



Dear Teachers,

We wanted to share with you an interesting example of **how Strawbees can be applied to scientific research of learning through play.**

Recently, we read the Lego Foundation's white paper that reviews the evidence of learning through play, which demonstrates the difference between surface learning and deep learning.

The paper inspired us to create models using Strawbees that illustrate the concepts outlined in the white paper.

The **first illustration** in the paper shows the difference between surface learning (memorizing key facts and principles) and deeper learning (connecting factual knowledge with real-world experiences).

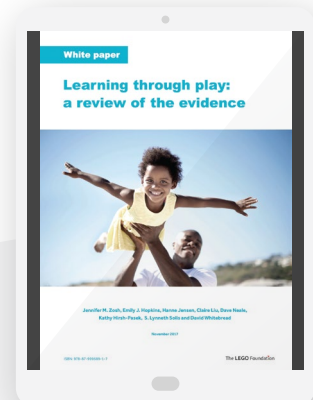
The **second illustration** demonstrates how Strawbees STEAM Solution can put deep learning into practice with our models and how to expand it further with more ideas.

We hope you find the white paper and models inspiring. If you would like to read more, please download the white paper below.

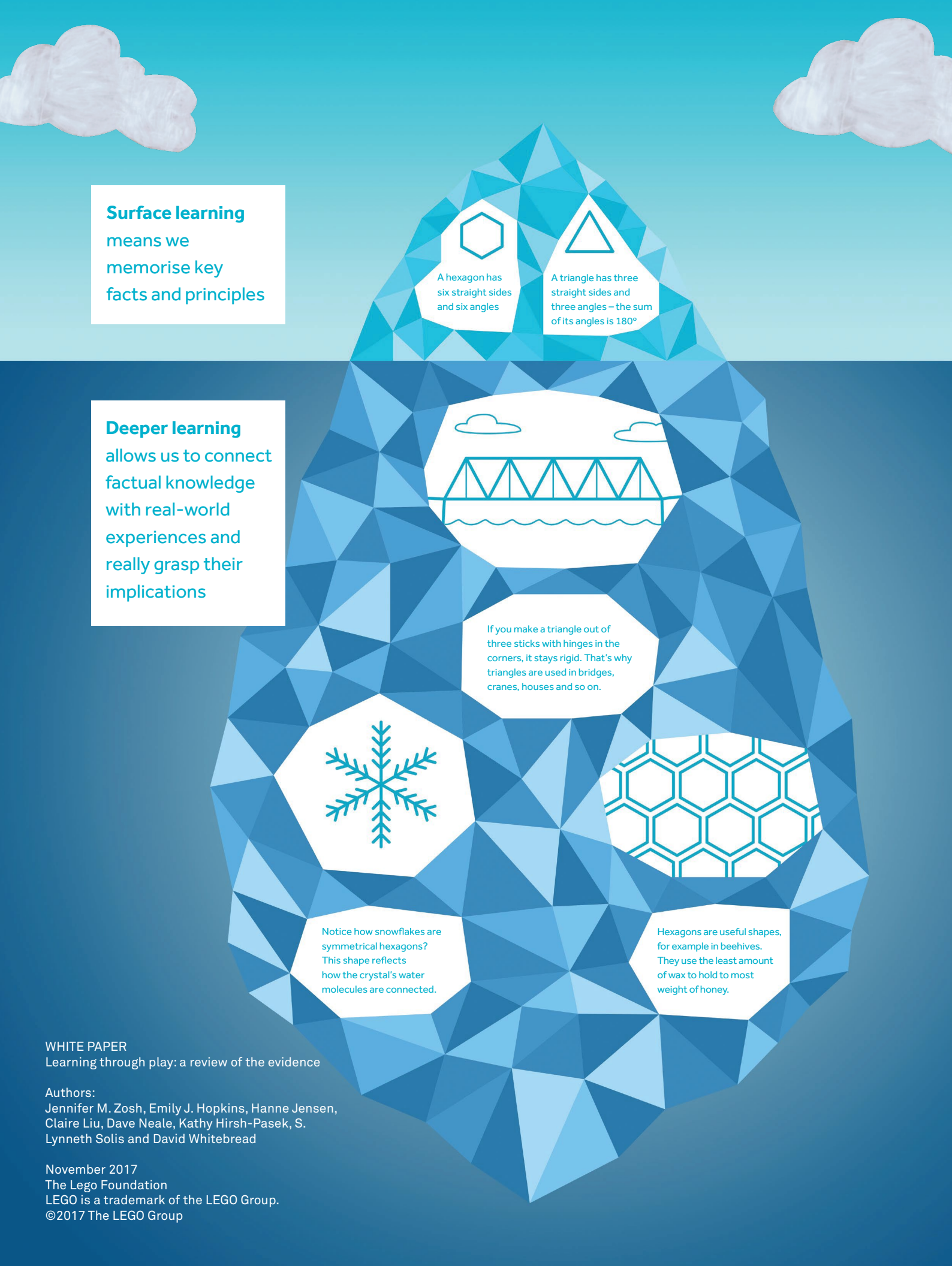
Best regards,



Erik Torstensson Boije
Co-Founder and CIO of Strawbees



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Surface learning
means we
memorise key
facts and principles

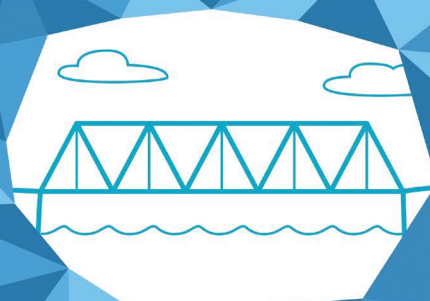
Deeper learning
allows us to connect
factual knowledge
with real-world
experiences and
really grasp their
implications



A hexagon has
six straight sides
and six angles



A triangle has three
straight sides and
three angles – the sum
of its angles is 180°



If you make a triangle out of
three sticks with hinges in the
corners, it stays rigid. That's why
triangles are used in bridges,
cranes, houses and so on.



Notice how snowflakes are
symmetrical hexagons?
This shape reflects
how the crystal's water
molecules are connected.



Hexagons are useful shapes,
for example in beehives.
They use the least amount
of wax to hold to most
weight of honey.

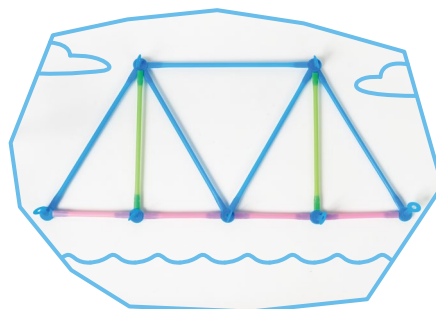
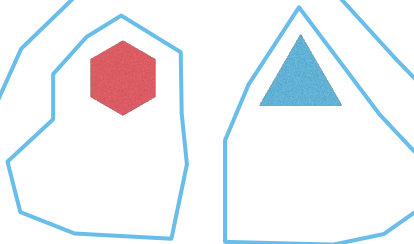
WHITE PAPER
Learning through play: a review of the evidence

Authors:
Jennifer M. Zosh, Emily J. Hopkins, Hanne Jensen,
Claire Liu, Dave Neale, Kathy Hirsh-Pasek, S.
Lynneth Solis and David Whitebread

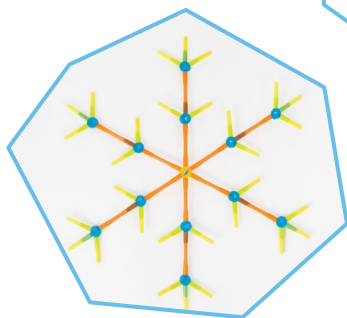
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The Lego Foundation
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SURFACE LEARNING

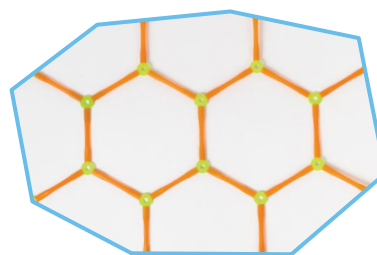
DEEPER LEARNING



Build a bridge and experiment to enhance the strength of the bridge.



Explore different snowflake patterns.¹



Construct another honeycomb shape using the identical number of straws.²

¹ **TIP:** Create only a 'leg' replicating the rest with a kaleidoscope app and preview it. Then, decide which one to build.

² Which structure has the greater surface area?