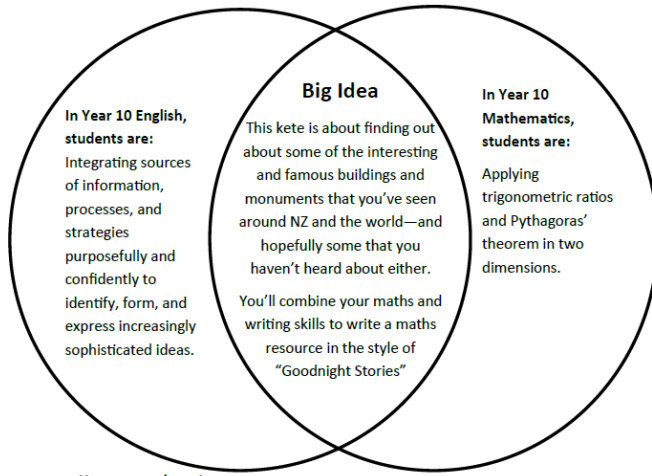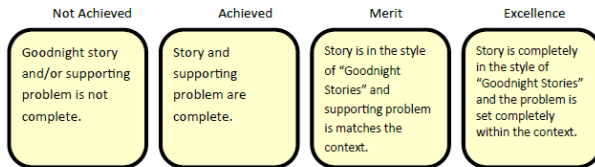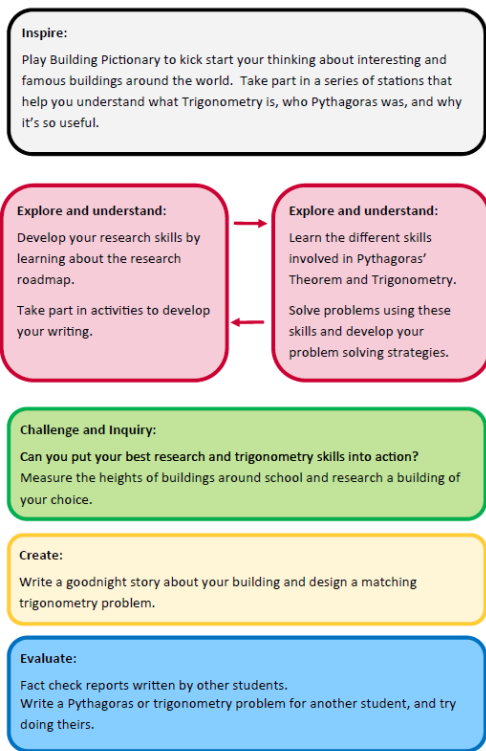# Goodnight Stories

In this kete you will use Pythagoras and Trigonometry to understand buildings and the structures around them, using the processes of research and formal writing to communicate your findings.

Big Idea

In Year 10 English, students are: Integrating sources of information, processes, and strategies purposefully and confidently to identify, form, and express increasingly sophisticated ideas.

This kete is about finding out about some of the interesting and famous buildings and monuments that you've seen around NZ and the world—and hopefully some that you haven't heard about either.

You'll combine your maths and writing skills to write a maths resource in the style of "Goodnight Stories"

In Year 10 Mathematics, students are: Applying trigonometric ratios and Pythagoras' theorem in two dimensions.

Your research project:

Not Achieved	Achieved	Merit	Excellence
Goodnight story and/or supporting problem is not complete.	Story and supporting problem are complete.	Story is in the style of "Goodnight Stories" and supporting problem is matches the context.	Story is completely in the style of "Goodnight Stories" and the problem is set completely within the context.

Your Learning Journey

Inspire:
Play Building Pictionary to kick start your thinking about interesting and famous buildings around the world. Take part in a series of stations that help you understand what Trigonometry is, who Pythagoras was, and why it's so useful.

Explore and understand:
Develop your research skills by learning about the research roadmap.

Take part in activities to develop your writing.

Explore and understand:
Learn the different skills involved in Pythagoras' Theorem and Trigonometry.

Solve problems using these skills and develop your problem solving strategies.

Challenge and Inquiry:
Can you put your best research and trigonometry skills into action? Measure the heights of buildings around school and research a building of your choice.

Create:
Write a goodnight story about your building and design a matching trigonometry problem.

Evaluate:
Fact check reports written by other students.
Write a Pythagoras or trigonometry problem for another student, and try doing theirs.
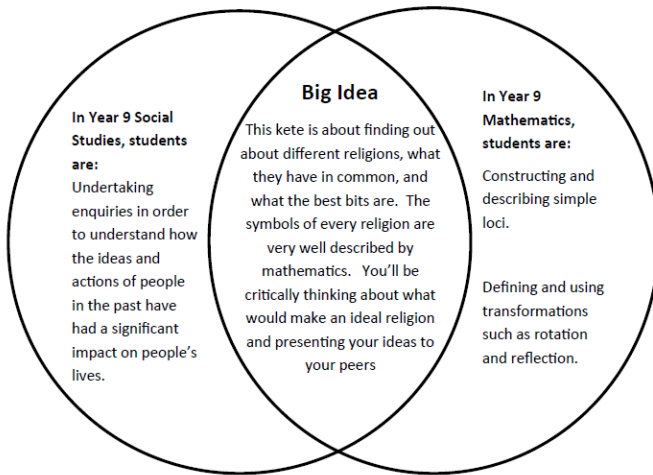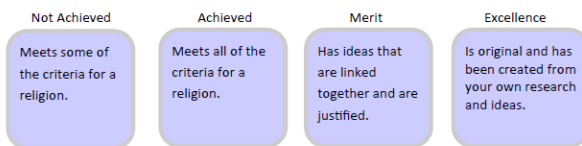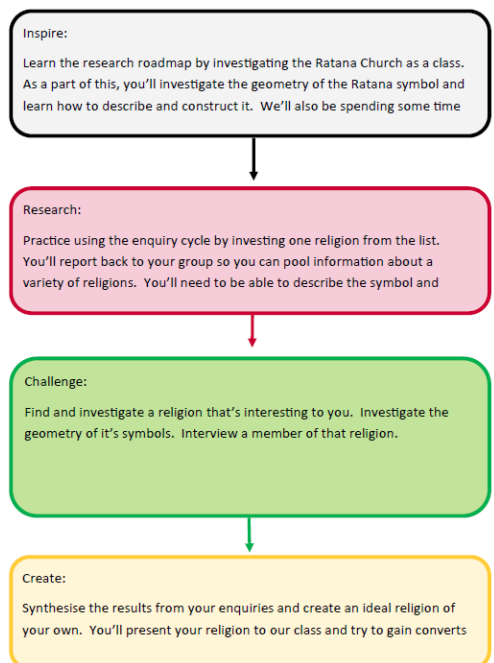
OMG!

Design your perfect religion. You'll research some different religions from around the world and then have the chance to create and present your religion to see who can gain the most converts.

Big Idea

In Year 9 Social Studies, students are: Undertaking enquiries in order to understand how the ideas and actions of people in the past have had a significant impact on people's lives.

This kete is about finding out about different religions, what they have in common, and what the best bits are. The symbols of every religion are very well described by mathematics. You'll be critically thinking about what would make an ideal religion and presenting your ideas to your peers

In Year 9 Mathematics, students are: Constructing and describing simple loci.

Defining and using transformations such as rotation and reflection.

Your own religion:

Not Achieved	Achieved	Merit	Excellence
Meets some of the criteria for a religion.	Meets all of the criteria for a religion.	Has ideas that are linked together and are justified.	Is original and has been created from your own research and ideas.

Your Learning Journey

Inspire:
Learn the research roadmap by investigating the Ratana Church as a class. As a part of this, you'll investigate the geometry of the Ratana symbol and learn how to describe and construct it. We'll also be spending some time

Research:
Practice using the enquiry cycle by investing one religion from the list. You'll report back to your group so you can pool information about a variety of religions. You'll need to be able to describe the symbol and

Challenge:
Find and investigate a religion that's interesting to you. Investigate the geometry of it's symbols. Interview a member of that religion.

Create:
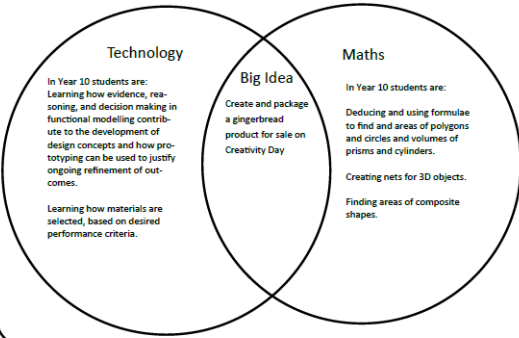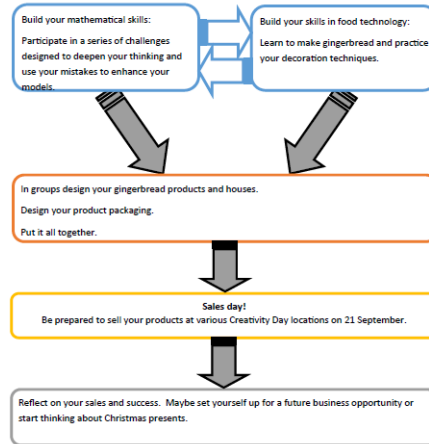Synthesise the results from your enquiries and create an ideal religion of your own. You'll present your religion to our class and try to gain converts

Gingerbread Architecture:

Design and create gingerbread houses and products for sale on creativity day.

BAKE A BACH!

KIWISTYLE GINGERBREAD HOUSES

@ Riverside Community 289 Main Road Lower Moutere

Technology

In Year 10 students are:
Learning how evidence, reasoning, and decision making in functional modelling contribute to the development of design concepts and how prototyping can be used to justify ongoing refinement of outcomes.

Learning how materials are selected, based on desired performance criteria.

Big Idea

Create and package a gingerbread product for sale on Creativity Day

Maths

In Year 10 students are:

Deducing and using formulae to find and areas of polygons and circles and volumes of prisms and cylinders.

Creating nets for 3D objects.

Finding areas of composite shapes.

Learning Journey

Build your mathematical skills:

Participate in a series of challenges designed to deepen your thinking and use your mistakes to enhance your models.

Build your skills in food technology:

Learn to make gingerbread and practice your decoration techniques.

In groups design your gingerbread products and houses.

Design your product packaging.

Put it all together.

Sales day!
Be prepared to sell your products at various Creativity Day locations on 21 September.

Reflect on your sales and success. Maybe set yourself up for a future business opportunity or start thinking about Christmas presents.

Project grade:

NA	A	M	E
Did not successfully complete one or more of: House Product Packaging	Successfully completed all of: House Product Packaging Products are available for sale on Creativity Day.	House, product and packaging are linked by a common theme and are presented for sale on Creativity Day.	Insight is shown and a high level of creativity has been used in the design of house, package and product which is available for sale on Creativity Day.