

# This term's Big Question:

## How does our solar system define time?

Assignment Topic:  
Science - Earth in Space

Key vocabulary:

- Earth
- Sun
- Moon
- Axis
- Rotation
- Day
- Night
- Phases of the Moon
- Star
- Constellation
- Planets
- Geocentric
- Heliocentric
- Spherical
- Gravity
- Hubble
- Copernicus

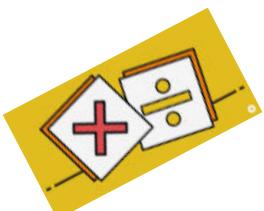
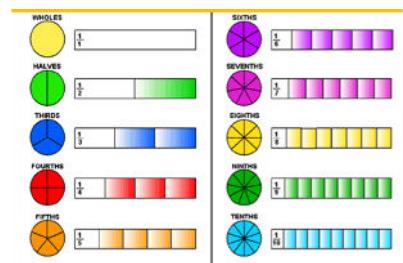


## Maths

### Multiplication:

1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

### Fractions:



### Key vocabulary:

Factor, multiple, multiplier, times, model, multiply, divide, division, product, multiplication, area, misconception, part, whole, calculate, calculation, inverse, fraction, integer, numerator, denominator, equivalent, improper, mixed numbers, place value, simplest form.

## In this project children will focus:

On how night and day; 24 hours in a day, a month, seasons and a year are determined by the solar system

LEARNING TO FLY  
Harriers Banbury Academy  
Year 5 Knowledge Organiser  
Term 3 Aspiration: Curiosity and Creativity

### RSF - Me and my relationships

Being kind to one another, healthy relationships, how to respond to risky/negative relationships, how to be a good team member, how to identify feelings, identifying trusted adults and what to do when upset.

### Computing

#### Key Vocabulary:

- Conduct
- Contact
- Content
- Personal
- Private
- Information
- Safety
- Instructions
- Equipment
- Acceptable use
- Online
- Coding
- Design
- Create

### RE—Christian Parables

Who are stories for? Children to make comparisons with some of the Christian Parables explored in Term 1 and explore themes of: appreciating others.

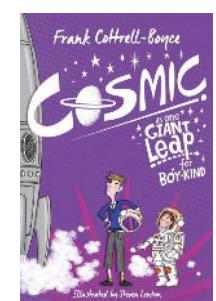


### English

#### Reading:

Fiction text - Cosmic, by Frank Cottrell Boyce.

Writing: Note writing in role as a character; Composing an email from one character to another; Written argument; Visitor leaflet for a theme park; Writing a message to a character in the story; Poetry.



#### Key vocabulary:

Vanished, calmer, discovered, facial, wispy, enchantment, cosmic, catapults, drawbacks, blatantly, relieved, requirement.

#### Grammar

Nouns, verbs, adjectives, adverbs, determiners, pronouns, expanded noun phrases, commas in a list, metaphor, Simile, fronted adverbials, present perfect, formal/informal language, coordinating and subordinating conjunctions, personification, using standard English in writing to be published, use and punctuate direct speech, inverted commas.

Spellings: Year 5/6 spelling list, homophones, -tion, sion, -ure, tch, -nn, y (ee), -ous.

## Trips, visits and events

18/01/23 -Science Oxford—Planetarium

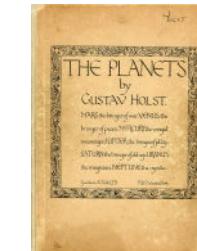
11/01/23 Scarf online Workshop

09/02/23 Pelicans Class Assembly 2.30 pm

## Music

### Key Vocabulary:

- Rhythm
- Fast
- Slow
- Loud
- Quiet
- Smooth
- Bumpy
- Beat
- Orchestra
- Harmony
- Dynamics
- Forte
- Piano
- Compose
- Improvise
- Rest



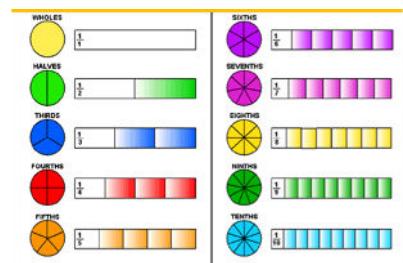
- Canon
- Pitch
- Duration
- March
- Coda
- Ostinato
- Structure
- Musician
- Violin
- Piano
- Composer
- suite
- orchestra
- rhythm
- Layers
- Crescendo
- Decrescendo

## Maths

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## Spanish



## OAA

### Key Vocabulary:

- Tactical
- Control
- Critical thinking
- Co-operatively
- Orienteering
- Navigation
- Location
- Strategy
- Boundaries



### Swimming

#### Key Vocabulary

- Listen
- Instructions
- Safety

# KS2 Science Knowledge Organiser

## Driving Question: How does our solar system define time?

### Prior Learning

- Why do we have shadows? (Year 3)
- How do we identify the Earth from space? (Year 2)
- How do we know that the Sun is a star? (Year 2)
- We understand that the Moon orbits Earth. (Year 2)



### Key Knowledge

In this Science project, the children will focus on the Earth (our planet) as a part of the Solar System and understand that time and the seasons are defined by the rotation of the Earth around the sun and the moon around the Earth.

In this project, the children will learn about:

- At the centre of the Solar System is the Sun. The Sun is a star.
- There are 8 planets and 5 dwarf planets in the Solar System, which orbit (go around) the Sun.
- It takes Earth just over 365 days to go around the Sun (one year).
- The Earth rotates on its axis once every 24 hours (one day). This causes day and night, as different parts of the planet face the Sun.
- The Moon orbits around the Earth. The Sun, Earth and Moon are all roughly spherical.
- The Solar System includes the Sun and all of the objects that orbit around it due to gravity.
- The Earth is one of eight planets that orbit the Sun. It is the third closest to the Sun.
- Earth is the only known planet in the Solar System where there are living things. The planets closer to the Sun are thought to be too hot, whilst some of those further away are too cold.

### High Frequency Vocabulary (Tier 2)

Earth	Night	Astronaut	Year
Planet	Day	Solar System	Moon
Rotate	Season	Star	Shadow

### Subject Specific Vocabulary (Tier 3)

Axis	An imaginary straight line around which an object such as Earth rotates.
Rotate	A turn like a wheel around an axis or a fixed point, or make something turn around an axis or a fixed point.
Spherical	Round. shaped like a sphere.
Orbit	The path that an astronomical object such as a planet, moon, or satellite follows around a larger astronomical object such as the Sun.
Geocentric	Describes the solar system when it is regarded as having the Earth as its centre.
Heliocentric	With the sun at the centre.
Gravity	The attraction due to gravitation that the Earth or another astronomical object exerts on an object on or near its surface.
Milky Way	The spiral galaxy to which Earth and its solar system belong, appearing as a faint band of light in the night sky.
Waxing	To show a gradually increasing illuminated surface, as does the Moon between its new and full phases.
Waning	To show a decreasing illuminated surface between a full moon and new moon.
Time	A dimension that enables two identical events occurring at the same point in space to be distinguished, measured by the interval between the events.

### Key Concept Questions

Why do we have shadows?

What is a year?

Why do we get seasons?

What are the different phases of the moon?

### Key People

### Detail

#### Nicolaus Copernicus

He was the first person to state that Earth and the other planets travel around the sun. This was an important change in thinking.

#### Edwin Hubble

He was an American astronomer. Hubble's findings changed the scientific view of the universe. In 1925 he showed that there are galaxies beyond our own, the Milky Way.

#### Mae Jemison

The first black American female astronaut.