Student

Student

Teacher

Immersive Virtual Reality for All

What you need to know to teach in VR!

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THE VIRTUAL EXPERIENCE

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Outline

What is Immersive Virtual Reality?

A Look Inside Immerse

Teaching English in VR

The Research

Immerse VR for Learning

- VR Experience

- VR Affordance

Planning VR Lessons

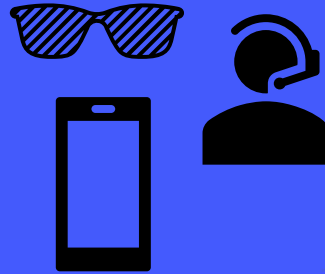- Sample Lessons

Future of Learning?

Questions

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What's Virtual Reality?

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Face to Face (F2F)

Real world experienced in the classroom

Augmented Reality (AR)

Digitally-Enhanced Real world

Virtual Reality (VR)

Immersive Face to Face Virtual World

Mixed/Extended Reality (EE)

A combination of AR, VR, and other digital experiences.

VR & ENGLISH LANGUAGE LEARNING

How VR Works

→ **Immersion**
   Real world experienced in the classroom

→ **Interaction**
   Digital-Enhanced Real world

→ **Presence**
   Immersive Face to Face Virtual World

BEST PRACTICES
IN ELT

Regardless of which reality you are in...

- Objective Aligned
- Comprehensible Input
- Student-Centered
- Interactive
- Collaboration with peers

- Engages in task work or problem solving
- Relevant and authentic to the real world
- Integrates communicative skills
- Creates opportunities for language transfer

BEST PRACTICES IN VR

Building on the 3 Pillars with ELT Principles

Relevant and engaging scenarios aligned to real world language learning goals

Opportunities for collaboration and direct interaction with peers to complete tasks and solve problems

Create an ability to interact with other students, the facilitator, using various items and tools relevant to the learning situation

VR and Learning

- There are no distracting classroom windows to stare out of when students are directly immersed into the topic they are investigating…helping students make real world connections between the subject matter and their own lives. (Bonner & Reinders, 2018)

- VR instruction on language acquisition shows that learners "improved their phonological, morphological, grammar, and syntax knowledge, and virtual world learning assisted in the development of a more complex and higher level of thinking" (Chen, 2016).

the research continued...

- Learners described that learning vocabulary in the virtual world was more fun, and they felt more comfortable using the language, which led to a significant difference in learner achievement compared to the control group using traditional vocabulary exercises (Alfadil, 2020).

- [I]ndications that VR vocabulary practice improves learner accuracy during assessment, and has a significant impact on improving vocabulary knowledge for learners who underperformed using traditional vocabulary learning methods (Legualt et al., 2019).

- VR instruction and strategies need to be meaningfully designed for the immersive spaces (Cook et al., 2019).

- A comprehensive analysis of VR in language education identified task-based learning as an area of greatest interest, and the most common practice, to educators implementing and researching VR experiences (Lin & Lan, 2015).

Immerse VR

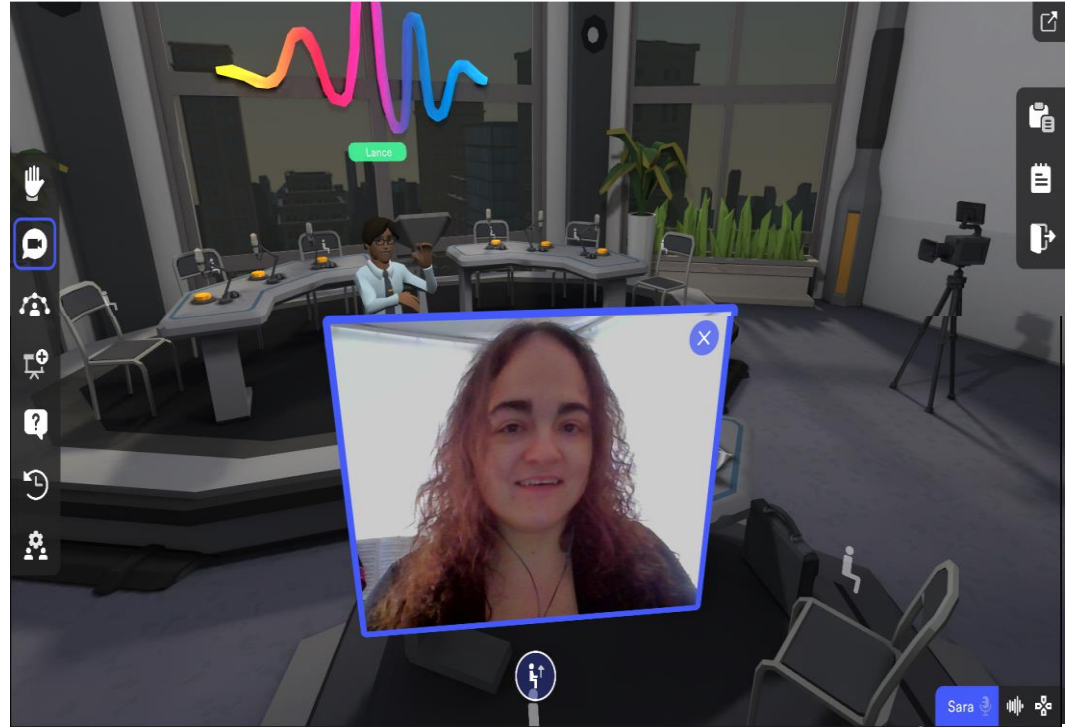A desktop platform for teachers that allows for:

- Synchronous Virtual Reality Teaching platform

-Facilitate lesson in real-time with students

-Allow for easy student to student interaction, made real by the magic of VR

-A platform for your curriculum, creativity, and course needs

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# A Virtual Experience for Learners

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Oculus Go   VS Oculus Quest 2

Oculus Go

- Display Resolution: 1280x1440px
- Display Refresh Rate: 60hz
- Processor: Snapdragon 825
- Ram: 3GB
- Weight: 1247.4g
- Only tracks head rotational movement

  - Using head only tracking can cause motion sickness
- Single controller

  - Virtual pointing
- 3DOF
- No Guardian
- No Room Scale
- No Hand tracking
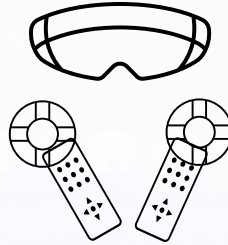
Oculus Quest 2

- Display Resolution: 1440x1600px
- Display Refresh Rate: 90hz
- Processor: Snapdragon XR2
- Ram: 6GB
- Weight: 503g
- Uses external motion tracking supported by two controllers
  - Reduces motion sickness
- 6DOF
- Allows for guardian set up
- Can be used at room scale
- 2 fully interactive controllers allow you to catch, throw, grab. Controllers utilize hand tracking.

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Affordances of Virtual Reality

- Move around and interact
- Physically interact with others
- Pass objects
- Complete tasks
- Speak with partners in private audio channels
- Work together as teachers monitor and observe

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Learning in Immerse

Virtually Grab, Throw, Move, Engage

Virtual Settings and Controls

Virtual Prompts and Support

The Teacher App

Experience Selector

Plan & Teach Tab

Teacher Avatar

Facilitation Toolbar

Audio Controls

Instructor
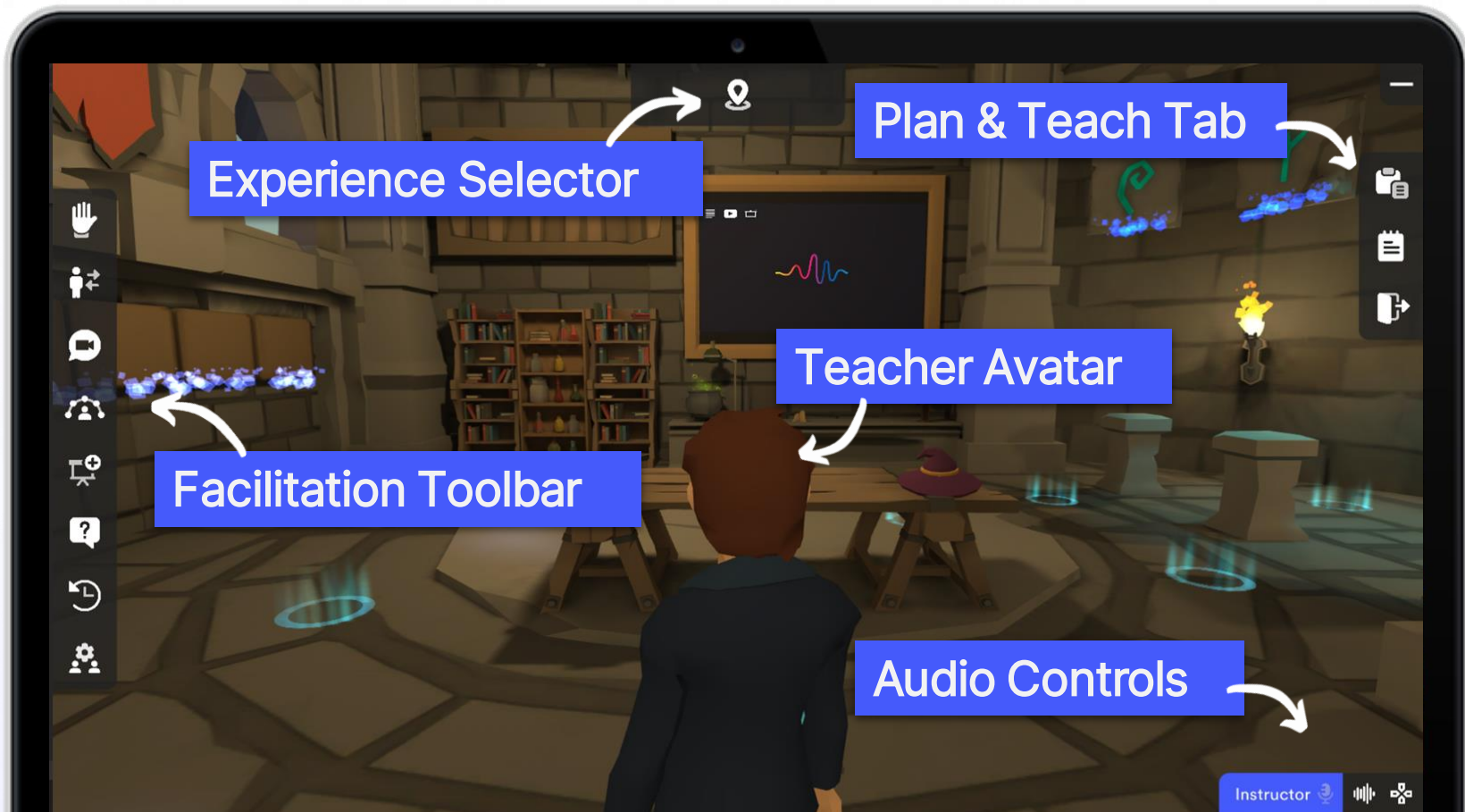
1. Graphic Organizer

2. Nested Prompts

3. Prompt Cards

4. Activated Prompts

5. Multiple Choice
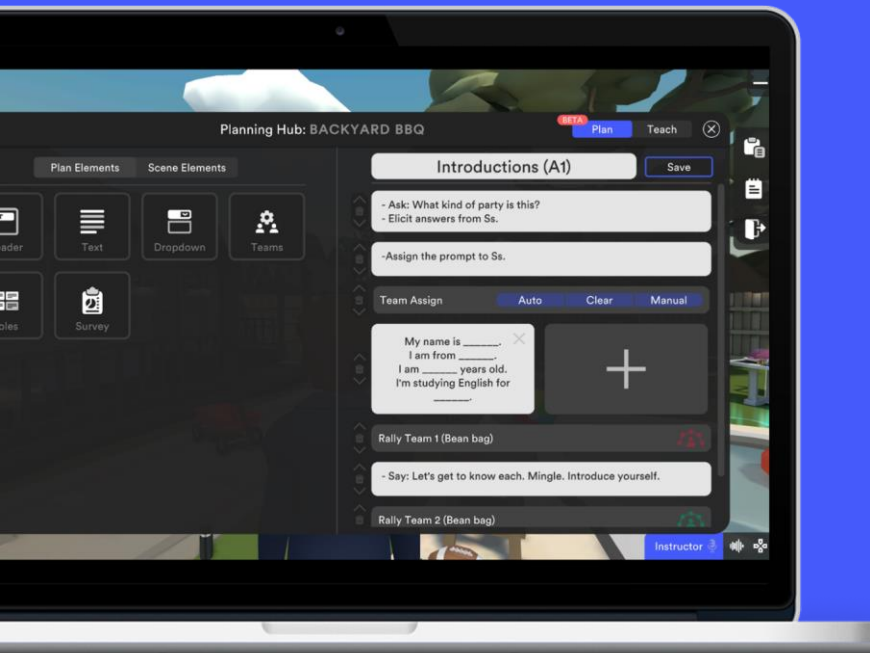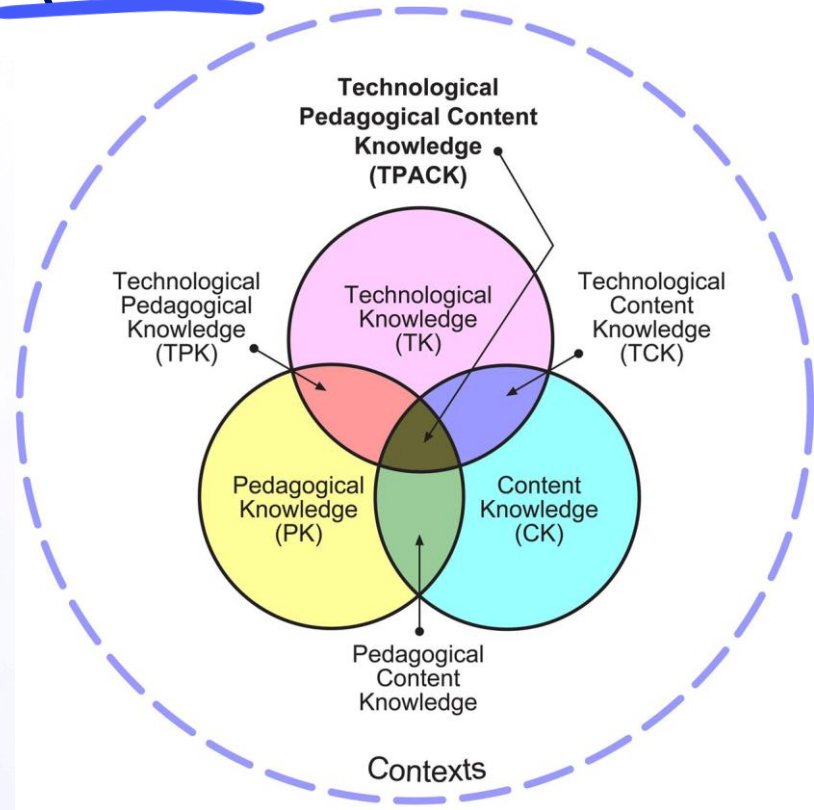
Teaching in VR

How to prepare VR learning

Planning Virtual Reality English Experiences

Teaching English in VR provides new opportunities for creating interesting and unique learning experiences.

Just like planning for classroom based or online courses, teachers should consider the objectives to be accomplished, the relevant pedagogical approaches, and the affordances of virtual reality technology.

We recommend using the TPACK* framework when planning a Virtual Reality lesson.

Technological
Pedagogical Content
Knowledge
(TPACK)

Technological
Pedagogical
Knowledge
(TPK)

Technological
Knowledge
(TK)

Technological
Content
Knowledge
(TCK)

Pedagogical
Knowledge
(PK)

Content
Knowledge
(CK)

Pedagogical
Content
Knowledge

Contexts

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*For more information about TPACK and the application of the framework see tpack.org

The TPACK Framework

TPACK is a framework that helps educators transfer their knowledge of pedagogical practice and content into technology enhanced learning experiences.

The framework integrates technology, pedagogical and content knowledge, or TPACK.

Asking these three questions can help you plan a VR lesson that will engage students and achieve your learning objectives.

Technological Knowledge (TK)
- What virtual reality tools are most appropriate to help students achieve learning outcomes relevant to the content?

Pedagogical Knowledge (PK)
- What are the most appropriate instructional strategies to communicate and engage students in using new content?

Content Knowledge (CK)
- What do you know about what you are teaching that must be communicated to learners?

Applying the TPack Framework

Your lesson objective:

Students can orally narrate a story. (A2+/B1)

Technological Knowledge: Immerse VR learners can work in groups and have access to a virtual reality camera.
Pedagogical Knowledge: Language learners need to speak with others to complete tasks that promote communication.
Content Knowledge: Sequencing language (cardinal numbers, linking language (next, after that, then, etc.).

Traditional Class

1. Arrange learners in groups. (PK)
2. Pass out story pictures. (CK)
3. Have Ss order pictures to communicate a story. (PCK)
4. Jigsaw groups, groups take turns sharing their picture story. (PCK)
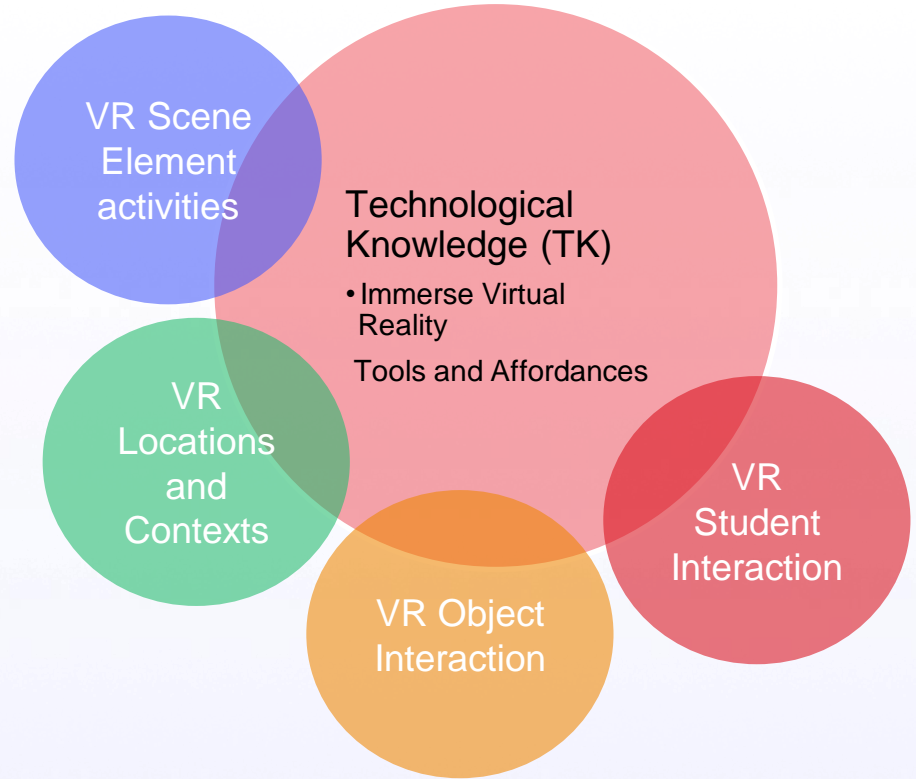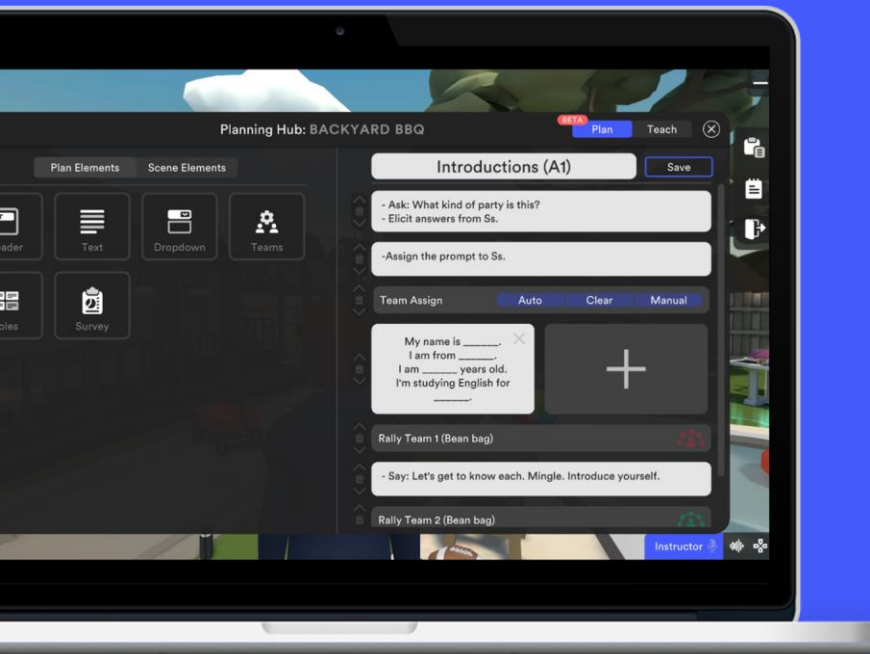
VR Class using TPACK Model

1. Arrange learners in virtual groups. (TPK)
2. Have Ss use Camera to take pictures that tell a story. (TCK)
3. Have Ss order VR pictures to communicate their story. (TPCK)
4. Jigsaw virtual teams, take turns sharing their picture story. (TPCK)

Creating Powerful Language Learning

When working in Immerse VR we provide ways for teachers to easily incorporate their pedagogical and content knowledge with power tools available in our Immersive virtual reality environment.

This allows educators to conduct a variety of robust and engaging learning experiences for students at any level of language ability.

VR Scene Element activities

Technological Knowledge (TK)
- Immerse Virtual Reality

Tools and Affordances

VR Locations and Contexts

VR Student Interaction

VR Object Interaction

Planning Hub: BACKYARD BBQ
BETA Plan Teach

Plan Elements   Scene Elements

Introductions (A1)   Save

- Ask: What kind of party is this?
- Elicit answers from Ss.

-Assign the prompt to Ss.

Team Assign   Auto   Clear   Manual

My name is _____.
I am from _____.
I am _____ years old.
I'm studying English for
_____.

Rally Team 1 (Bean bag)

- Say: Let's get to know each. Mingle. Introduce yourself.

Rally Team 2 (Bean bag)

Text   Dropdown   Teams   Survey

Instructor

Sample VR Learning Experience

1. Cause and Effect Mapping

Objective*:
Can describe basic activities or events that are happening at the time of speaking. Speaking, A2 (33)

1. Use the graphic organizer to share the cause and effect map.

Ss will use take different food. Using food related verbs, Ss prepare food in teams.

Tip: *You can edit your graphic organizer header text to create the cause and effect map.*

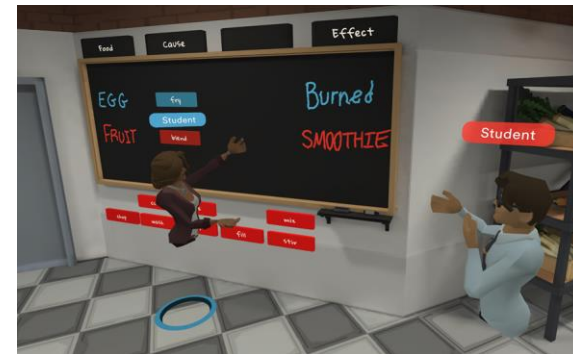## 2. Ss work in teams to learn about cause and effect in the kitchen.

Have Ss work at the kitchen island. Ss push the activated prompt to receive a type of food. With partners, Ss collect the food. Teams write their food on the graphic organizer. Next, Ss choose an verb tile to place in cause. Ss then perform the action on the food (e.g. Ss cut an apple).

3. Ss complete the effect column for each food interaction.

Have Ss work with partners to write the effects in the final column. Have Ss share their discoveries when finished.

Tip: *Clear the graphic organizer and have Ss repeat with different items.*
Extension: *Have Ss choose one cause and effect action to write about. Have Ss share writing on the class LMS or forum.*

*Global Scale of English learning objectives aligned to the CEFR, for more information see English.com/gse

Mix and Mingle

Objectives*: Can accept/decline offers politely using a range of formal and information expressions.
Speaking, B1+ (56)

1. Review language for politely accepting or rejecting offers.

Use the Graphic organizer to review language for accepting or rejecting offers.

2. Make an unusual creation to offer to your partner.

Arrange Ss in pairs or groups. During the activity learners will watch as others make various mixed drinks using items from the kitchen. Students must politely accept or reject the mixed drink, before making and offering their own drinks.
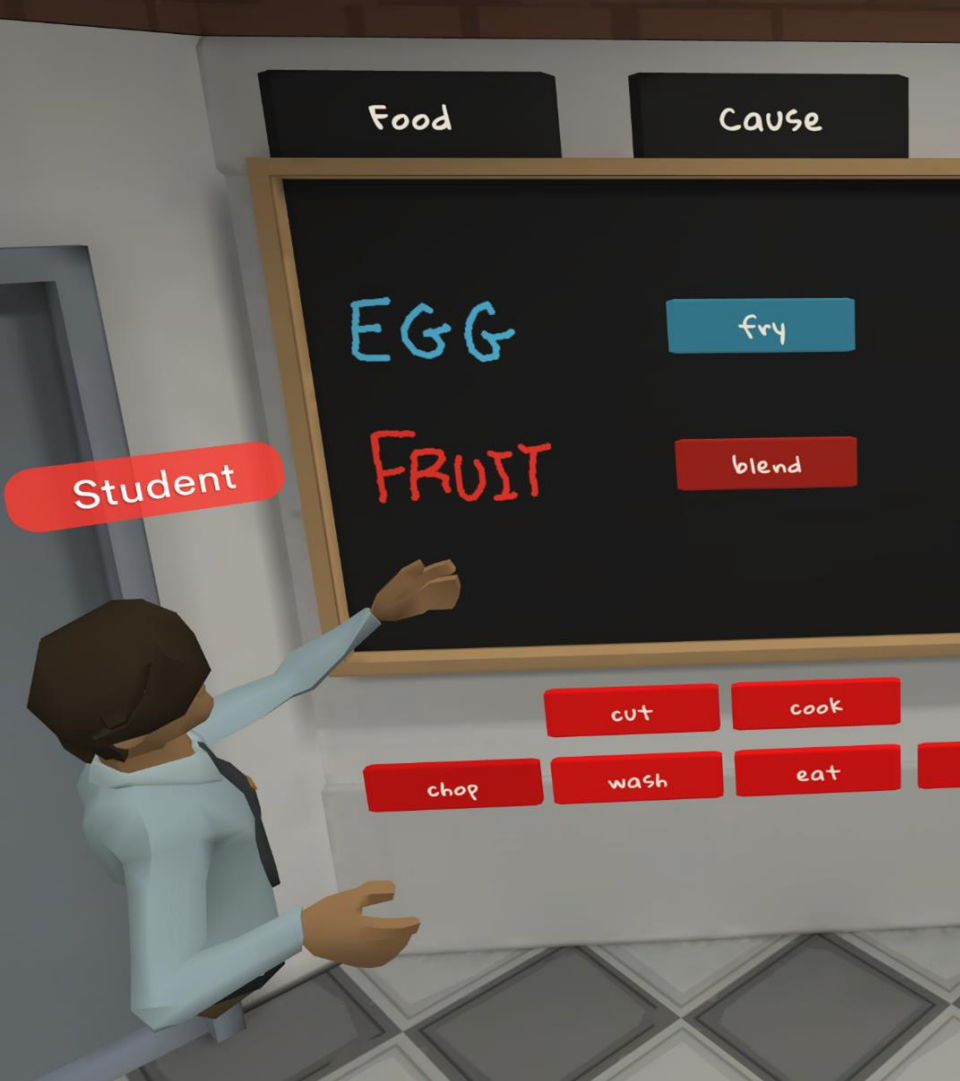
Tip: *You can use mix and mingle in any room that includes mixing areas including the Home, Resort, and more.*

3. Mix and offer the creation to a partner. Accept or reject?

Ss collect the ingredients and use blenders to mix a recipe. Pour and offer to partners. Partners must accept or reject, offering polite expressions for their choice. Partners change turns and repeat. When finished, rearrange teams and repeat with new partners.

Extension: *Have Ss reflect on a time in their lives when they needed to accept or reject and offer, to help further transfer language knowledge to communicating experiences.*

*Global Scale of English learning objectives aligned to the CEFR, for more information see English.com/gse

Future of Learning?

Metaverse and More

- Dynamic integration of platforms
- Moving from computer to phone to VR and back again
- VR for meetings, work, business, tourism, fashion and more...

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WANT TO EXPERIENCE OUR PLATFORM?

Recruiting Research Partners

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About Immerse

- We are a passionate global team of VR developers, designers, and language education experts dedicated to helping language schools innovate and thrive, today and tomorrow.

- Learn more immerse.online

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bringing **VR** to your language institution