

LOOK UP! NUMBERS, COLOURS AND SHAPES IN ARCHITECTURE

TEACHERS NOTES

Written and illustrated by Antonia Pesenti
Published by Hardie Grant Egmont in August 2018

SYNOPSIS

Look Up! features a selection of architectural wonders; each one draws our attention to numbers, shapes and colours in unique and fascinating ways.

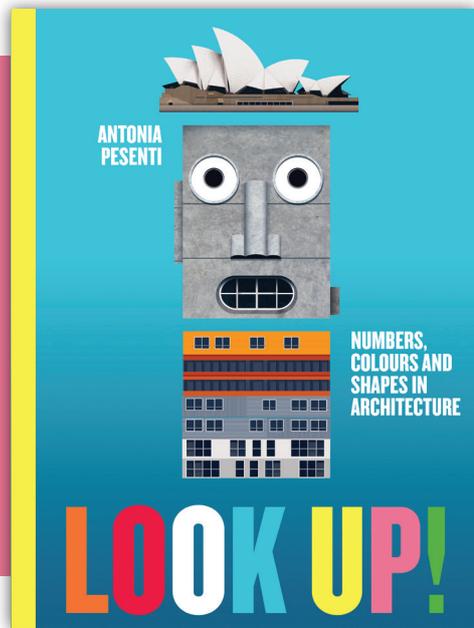
Carefully curated by Antonia Pesenti to include a broad range of buildings from around the world and from different eras, *Look Up!* not only introduces young children to numbers, colours and shapes, but also provokes discussion about architecture.

ABOUT THE AUTHOR

Antonia Pesenti is a Sydney-based architect and illustrator. She has a degree in Architecture from Sydney University and has worked as an architect for eight years in Paris, a city full of architectural wonders! Parallel to her work there, Antonia spent her time discovering and documenting Paris through drawing, thus developing a passion for illustrated books.

Today she combines co-directing the award-winning design partnership MAKE Creative with illustrating/designing and making beautiful books, exploring all formats from experimental zines through to picture books. She has previously illustrated a number of picture books including *Alphabetical Sydney*, *Rhyme Flies* and *Numerical Street*.





LOOK UP! NUMBERS, COLOURS AND SHAPES IN ARCHITECTURE

TEACHERS NOTES

Written and illustrated by Antonia Pesenti
Published by Hardie Grant Egmont in August 2018

THEMES

Colours and numeracy

Sustainability and the built environment

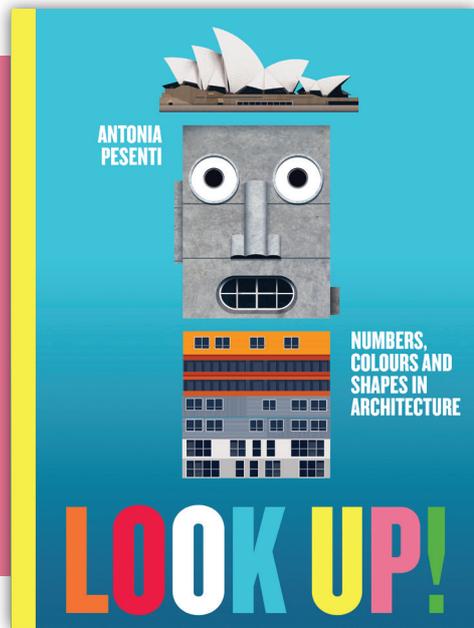
Full of stunning architectural wonders, Look Up! is a great way to introduce young children to different shapes around them. After studying the book, children will be inspired to visually break down the complex buildings they see around them into simpler shapes, which can help them learn how various shapes fit together.

A snail appears alongside the buildings in this book to take the reader on a journey through the wonders of the world. Snails are amazing creatures that carry their own protection (or home) wherever they go! A snail's shell is also a perfect natural representation of Fibonacci's Golden Ratio.

If we want a sustainable world and citizens who demand sustainability, we have to start with our children. Introducing children to concepts related to cities and architecture is an excellent foundation to making real improvements to our built environment.

Architecture is everywhere but rarely are we taught how to understand and enjoy a city in all its complexity. Teaching children how to observe, understand and enjoy the human built environment will open their minds towards a more creative way of thinking and prepare them to play an active role as citizens of a sustainable future.





LOOK UP! NUMBERS, COLOURS AND SHAPES IN ARCHITECTURE

TEACHERS NOTES

Written and illustrated by Antonia Pesenti
Published by Hardie Grant Egmont in August 2018

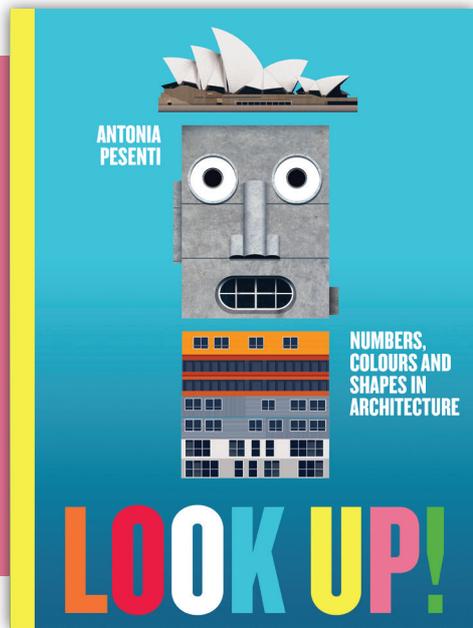
STUDY NOTES

Questions and discussion points to explore with students:

- Do they recognise any of the buildings pictured in Look Up! – and if so, where do they recognise them from?
- How many buildings can they list by name?
- Ask students if they can identify how the number on the opposite page relates to each building pictured.
- Do they know the location of the buildings?
- Ask students to choose a picture and identify all of the shapes the building is composed of.
- Ask students to design and draw their own building. Who is it for? What is it for? Why does the world need a building like theirs?
- Ask students to choose their favourite building (either from the book or not) to research and report on. What do they like about the building? Who designed it? When was it built? What was it originally used for? What is it used for now? What is it built from? Has the architect of that building designed other buildings? If so, how are they similar or different to the one being studied?
- Discuss the different art movements that have influenced the design of the buildings.
- What forces keep a building standing? Which ones could make a building collapse?
- Who designs bridges and airports and train stations?
- What is 'green' architecture?
- Ask students if they understand why there is a snail on each page. This is to demonstrate the Golden Ratio Principle. Ideas for further teaching - <https://www.mathsisfun.com/numbers/nature-golden-ratio-fibonacci.html>

Thinking about skyscrapers:

- How do they stand up?
- How tall can they be built?



LOOK UP! NUMBERS, COLOURS AND SHAPES IN ARCHITECTURE

TEACHERS NOTES

Written and illustrated by Antonia Pesenti
Published by Hardie Grant Egmont in August 2018

- What is the tallest skyscraper in the world/in your city?
- Discussion could also include economic and social issues — why build skyscrapers? What are they used for? What problems do they solve? Do they introduce problems? (For example, a skyscraper used as an apartment block is an effective way to house people, but may overshadow surrounding areas; streets full of skyscrapers can create wind tunnels.)

Further teaching and learning:

- Using free software applications to 'learn by doing', students can experience the design process firsthand with questions and activities that direct learning. Download **SketchUp**
- **Nova**, the companion site to Super Bridge, lets kids build virtual bridges based on four different scenarios. School children will enjoy the graphics, and the website also has a teacher's guide and links to other helpful resources. <http://www.pbs.org/wgbh/nova/tech/build-bridge-p1.html>
- **ArchKIDecture** has some great lesson ideas, resources and word lists: <http://archkidecture.org/learn/>
- **Architecture! It's Elementary** has lesson plans that combine individual and group activities: http://www.k5architecture.org/Download_chpt.htm
- The **Learning Network at The New York Times** takes architecture-related news stories from their pages and transforms them into learning experiences for students. It includes articles, video presentations, and suggested questions and lessons about architecture and our environment.

