



Simulations in the Real World

Today's focus:

- How industries use simulations
- The role of VR, AR and MR
- What makes a simulation powerful?
- What are the risks or responsibilities?

What are the core differences between games and simulations?

How do simulations aim to replicate real-world systems or processes?

Can a game also be a simulation?
Under what conditions?

What is a Simulation Really For?



Simulations are:

Digital models of real-world systems

Designed to let people test, practise, or experience something safely

Used for education, training, experimentation, and awareness

Simulations help us:

- Reduce risk
- Repeat difficult scenarios
- Save money and time
- Prepare for high-stress tasks
- Raise awareness of social issues



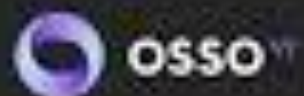
Video Exploration: Simulations in Industry

As we watch the following short clips, take notes in this table:

Industry	What is being simulated?	Why is it useful?	What technology is used?
Healthcare			
Military			
Education			
Climate Science			



No VR Training



0

- Unpack the robot
- Introduce the robot
- Test assembly
- Test assembly
- Test assembly



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VIRTUAL REALITY TRAINING FOR MILITARY



REUTERS





The Ocean Simulator Making Waves in Climate Science

Agent Recruitment



Cash: \$100

Done

Think Pair and Share

Pick one simulation that stood out to you and answer the following:

1. What was the purpose of the simulation?
2. What made it feel real or immersive?
3. Why was simulation better than doing it in real life?
4. What societal need is being addressed? (health, education, safety, etc.)



VR Headset Time: Experience a Simulation



Before you begin:

- Sit down
- Be aware of your surroundings
- Remove headset immediately if you feel unwell or dizzy
- 1-2 mins per student then switch



What Was It Like?

After using the VR headset, write short answers to these questions:

1. What did the simulation help you feel, see, or understand?
2. What was realistic about it?
What was missing or limited?
3. Could this replace real training or just support it?

You can write this in your Onenote.



Research Task: Simulations in Industry

Choose **3 different industries** (e.g. healthcare, military, education, climate science, space, sport).

Research how each one uses simulation or gaming technology.

For each industry, answer:

1. What is the simulation used for?
2. What technology does it use? (VR, AR, MR, software, etc.) How does it use this to create immersive experiences?
3. What are the benefits?
4. What are the challenges or risks?
5. Add 1 image or screenshot

Whole Class Reflection

1. Which industry do you think benefits the most from simulation? Why?
2. What's one risk or challenge that simulations can't fully solve?
3. Would you feel comfortable being trained using simulation?

