



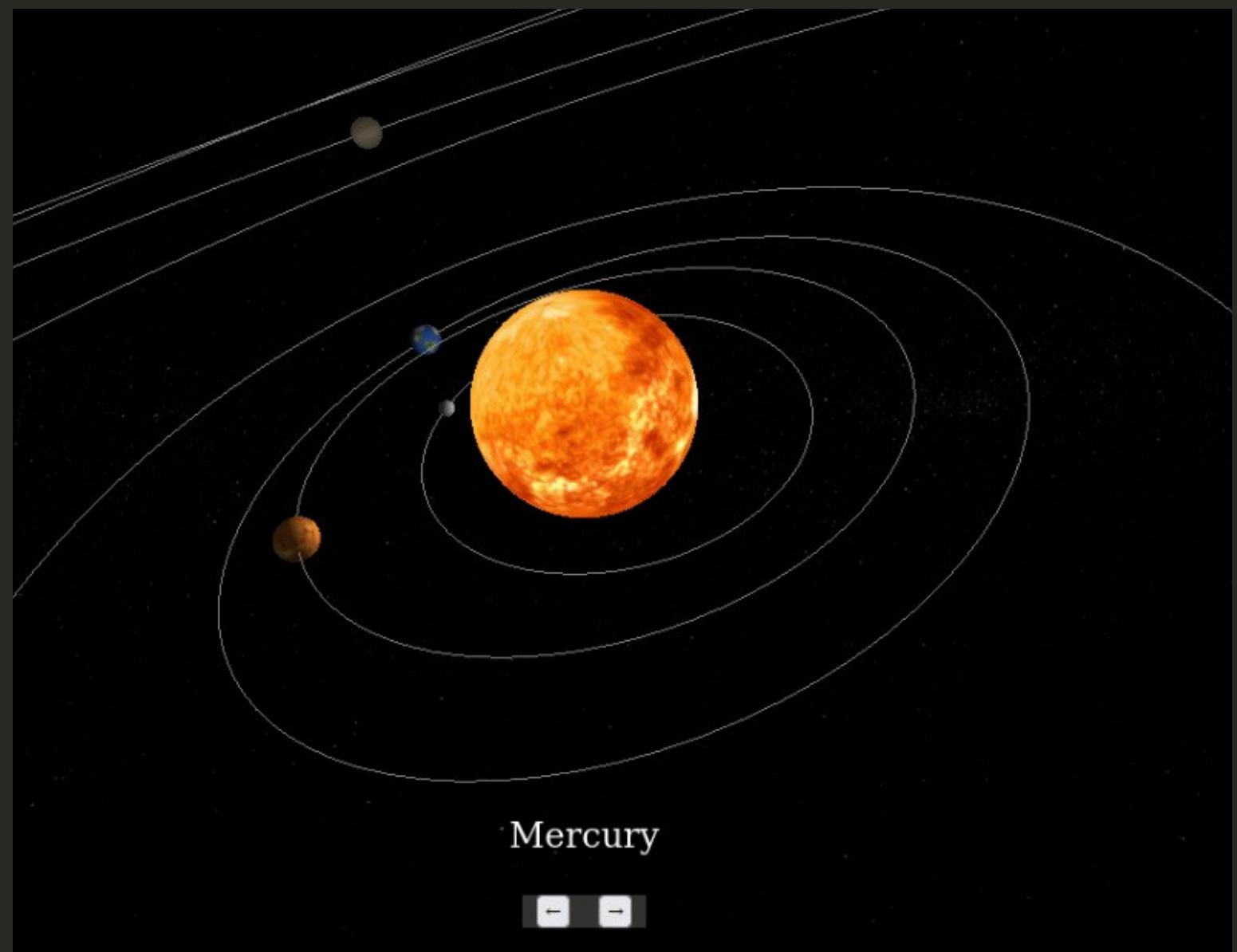
SPACEWIKI - EXPLORE THE WONDERS OF OUR SOLAR SYSTEM

FSOCIETY
[IVAN BOGINSKIY AND MARYNA OSYPENKO,
OLEKSII GRYVIUK]

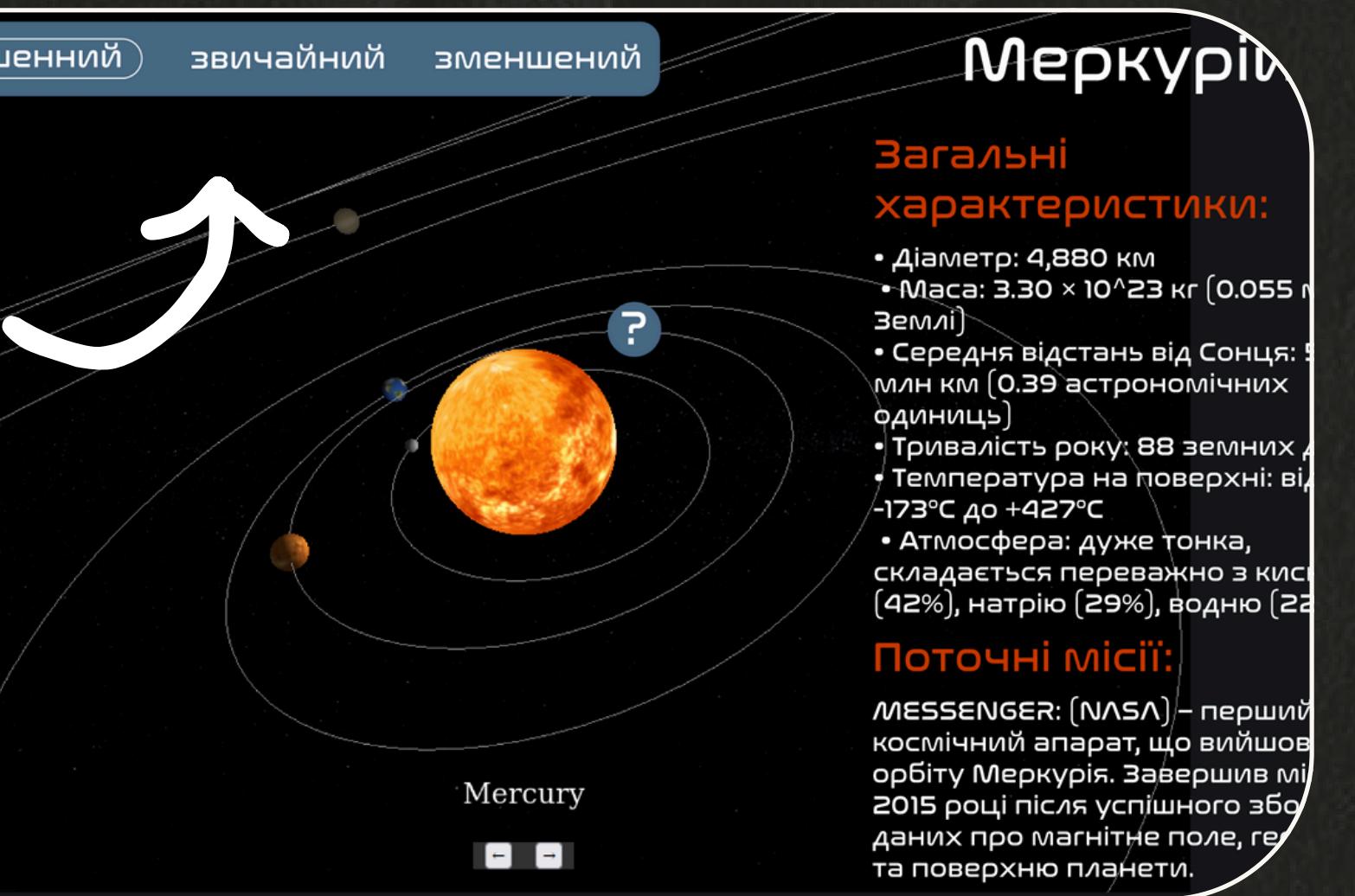


ADDRESSING THE CHALLENGE OF ACCESSIBLE SPACE EDUCATION

SPACEWIKI ADDRESSES THE CHALLENGE OF MAKING ASTRONOMICAL KNOWLEDGE ACCESSIBLE AND ENGAGING. USING INTERACTIVE 3D MODELS AND DATA, IT HELPS STUDENTS, EDUCATORS, AND ENTHUSIASTS EXPLORE THE SOLAR SYSTEM WITH EASE.



WHAT IS SPACEWIKI?



SpaceWiki: A Gateway to Our Solar System

Interactive 3D models of planets, moons, and asteroids

Two viewing modes (3 in progress): Classic (enhanced navigation) and Realistic (true-to-scale representation)

Rich educational content about celestial objects

Image:

HOW SPACEWIKI WORKS?

Presentations are communication tools that can be used as demonstrations, lectures, speeches, reports, and more. It is mostly presented before an audience. It serves a variety of purposes, making presentations powerful tools for convincing and teaching.

Presentations are communication tools that can be used as demonstrations, lectures, speeches, reports, and more. It is mostly presented before an audience. It serves a variety of purposes, making presentations powerful tools for convincing and teaching.



BENEFITS OF SPACEWIKI

ENGAGES USERS WITH INTERACTIVE CONTENT
PROMOTES SCIENTIFIC LITERACY BY MAKING SPACE
EXPLORATION MORE UNDERSTANDABLE
ACCESSIBLE PLATFORM FOR LEARNERS, EDUCATORS, AND
SPACE ENTHUSIASTS



05

POWERED BY NASA AND OPEN SPACE DATA

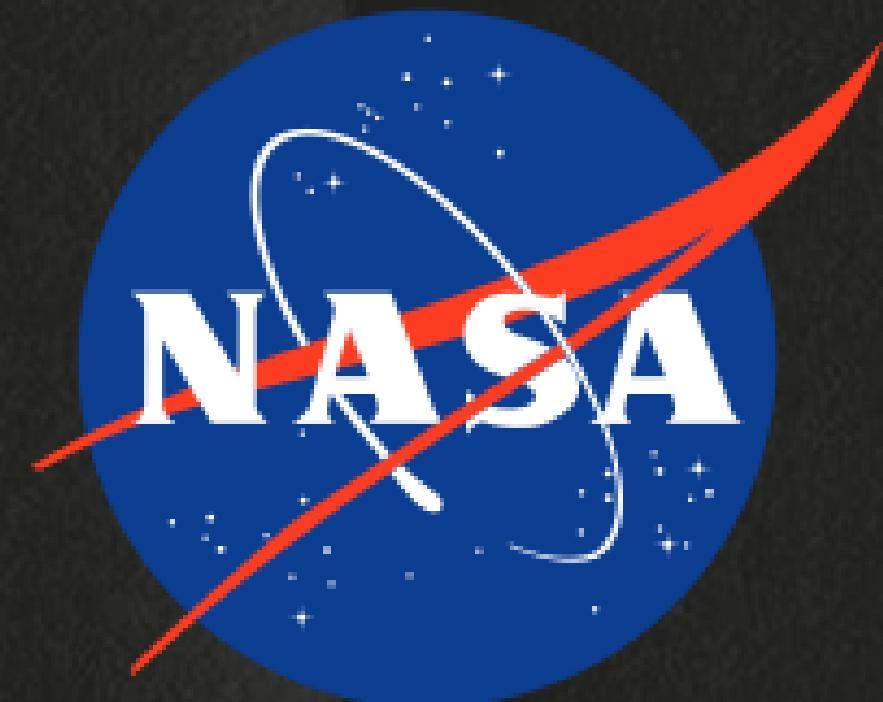
SPACEWIKI UTILIZES DATA FROM NASA'S OPEN DATA PORTAL, JPL SOLAR SYSTEM DYNAMICS, AND OTHER SPACE AGENCY RESOURCES TO ENSURE ACCURACY IN MODELS AND INFORMATION.

SPACE AGENCY DATA

SOLAR SYSTEM SCOPE
JPL SOLAR SYSTEM DYNAMICS
NASA OPEN DATA PORTAL
JPL SOLAR SYSTEM DYNAMICS
NASA SPACE SCIENCE DATA COORDINATED ARCHIVE

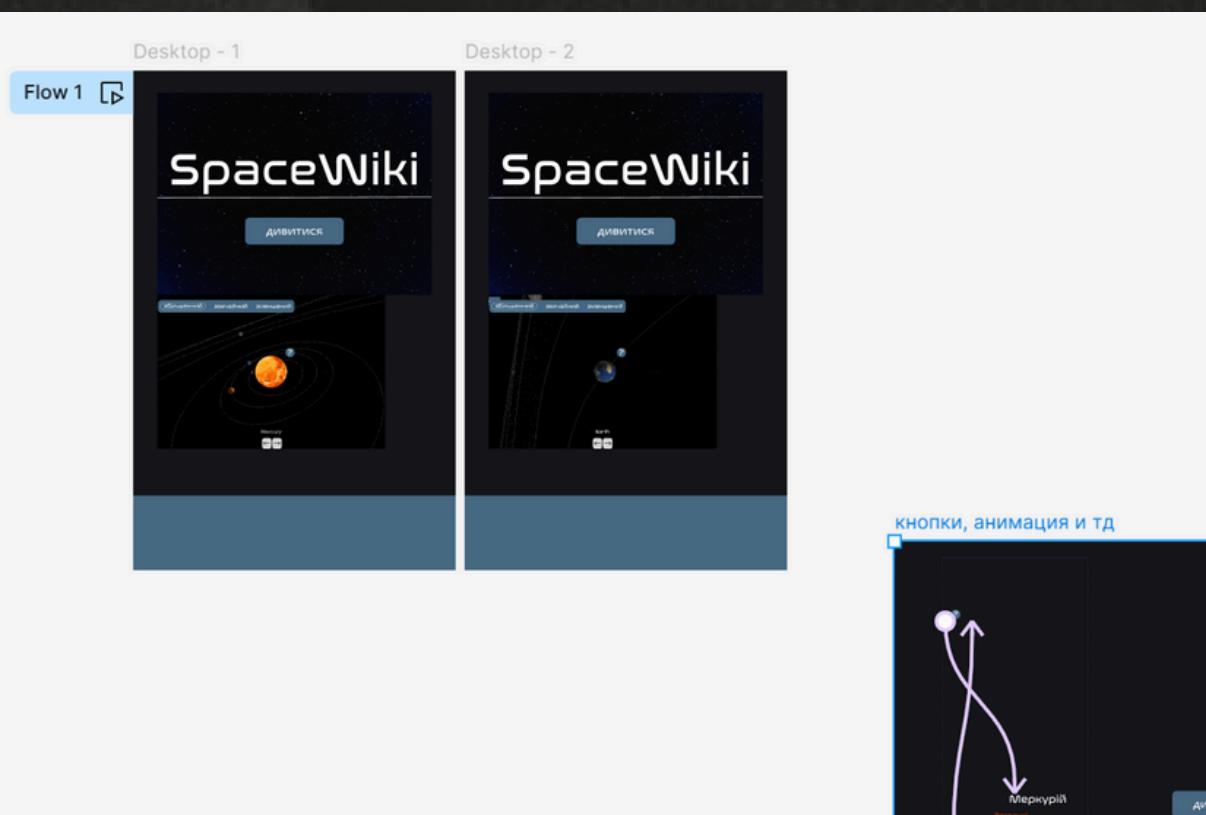
REFERENCES

PLANETS TEXTURES
PLANETARY FACT SHEET - METRIC



THE FUTURE OF SPACEWIKI

SPACEWIKI AIMS TO BECOME A COMPREHENSIVE EDUCATIONAL HUB, INTEGRATING REAL-TIME DATA AND EXPANDING TO FEATURE MORE CELESTIAL BODIES. IT WILL CONTINUE TO INSPIRE CURIOSITY AND KNOWLEDGE ABOUT THE UNIVERSE.



```
File Edit Selection Find View Goto Tools Project Preferences Help
css style.css
fonts
img
background_stars.ji
background_stars_t
bg.jpg
earth.jpg
favicon.ico
jupiter.jpg
mars.jpg
mercury.jpg
moon.jpg
neptune.jpg
saturn.jpg
saturn_rings.png
sun.jpg
uranus.jpg
venus.jpg
js
classic.js
index.js
OrbitalTrajectory.js
realistic.js
templates
classic.html
index.html
realistic.html
app.py
PlanetWiki.tar.gz
PlanetWiki.tar.gz
Line 278, Column 23
Spaces: 4 JavaScript
function createAsteroidBelt() {
    const asteroidBelt = new THREE.Group();
    const asteroidCount = 3000;
    const minDistance = 6.2 * 100;
    const maxDistance = 6.4 * 100;

    for (let i = 0; i < asteroidCount; i++) {
        const radius = Math.random() * 1.5 + 0.1;
        const distance = THREE.MathUtils.randFloat(minDistance, maxDistance);
        const inclination = THREE.MathUtils.degToRad(THREE.MathUtils.randFloat(-5, 5));

        const angle = Math.random() * Math.PI * 2;
        const x = distance * Math.cos(angle);
        const y = distance * Math.sin(angle);
        const z = distance * Math.sin(inclination);

        const geometry = new THREE.SphereGeometry(radius, 16, 16);
        const material = new THREE.MeshStandardMaterial({ color: 0x888888 });

        const asteroid = new THREE.Mesh(geometry, material);
        asteroid.position.set(x, y, z);
        asteroidBelt.add(asteroid);
    }
}
scene.add(asteroidBelt);
```

The image shows a code editor window with a sidebar containing file navigation. The main area displays a portion of a JavaScript file named 'realistic.js'. The code defines a function 'createAsteroidBelt' that creates a group of 3000 asteroids within a specified distance range and orbital parameters, using a sphere geometry and standard material.