Bees & Honey VR Plan

*adapted from a lesson by Lauren Hodes, here

For a **getting started guide**, **click here.**
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LESSON BACKGROUND

Grade: 2nd **# Students:** Small groups

Curricular Focus / Unit of Study/ Standards/ Learning Targets

Science - Insects and Plants - Pollination
2nd grade students complete the Insects and Plants module as part of their core curriculum. Virtual reality can be incorporated into an integrated English language development unit in order to build background knowledge and reinforce important pretaught vocabulary students will encounter during the unit in their classrooms.

1. **2-LS2-2 Ecosystems:** Interactions, Energy, and Dynamics. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
2. **CCSS.ELA-LITERACY.SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
3. **CCSS.ELA-LITERACY.L.2.6** Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., *When other kids are happy that makes me happy*).

When in the unit will you use Virtual Reality?

The Bees and Honey module could be used at the beginning of the unit in order to build background knowledge.

What non-virtual reality activities have you ALREADY done / planned for this unit?

PRIOR TO VR:
Students review or fill out the vocabulary (*spanish vocab coming soon*) terms to frontload key insect vocabulary. Students could also complete a K and W section of a KWL chart on bees.

STUDENT THINK SHEETS
Utilize whatever format is best for your learners.

iPads / Laptops - Book Creator — English: See, Think, Wonder.epub; Español: Ve, Piensa, Pregunta.epub

iPads / Laptops - Google Docs — English: See, Think, Wonder; Español: Ve, Piensa, Pregunta

Printout- PDF — English: See, Think, Wonder.pdf; Spanish: Ve, Piensa, Pregunta.pdf

VIRTUAL REALITY PLANNING

Where are you going? What tool(s) will you use?

- *Google Expeditions: Expeditions Lesson: Bees and Honey Production*

How will you get students connected to the location?

- Expeditions App on Guide Tablet and VR Devices

How will this / these 360 immersive experience(s) enhance / transform this activity?

- This virtual reality experience will provide students with an up close view of an insect that many would not approach. Students will be able to make connections with science content words directly through this experience and they will be able to make connections on how insects and plants are dependent on each other.

QUESTIONING

(These questions are in addition to the See/Think/Wonder think sheet)

What questions will you ask **BEFORE** the experience?	• What are the main parts of an insect? • Why might bees be important?
What questions will you ask **DURING** the experience?	• What do you notice about _____(part of the bee)? • What makes these parts on bees special? • What structures of the bee help it function as a pollinator?
What questions will you ask **AFTER** the experience?	• Why are bees important to plants?

How will students actively REFLECT and/or APPLY their new knowledge / understanding after the experience?

- Questions could be used to help guide further inquiry research about bees.
- Provided a bunch of raw, everyday materials, students might design a model that mimics the function of dispersing seeds or pollinating plants. Different groups can make different models based on the dispersal/pollinating method found in nature. Students can then test their prototypes with seeds or chalk dust to see which models stick the longest, which transfers easiest, etc..

POSSIBLE EXTENSIONS

Could your students:

- **Write** text for wordless picture book *Bee and Me* by Alison Jay
- **Watch** Busy Bees video by SciShowKids
- **Watch** Amazing Time-Lapse: Bees Hatch Before Your Eyes by National Geographic
- **Create** a digital information story using Adobe Spark
- **Read** informative texts on bees
- **Write** an opinion paragraph about why it is important to protect bees.

If so, how would this EXTEND / ENHANCE their learning?

These additional extension activities will allow students opportunities to practice new vocabulary about insects which will help them apply new concepts to their classroom science lessons.