Understanding by Design- by Jasmine Handsome
Unit planning template
Identify Goals & Understandings > Assessment> Activities

Stage 1
Desired Results
School Driven

Established Goals/Transfer Goal: What do students need to learn and be able to do? Include essential standards.

1. Prepare students for College, Career, and Military Readiness (CCMR) through immersive, hands-on learning.
2. Provide equitable access to experiential learning opportunities for underserved and special needs students.
3. Align instruction with district goals of student-centered learning and disruptive innovation.
4. **TEKS Alignment (Science, Grades 6–12):**

   §112.18(b)(3)(A): Students will plan and implement investigative procedures.

   §112.19(b)(7)(C): Students will analyze interactions in ecosystems.

   §112.20(b)(9)(A): Students will investigate chemical reactions and conservation of mass.

Enduring Understandings:
What understandings are desired about the big ideas of this unit?

- Learning is more meaningful when connected to real-world applications.
- VR can simulate complex processes safely and accessibly, leveling the playing field for all learners.
- Innovation often begins with underserved populations and expands to reshape systems.

Essential Questions:
What questions(s) will guide inquiry and point toward the big ideas and transfer goals of the unit?

- How does immersive learning change the way students connect with content?
- In what ways can VR prepare students for future careers and challenges?
- How can technology disrupt traditional teaching to better serve diverse learners?

Students will know… • Scientific processes such as ecosystems, chemical reactions, and dissections. • Career pathways through VR simulations. • How innovation can transform learning environments.	**Students will be able to…** What will students know and be able to do by the end of the unit? • Conduct virtual experiments and simulations. • Explore career modules and reflect on personal interests. • Collaborate, problem-solve, and reflect on VR experiences to connect them to real-world applications.

Stage 2 **Assessment Evidence**: Teacher and School Driven How will we know if students have learned?	
Formative Assessments: • Pre- and post-assessments measuring comprehension. • Engagement metrics (time on task, participation rates). • Student and parent feedback surveys.	**Summative** ***Summary in GRASPS form*** **Goal:** Demonstrate understanding of ecosystems or career pathways through VR exploration. **Role:** Student as scientist or career explorer. **Audience:** Teacher, peers, and potentially parents. **Situation:** Small-group VR sessions followed by reflection activities. **Performance:** Students complete VR tasks and present findings in journals, presentations, or projects. **Standards:** Success measured by comprehension gains, engagement, and ability to connect VR experiences to

	real-world applications.
Key Criteria to reflect performance task (rubric, checklist) • Rubrics for comprehension, engagement, and reflection. • Checklists for participation and task completion.	**Other Evidence (essay, work sample)** What other evidence (formative, observations. Home learning, etc.) will be collected to determine whether or not Desired Results have been achieved? • Teacher observations. • Work samples (journals, presentations). • Home learning reflections.

Stage 3 **Learning Plan Activities**: (Teacher Driven) How will students engage in learning?	
Consider the WHERETO elements These questions are/can be directed as…. What the teacher and/or the student do in regards to the WHERETO. **W:** Students will explore ecosystems and careers through VR to connect learning with real-world applications. **H:** Hook students with immersive VR experiences (e.g., virtual dissection, career exploration). **E:** Equip students with VR tools, guided lesson templates, and structured reflection activities. **R:** Rethink by addressing predictable misunderstandings (e.g., novelty distraction, technical issues). Provide troubleshooting and scaffolding. **E:** Students self-evaluate through journals and peer discussions. **T:** Tailor experiences with differentiated pacing and	**Resources** **Instructional Resources** • VR headsets and educational VR software (science and career modules) • Guided VR lesson templates • Teacher reflection journals • Student VR exploration journals • Accessibility tools for special needs students **Implementation & Support Resources** • Professional development for VR integration • District technology support for setup and troubleshooting • Safety and classroom VR usage guidelines **Research and Planning Resources** • Christensen, C., Horn, M., & Johnson, C. (2016). • Radianti, J., Majchrzak, T., Fromm, J., & Wohlgenannt, I. (2020). • Fink, L. D. (2013). • Wiggins, G., & McTighe, J. (2005). • TEKS Science Standards (TEA, 2021)

accessibility features for special needs students. **O:** Organize learning in phases: pilot (Year 1), expansion (Year 2), scaling (Year 3).	

Reflection (Optional)
• Success measured by engagement, comprehension, and CCMR readiness indicators. • Adjust rollout based on teacher/student feedback. • Intervention: Additional scaffolding for students struggling with VR navigation. • Enrichment: Advanced modules for students ready to explore deeper career pathways or scientific processes.

UbD vs. Fink's 3-Column Table

When I look at UbD, I see structure. UbD helps me line everything up so nothing is random. It keeps my unit grounded in what students need to learn according to TEKS, district goals, and CCMR expectations. It helps me make sure that any innovation I introduce, especially VR, still leads to measurable outcomes and equity for all learners.

Fink's 3-Column Table feels different. It pushes me to think about who my students become, not just what they can do. It reminds me that learning should spark curiosity, build confidence, and help students see themselves in new ways. With Fink, VR becomes more than an activity. It becomes an experience that transforms how students think about science, careers, and even their own potential.

When I put the two together, it finally makes sense.
UbD keeps my innovation solid, aligned, and accountable.
Fink keeps it meaningful, personal, and human.

Using both ensures my design is not too rigid or checklist-driven, but also not too abstract or idealistic. It gives me a balanced foundation to build a learning environment where VR is both powerful and purposeful.

As an educator, I believe innovation must be both structured and human-centered. UbD gave me the discipline to align VR integration with TEKS standards, CCMR goals, and district priorities.

Fink's model reminded me that learning is not only about outcomes but also about identity, curiosity, and lifelong growth.

Designing with both frameworks has changed how I see innovation: it is not just about introducing new tools, but about creating **e**quitable, meaningful, and transformative experiences for students. My audience, district leaders, fellow teachers, and curriculum designers will see that this plan is both academically rigorous and deeply student-centered. That balance is what makes innovation sustainable.

References:

Christensen, C. M., Horn, M. B., & Johnson, C. W. (2016). *Disrupting class: How disruptive innovation will change the way the world learns* (2nd ed.). McGraw-Hill.

Duckworth, A. (2016). *Grit: The power of passion and perseverance* [Video]. TED Conferences. https://youtu.be/H14bBuluwB8

Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.

Dweck, C. S. (2014). *The power of believing that you can improve* [Video]. TED Conferences. https://youtu.be/_X0mgOOSpLU

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses* (Revised and expanded ed.). Jossey-Bass.

Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020). A systematic review of immersive virtual reality applications for higher education. *Computers & Education, 147*, 103778. https://doi.org/10.1016/j.compedu.2019.103778

RSA. (2015). *How to help every child fulfil their potential* [Video]. RSA Animate. https://youtu.be/Yl9TVbAal5s

Texas Education Agency. (2021). *Texas essential knowledge and skills for science, middle school*. https://tea.texas.gov/academics/curriculum-standards/teks/texas-essential-knowledge-and-skills

Wiggins, G., & McTighe, J. (2005). *Understanding by design* (Expanded 2nd ed.). Association for Supervision and Curriculum Development.