

Design Challenge: Beekeeping in Doha, Qatar

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After doing an in depth study about the decline of honeybee populations in the United States, our students were presented with a challenge to design beehives that would be able to withstand the harsh conditions here in the desert of Qatar. Students read about local beekeepers and the problems they faced and then designed hives to solve problems such as extreme temperatures and dust storms. Students tested their prototypes and followed that with a redesign. Despite having limited resources for this sort of project, they were able to produce impressive hives that were indeed effective in solving their problem. The student designs ranged from internal cooling systems to insulated outer layers to the hive.

Teacher Reflection

This was our students' first introduction to the design thinking process and engineering practices in NGSS. We were impressed with students' engagement in the project and their genuine concern for declining honeybee populations. Going forward, we would like to be sure that students are personally connected with the local beekeepers that are here in Qatar so that we can have implementation of their designs by the beekeeper.

Student Reflection

It is important to listen to other people's ideas and not just your own as we need to put as many ideas as we can on the table in order to have a good design.
—Jude

I previously had no idea that there were so many types of beehive designs.
—Andia

The high temperature and dust have a huge impact on the survival of bees here in Qatar, but with a well thought out design, we can solve those problems.
—Eleyna

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