



Topic	RE	Theme	Explorers	Year Group	5
Key Question	What does it mean if Christians believe God is holy and loving?				

★ OUTCOMES

BY THE END OF THIS UNIT, PUPILS ARE EXPECTED TO BE ABLE TO:

- Identify some different types of biblical texts, using technical terms accurately.
- Explain connections between biblical texts and Christian ideas of God, using theological terms.
- Make clear connections between Bible texts studied and what Christians believe about God; for example, through how churches are designed.
- Show how Christians put their beliefs into practice in worship.
- Weigh up how biblical ideas and teachings about God as holy and loving might make a difference in the world today, developing insights of their own.

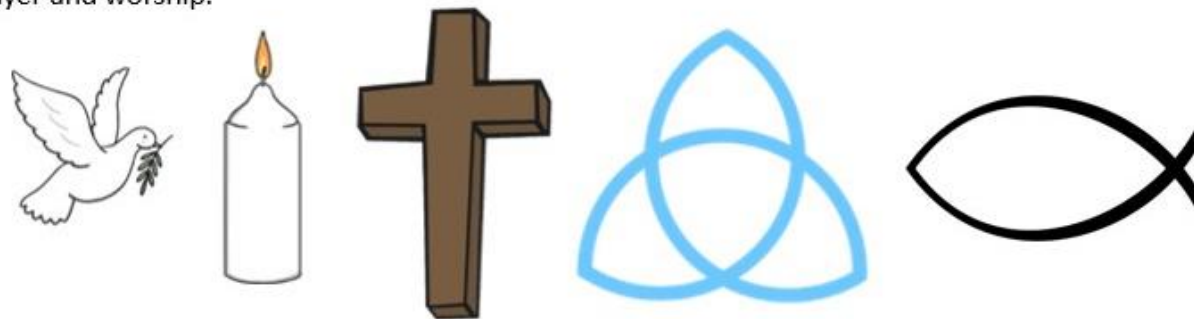
🧱 KNOWLEDGE BUILDING BLOCKS

PUPILS WILL KNOW THAT:

- Christians believe God is omnipotent, omniscient and eternal, and that this means God is worth worshipping.
- Christians believe God is both holy and loving, and Christians have to balance ideas of God being angered by sin and injustice (see Fall) but also loving, forgiving, and full of grace.
- Christians do not all agree about what God is like, but try to follow his path, as they see it in the Bible or through Church teaching.
- Christians believe getting to know God is like getting to know a person rather than learning information.

Key Vocabulary

- Bible: the sacred scriptures of Christians comprising the Old Testament and the New Testament.
Church: a building used for public Christian worship.
Christian: a person who follows or belongs to a religion based on the worship of one God and the teachings of Jesus Christ as described in the Bible.
Eternal: Everlasting
Holy: morally pure, hates sin
Holy Trinity: from the Latin noun "trinitas" meaning "three are one" - Father, Son and Holy Spirit.
Image: a representation of the external form of a person or thing
Loving: wanting the very best for someone, caring for them
Omnipotent: All powerful
Omniscient: Knows everything
Spirit: Not physical
Society: people in general living together in an organized way, making decisions about how to do things, and sharing the work that needs to be done.
The book of Psalms: prayers and songs used by the people of God in private and communal prayer and worship.






Topic	Art – Drawing: I need space	Theme	Explorers	Year Group	5
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collagraphy	A printmaking process that uses textures to create interesting surfaces within a print.
decision	After taking different things into account you come to a conclusion.
futuristic	An object or image that looks like it is from the future.
imagery	A collection of visual images.
propaganda	Information, that may be misleading, to promote an often political cause.
purpose	The reason for something being created.
retrofuturism	A vision of what the future might look like created in the pre-1960s.
technique	Applying a particular method of making something.

Retrofuturism



Art produced between 1950-1960 that depicted what people imagined the future would look like.

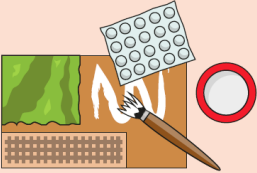
Credit: Look and Learn / Bridgeman Images

Making a collagraph printing plate

Step 1

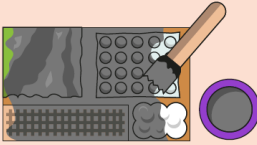
Glue the different textures to your flat cardboard plate.

Top tip! It must be allowed to dry completely before you use it.



Step 2

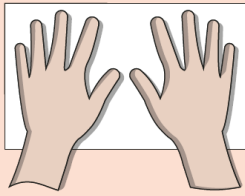
Completely cover your plate with printing ink. Use a thick brush to get into all the gaps. Make sure the ink is evenly applied.



Step 3

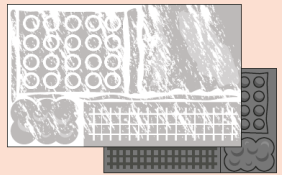
Place your inked plate onto your paper and press firmly all over. You can use a dry roller to do this.

Top tip! Work from top to bottom to smooth over the entire plate.



Step 4

Peel the paper away from the printing plate to reveal your print!



Impact of the Space Race on art and design



What was the space race?



During the 1950s and 1960s, the United States of America and the Soviet Union were competing for supremacy in many areas, including competing to explore space.



Topic	Science – Earth and Space	Theme	Explorers	Year Group	5
Key Question	What have we learnt from our space explorations?				

What should I already know?	What will I know by the end of the unit?
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- We have four seasons (autumn, winter, spring and summer).
- The sun is a source of light but the Moon is not.
- Know that a **shadow** is caused when an object blocks light from passing through it.
- The properties of a **sphere**.

- What is the Solar System?
- There are 8 planets in our Solar System (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune). Pluto is a dwarf planet.
 - They all orbit the Sun, which is a star, and they all have moons.
 - The first four planets are relatively small and rocky while the four outer planets are gas giants (Jupiter and Saturn) or ice giants (Uranus and Neptune).
 - There are also asteroids, meteoroids and comets in the Solar System.
 - The Solar System is in a galaxy called the Milky Way.
 - The galaxy is in the universe.

What will I know by the end of the unit?

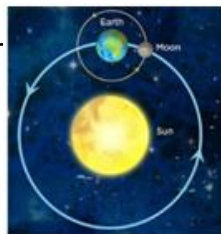
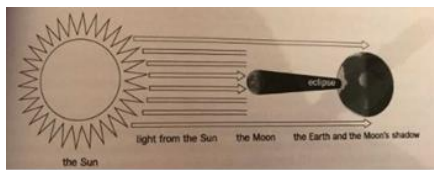
- What causes day and night?
- The Earth **rotates** on its **axis** anti-clockwise and makes a complete **rotation** over 24 hours (a day).
 - This makes it appear as the Sun moves through the sky but the Earth's rotation causes day and night.
 - Different parts of the Earth experience daylight at different times - this means that it is morning, afternoon and night in different places. This is also the reason why we have **time zones**.
 - Because of the Earth's tilt, the poles experience 24 hours of sunlight in the summer and very few hours in the winter.
 - As the Earth **rotates**, **shadows** that are formed change in size and orientation.

- Year length and the seasons
- The Earth takes 365 and a quarter days to **orbit** the Sun.
 - Because of the extra quarter day it takes to **orbit** the Sun, every four years on Earth is a leap year.
 - It is the Earth's tilt that causes the seasons.

- The Moon
- The Moon **orbits** the Earth anti-clockwise and takes approximately 28 days.
 - The Moon spins once on its **axis** every time it **orbits** Earth. This means that we only see one side of the Moon.
 - The Moon has different phases depending on where it is in its **orbit**.
 - The Moon's **gravity** causes high and low tides.

Key Vocabulary

asteroid	A rock that orbits the Sun in a belt between Mars and Jupiter.
axis	An imaginary line through the middle of something.
comet	A bright object with a long tail that travels around the Sun.
Galaxy	An extremely large group of stars and planets. Our galaxy is called the Milky Way.
leap year	A year which has 366 days. The extra day is the 29 th February.
meteorite	A rock from outer space that has landed on Earth.
orbit	The curved path in space that is followed by an object going round and round a planet, moon or star.
planet	A large, round object in space that moves around a star.
shadow	A dark shape on a surface that is made when something stands between a light and the surface.
spin	Turns quickly around a central point.
star	A large ball of burning gas in space
Time zones	One of the areas into which the world is divided where the time is calculated as being a particular number of hours behind or ahead of GMT (Greenwich Mean Time)
universe	The whole of space and all the stars, planets and other forms of matter and energy in it.





Topic	Computing - Coding	Theme	Explorers	Year Group	5
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Key Learning

- To begin to simplify code.
- To create a playable game.
- To understand what a simulation is.
- To program a simulation using 2Code.
- To know what decomposition and abstraction are in computer science.
- To take a real-life situation, decompose it and think about the level of abstraction.
- To understand how to use friction in code.
- To begin to understand what a function is and how functions work in code.
- To understand what the different variables types are and how they are used differently.
- To understand how to create a string.
- To understand what concatenation is and how it works.

Key Images



Open design mode in 2Code. Switch to code mode in 2Code. Add a new Tab to your code A change variable block.



Example of combining variables and strings to print to the screen



Creating a variable in 2Code



Creating a function in 2Code



Calling a function in 2Code

Key Questions

What does simulating a physical system mean?

Creating a program where the objects behave as they would in the real world. For example, a football program that uses angles, speed and friction to simulate kicking a football. When simulating a physical system, you first must break the system down into parts that can be coded (decomposition). The different parts will come together to make the full simulation.

Describe how you would use variables to make a timer countdown and a scorepad for a game.

Timer countdown: Create a timer variable and set it to the starting number of seconds. Add a Timer command that repeats and subtracts 1 every second. Add a text object in design view to display this number.

Score: Create a variable to store the score, each time the user gains a point, change and display the value of the variable.

Give examples of how you could use the Launch command in 2Code.

Clicking on a button or other object in the program to opens another 2Code program or a webpage.

What do the terms decomposition and abstraction mean? Use examples to explain them.

Decomposition is breaking a task into its component parts so that each part can be coded separately. If you were coding a game of chess, you could decompose into the moves of the different pieces and the setup of the playing space. Abstraction is removing unnecessary details to get the program functioning. In the example, the colour and size of the squares is not important to game play.

Key Vocabulary

Abstraction

A way of de-cluttering and removing unnecessary details to get a program functioning.

Action

The way that objects change when programmed to do so. For example, move or change a property.

Algorithm

A precise step by step set of instructions used to solve a problem or achieve an objective.

Concatenation

The action of linking a mixture of strings, variable values and numbers together in a series.

Debug\ Debugging

Fixing code that has errors so that the code will run the way it was designed.

Decomposition

A method of breaking down a task into manageable components. This makes coding easier as the components can then be coded separately and then brought back together in the program.

Efficient

In coding, simplified code runs faster and uses less processing memory, it is said to be more efficient.

Flowchart

A diagram that uses specifically shaped, labelled boxes and arrows to represent an algorithm as a diagram.

Event

An occurrence that causes a block of code to be run. The event could be the result of user action such as the user pressing a key (when Key) or clicking or swiping the screen (when Clicked, when Swiped) or when objects interact (collision). In 2Code, the event commands are used to create blocks of code that are run when events happen.

Nesting

When coding commands are put inside other commands. These commands only run when the outer command runs.

Physical System

In this context, this is any object or situation that can be analysed and modelled. For example modelling the function of a traffic light, modelling friction of cars moving down surfaces or modelling the functions of a home's security system.

Function

A block or sequence of code that you can access when you need it, so you don't have to rewrite the code repeatedly. Instead, you simply 'call' the function each time you want it.

Object

Items in a program that can be given instructions to move or change in some way (action). In 2Code Gorilla, the object types are button number, input, text, shape turtle, character, object, vehicle, animal.

Properties

These determine the look and size of an object. Each object has properties such as the image, scale and position of the object.

Selection

A conditional decision command. When selection is used, a program will choose which bit of code to run depending on a condition. In 2Code selection is accomplished using 'if' or 'if/else' statements.

Input

Information going into the computer. This could be the user moving or clicking the mouse, or the user entering characters on the keyboard. On tablets there are other forms such as finger swipes, touch gestures and tilting the device.

Output

Information that comes out of the computer e.g. sound, prompt, alert or print to screen.

Repeat

This command can be used to make a block of commands run a set number of times, until a condition is met or forever.

Sequence

This is when a computer program runs commands in order.

Simplify

In coding this is used to describe modifying the code to complete the same process with less lines of code.

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Timer

Use this command to run a block of commands after a timed delay or at regular intervals.

Variable

A named area in computer memory. A variable has a name and a value. The program can change this variable value. Variables are used in programming to keep track of things that can change while a program is running. In 2Code, variables can be strings, numbers or computer-generated variables to control objects of a type.



La fecha

go

sound in:

- domingo
- agosto



co

sound in:

- miércoles
- cinco

accents

Accents indicate the vowel is stressed. As seen in the words sábado and miércoles.

ñ tilde

This changes the 'n' to a 'ny' sound like in the English word 'onion'. As in the Spanish word cumpleaños.

phonics

The 7 days of the week in Spanish.

**lunes martes miércoles jueves
viernes sábado domingo**

The 12 months of the year in Spanish.



Numbers 21-31 in Spanish.

21-22-23-24-25-26-27-28-29-30-31

Key questions and phrases with the date:

¿Qué fecha es hoy?

What is the date today?

¿Cuándo es tu cumpleaños?

When is your birthday?

vocabulary

grammar

Days of the week and months of the year do not have capital letters unless they are at the start of a sentence in Spanish.

**Hoy es lunes
ocho de julio.**

Today it is Monday eighth July.

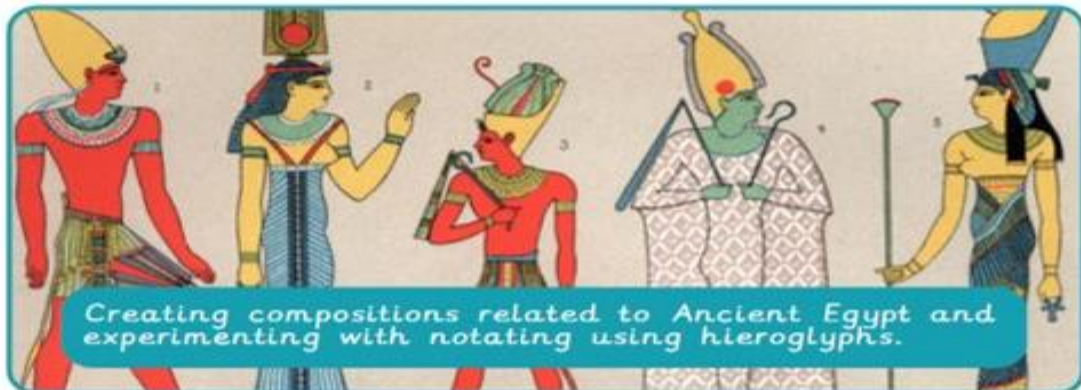
No capital letter in the phrase above for the day of the week 'Monday' or the month 'July' in Spanish.

What I will learn:

- Objective 1: I will learn to recognise and recall the 7 days of the week in Spanish.
- Objective 2: I will learn to recognise and recall the 12 months of the year in Spanish.
- Objective 3: I will learn to recognise and recall numbers 1-31 in Spanish.
- Objective 4: I will learn how to ask and answer the question *¿Qué fecha es hoy?* (*What is the date today?*) in Spanish.
- Objective 5: I will learn how to ask and answer the question *¿Cuándo es tu cumpleaños?* (*When is your birthday?*) in Spanish.



Musical feature: Composition notation



Vocabulary

Melody The combination of pitch and rhythm which forms a tune.

Improvising Making up music as it is played or performed.

Notation Written symbols used to represent music.

Motif A short musical phrase that is often repeated.

Call and response A musical technique that is similar to a conversation. One phrase of music acts as the 'call' and is 'answered' by a different phrase.

Unison Playing or singing notes at the same pitch at the same time.

Verse A repeated section of a song that usually features new lyrics on each repetition.

Structure The overall organisation of a piece of music. Traditional pop music usually follows a verse, chorus, verse structure.

Major A tonality where the music sounds happy or bright.

Minor A tonality where the music sounds sad or tense.

Tempo The speed or pace of the music.

Ensemble A group of people who perform instrumental or vocal music.

Notation

Staff notation

Quaver		Half	1/2	
Crotchet		One	1	
Minim		Two	2	
Dotted minim		Three	3	
Semibreve		Four	4	

Letter notation





Mechanical Systems - Pop-up book

Aesthetic	How an object or product looks.
CAD	Computer-aided-design. To use the computer to design a product, diagram or drawing.
Caption	A short piece of writing under a picture that describes or explains the picture.
Design	To make, draw or write plans for something.
Design brief	A description of what you are going to design and make and how it will work.
Design criteria	To help designers focus their ideas and test the success of them.
Exploded-diagram	A diagram which shows all of the parts of a product, including the internal and external parts.
Function	How an object or product operates or works.
Input	Input is the motion used to start a mechanism.
Linkage	A set of bars linked together to form a mechanism.
Mechanism	A system of parts working together.
Motion	The movement an object makes when controlled by an input or output (e.g. left, right, up, down).
Output	Output is the motion that happens as a result of starting the input.
Pivots	A shaft or pin on which something turns.
Prototype	A simple model that lets you test out your idea, showing how it will look and work.
Sliders	A part of a mechanism which allows an object to move from side-to-side (e.g. left-to-right).
Structure	Something which stands, usually on its own.
Template	A stencil made of metal, plastic, or paper, used for making many copies of a shape or to help cut material accurately (e.g. biscuit cutter).

Key fact



Input is the **motion** used to start a **mechanism**. **Output** is the **motion** that happens as a result of the **input**.



Think of a see-saw, when you sit on your side of the see-saw (**input**) your friend goes up on the other side. (**output**)

Did you know?



Did you know that the first children's pop-up books were invented in the 1700s? That's over 300 years ago! Lothar Meggendorfer was a well-known pop-up author in the 1800s.