Eiffel Tower 3D

Teaching the Eiffel Tower through 3D simulation

Lesson
Teaching the Eiffel Tower through 3D simulation

Objectives
Students will gain a basic understanding of the Eiffel Tower through 3D simulation and visualization.

Activity
Students travel across the Eiffel Tower in real-time 3D, helping them to visualize and understand its structure and function.

Materials
Eiffel Tower3D Homepage
 (cut and paste URL into browser, or Ctrl+click on picture above)
http://www.sunrisevr.com/eiffeltower3d

3D Simulation and Investigation

3D simulations are designed to make subject matter more engaging to today's technology-savvy kids, and help them bridge the gap between the "concrete" world and the abstract world of concepts. When students experience complex subject matter in real-time 3D it becomes clearer. Students learn best when they are actively immersed in subject matter from a variety of different viewpoints; 3D simulation is designed to help students visualize difficult ideas and objects through investigation at any scale (atomic, cellular, planetary, conceptual, etc), and doing things that would normally be impossible.

Required Technology
- PC/Tablet

Optional Technology
- Projector
- Multiple Computers
- Internet Connection

Grouping
- Large Group Instruction
- Small Group Instruction

Staging
Check computer/Tablet for Internet access if needed

Procedure
1. Access program

2. Pick a lead student navigator to control movement through the 3D environment

3. Pick a lead student reader to read information about the Eiffel Tower as it appears on-screen

4. Begin the lesson by asking students what they already know about the Eiffel Tower; write responses on the board

5. Review basic facts about the Eiffel Tower including:
    *   The Eiffel Tower in Paris is one of the most recognizable structures in the world.
    *   The tower was built in 1889 as the entrance arch to the 1889 World's Fair.

6. Start traveling through the program, facilitate discussion by asking students where the class should go.

7. Use the 3D simulation as a visual aid; explain information as needed

8. Have students pay special attention to:
    *   The iron used to build the tower
    *   The near demolition of the tower

9. Have a final wrap-up with students with a question and answer period about the Eiffel Tower. Ask them how it works, and what are the primary components and function of each component. Ask them what parts of the Eiffel Tower they found interesting.

Optional Activity: 3D Scavenger Hunt + Discussion
Have students find a particular part of the Eiffel Tower, such as the restaurant. If students are on multiple computers, have them "race" to the part of the Eiffel Tower the teacher wishes to highlight. Once students find/arrive at the location, the teacher may commence discussion. Repeat in other areas of the simulation as desired to build understanding.

Homework/Review
Students may also access the program outside the classroom to supplement textbook questions

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Functional Notes
1. The program is available on multiple platforms
2. If using the program online, please ensure the Unity3D Player is installed on the computer; through the Internet Explorer Browser; download the latest at https://unity3d.com/webplayer.
3. If you see something in **red** you can probably click on it
4. For ease of use you can go through most 3D objects, and even the ground
5. The school library can request and access programs (free) at www.sunrisevr.com for off-line use via PC and Mac if there is no internet connection