Implementation of interactive digital tools for Astronomy education

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Software Development:

p5.js

GODOT Game engine

Deployment:

GitHub Pages

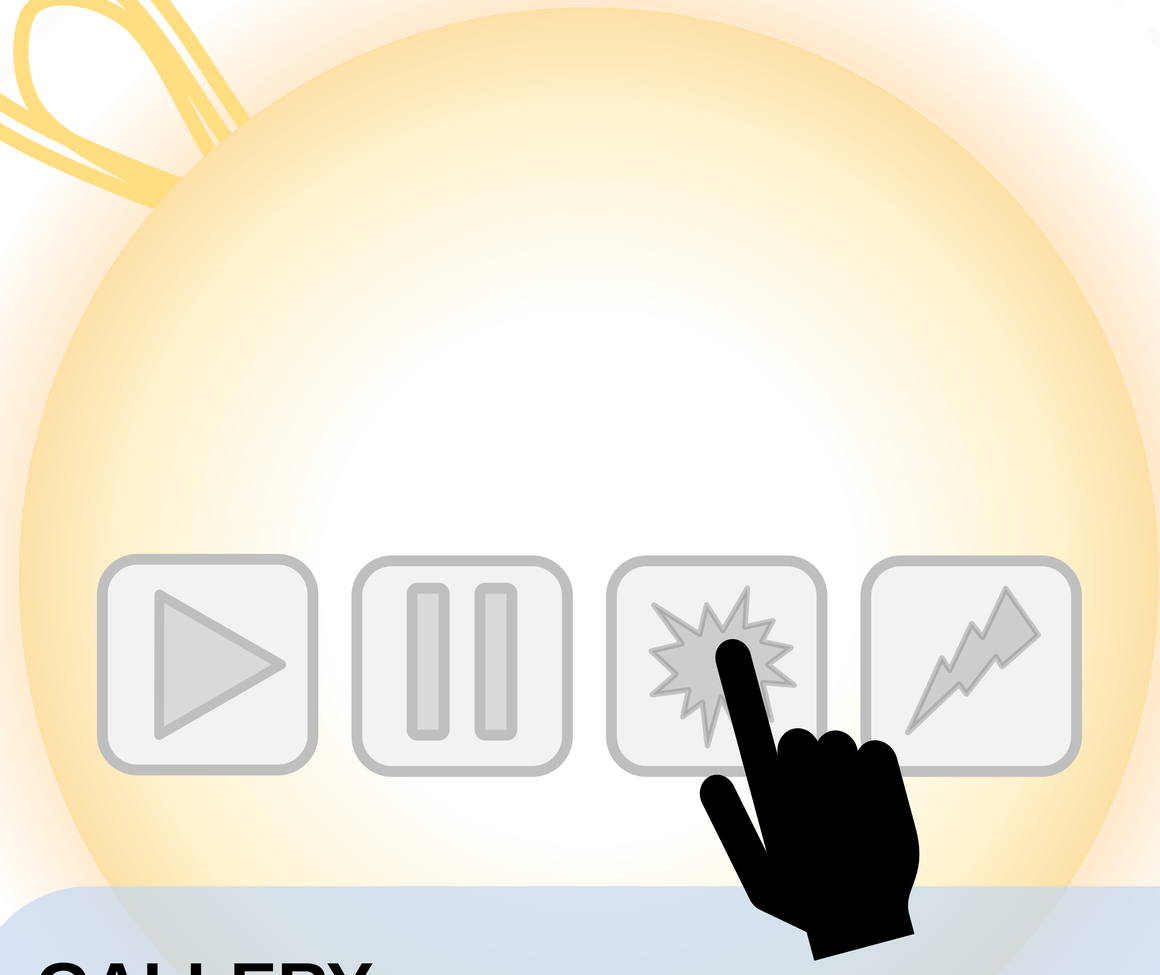
All done using free, easy-to-learn, well documented software.

SIMULATIONS:

- Basic Astronomy
  - Telescopes
  - Solar System Models
  - Eclipses and Tides
- Stellar Evolution
- Light & Spectra
- Orbital Mechanics

MAIN TAKEAWAYS:

- Choose clear **learning goals** to build upon.
- Focus on a **specific phenomena** and think about the ways it can be shown, understood, and misunderstood.
- **Buttons** help guide the user.
- Aesthetics will sometimes be **better** than realism. It's the teacher's task to land the concept.
- Use the simulations to tackle the biggest **misconceptions**.

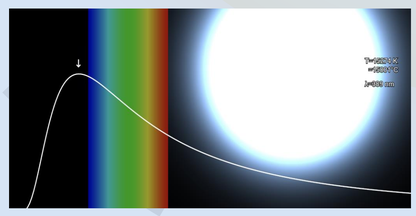


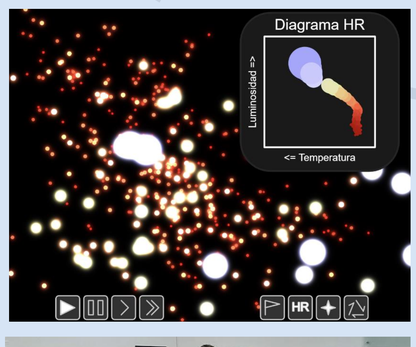
ACTIVITIES GUIDELINE:

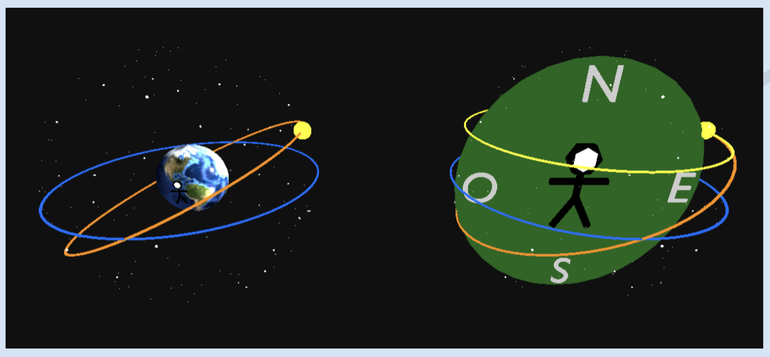
1. Identify students' **preconceptions**.
2. Let them explore the **simulation** on their own, guiding them to specific phenomena.
3. Ask them to formulate **hypotheses** and measure out data.
4. **Discuss** afterwards.

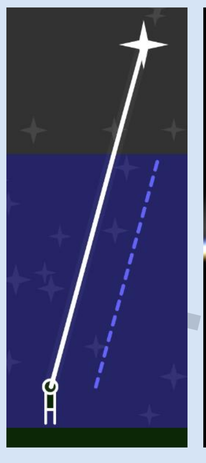
SCAN ME!

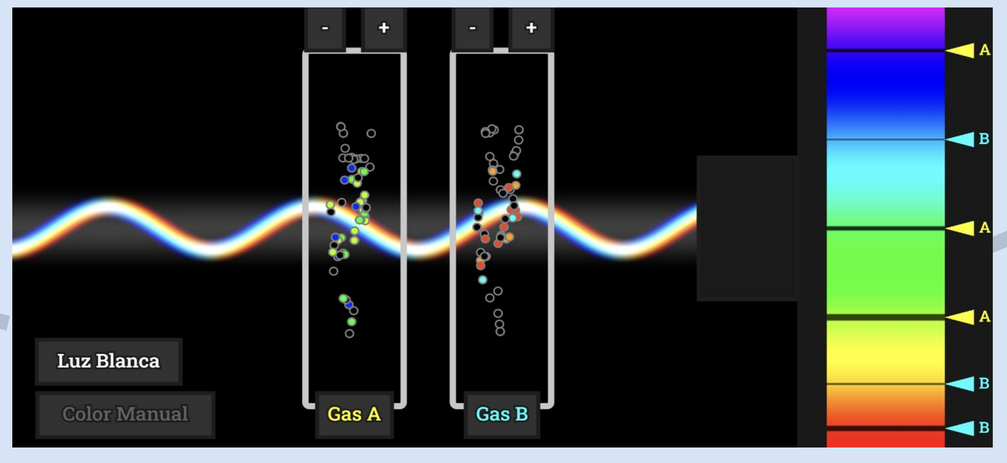
GALLERY:











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