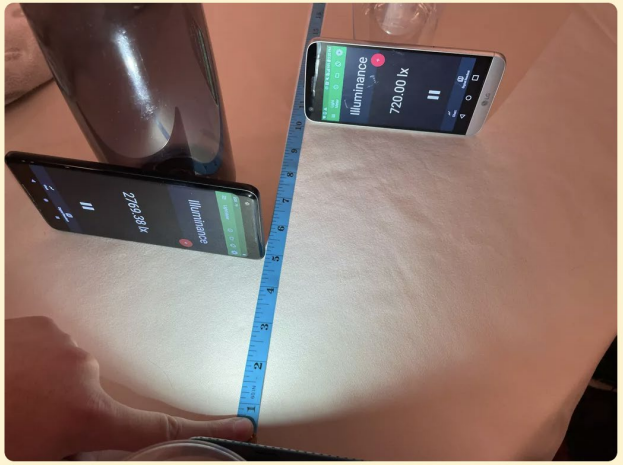
Magna AR (both)

Earth’s field

N & S poles

Visualization Examples

Our Lit Results



Inverse Square Law of Irradiance

We demonstrated that the Inverse Square Law of Irradiance holds. Doubling the distance from our light source from 5 to 10 inches reduced the amount of light by a quarter of its value, from approximately 2800 lx to approximately 700 lx.

~Julia, Facundo, Yaokun, Wyatt, Gia

What physics can your phone see, that you can’t on your own?

- What physics is around you?
- How can you illustrate it with a smartphone sensor?

Could this be helpful to you?

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10 min

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25 min

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by Vieyra Software

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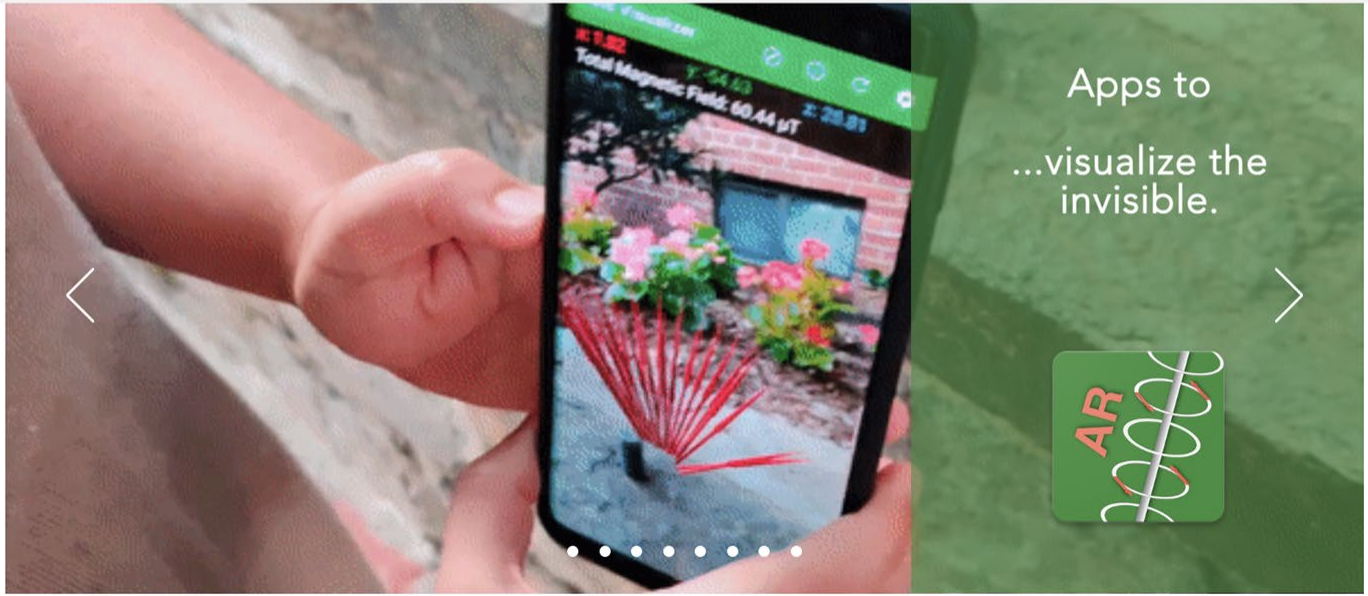

Thank you!

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