

Year 3 Knowledge Organiser - Ready to Pop!



DT

Vocabulary

Key Questions

Key paper engineer

Matthew Reinhart

1971-present



Key Vocabulary	Definition
Lever	A projecting arm or handle that is moved to operate a mechanism.
Linkages	A system of links
Annotated diagram	A diagram that contains brief explanations for parts of the diagram.
Function	A natural purpose of something.
Purpose	Why you do something
Three-dimensional	An object with length, width and height.
Mechanism	A set of parts that work together.

How is the mechanism connected and how does it work?

What is the purpose of the product and the lever?

Who is the audience of this product?

Key Facts

Matthew is an illustrator of children's pop-up books and picture books.

His most recent books include Frozen: a Pop-up Adventure and Lego Pop-up: A Journey to the Lego Universe.

In 2008 Matthew was honoured as the best paper engineer for his book "Star Wars-Pop-up Guide to the Galaxy"

Matthew uses Adobe Illustrator to trace the original pop ups then he uses die lines which act like a cookie cutter that punches out all the pieces for a pop-up book.

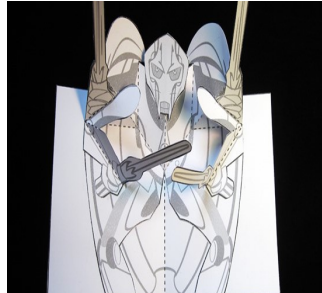
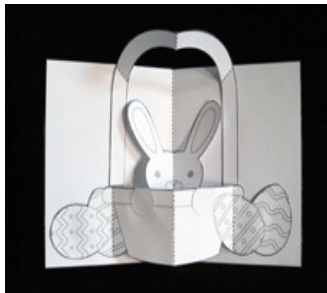
One of the mechanisms he relies on is the "v-fold," a little folded triangle of paper securing a pop-up to the page, allowing it to move in an arc as the page is opened.

By varying the angle of the v-folds behind each component, Reinhart can adjust when and how each piece will appear as the page is turned. Some of Reinhart's pop-ups use as many as 20 v-folds, many of them building off of each other to make movement possible.

Matthew says "the most important skill in paper engineering is problem solving." He says it is important to find ways to fix the problem if the pop up doesn't work.

His dream is to create the ultimate pop-up body book .

Work Examples



Timeline

Joseph Henry
1797–1878

Henry Ford
1863–1947

Ikea
1943- present

Michele Walker
1947– present

Matthew Reinhart
1971-present

Nadiya Hussain
1984–present