**Careers and Mathematics**

Mathematics is in every job - we all know that but do our students? We will explore a different job and the mathematical activities involving this job from the website “On the Job”.

Let’s have a look at the Beekeeper. Detailed information about the Beekeeper & the Bee Broker can be found here: [Beekeeper - Environments - On The Job](https://onthejob.education/environments/beekeeper.htm)

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**Context and relevance**: "As we approach the year 2050 it is estimated that the world’s population will reach 9.7 billion people. Although this seems a long way away, it is within students’ lifetime. Because of this expected population increase we need to be smart about how we use resources today, to make sure they are available in abundance in future years. Bees pollinate a whopping TWO THIRDS of our food production." (Source: [Cool Australia.org](https://www.coolaustralia.org/love-food-love-bees-curriculum-resources))

**Activities for the Classroom:** <https://onthejob.education/classhome_activities/environments/beekeeper.htm>   
To complete these activities, students need to go this page above for the details. Here is a summary of the activities:

**Activity 1: Building a Warre Hive: What’s the Cost?**

**MiddleMiddle  High SchoolSecondary**

This activity involves the costing of building a particular hive – the Warre hive and the associated costs of having a beehive at the school. Involving the Technology Teachers.

**Activity 2: Bees and Hexagons**An activity for **MiddleMiddle  High SchoolSecondary** studying Geometry. Students are challenged to investigate the geometrically appealing shape of honeycombs and present their findings.Teachers will need to direct students to the appropriate resources for their mathematical level.

**Activity 3: Fires and Beekeeping: What are the implications?  
High SchoolSecondary**An activity for students studying Ecology and Mathematics.While the main emphasis is the ecology of fires and beekeeping – there is a small element of mathematics involved.

**Activity 4: Let’s do the mathematics for the Almond Industry and the Bee Brokers!**  
**MiddleMiddle  High SchoolSecondary**

This lesson explores the impact of the relatively new Almond industry in Australia and the role of Bee Brokers to deliver bees and beehives to the almond growers in different States on time for pollination.

**Activity 5: Investigating the maths inside: Bees with backpacks (developed by UTS, CSIRO & AAMT)**

**MiddleMiddle  High SchoolSecondary**

These 6 activities are based on mathematics and bees: making beehives, dancing with bees, counting bees, clever bees, bee food and bee patterns. Teacher notes are provided.

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**Life on the Job – Cedar & Stu Anderson – Australian Inventors of the Honey Flow.**<https://onthejob.education/life_job/beekeeper.htm>This father and son team have revolutionised the harvesting of honey all around the world. You need to go this page and get your students to read it to complete the following two activities.

**Activity 6: Connect Three: Honey Bees**.

Primary**Primary MiddleMiddle  High SchoolSecondary**

This activity encourages creativity and critical thinking skills. Only one activity out of nine is based on Mathematics where the students are to view a video about the Waggle Dance and create an infographic explaining the mathematics in the video. The other eight activities are based on the Flow Hive, Bees, Honey, Venn Diagram on the roles, creating a Tik-Tok on how Honey Flow works.

**Activity 7: The Way of the Waggle Dance**Primary**Primary MiddleMiddle**

Students are to use the Cornell Note-taking Method to analyse the bees dance and share their findings with another pair. They are to then play the “The Way of the Waggle Dance” game created by Arizona State University and describe the mathematics involved in the game.

**Careers & Mathematics can be found at** <https://onthejob.education/teachers_parents/Mathematics_Teachers/Careers_Mathematics_Index.htm>

**Contact Information**

If you are investigating a job or person in that job, please contact me Frances Moore – I would be happy to hear from you.

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