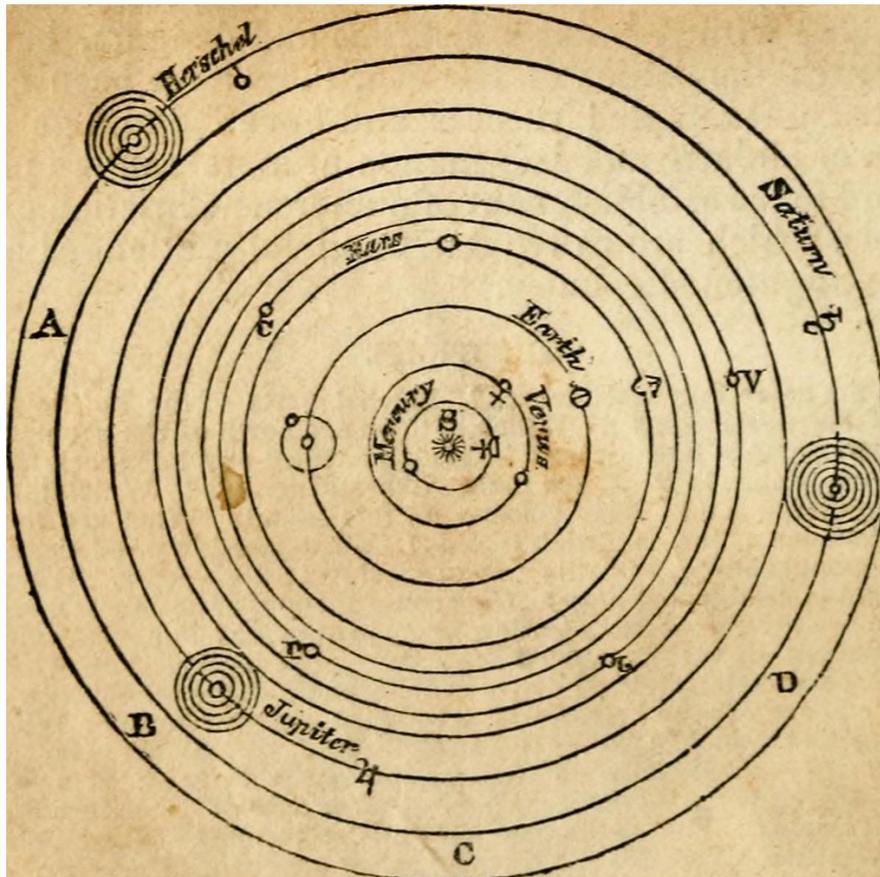


Week 1 - Nicolaus Copernicus

*How to change the
WORLD* 



That's it. Nicky came up with this when everyone else said that Earth was at the centre of everything. Can you add some more key details to the diagram?



11+ Writing BOOST – Make Your Reasons Unstoppable



THE TOP SECRET "TEEA" FORMULA

(How to Win Arguments and Sound Like a Genius)

Listen closely, recruit. Most people ramble. They waffle. They sound like a sloth trying to explain quantum physics. You? You are going to use **TEEA**. It is the academic equivalent of a karate chop: clean, precise, and impossible to ignore.

Use this structure for every "big idea" paragraph, and you will effectively be **bulletproof** against ermmm... bullets...seagull attacks...and ANY question you meet.

T is for TOPIC SENTENCE (The "Mic Drop") - 1 sentence - idea + adjective + reason

- **What it is:** The very first sentence. It tells the reader exactly what the paragraph is about. No mystery. No surprise parties.
- **The Vibe:** confident, bold, and bossy.
- **Bad Example:** "I think I'm going to talk about toast now." 🙄
- **Good Example:** "Toast is undoubtedly the most glorious culinary invention in human history because it's full of possibilities." 🍞👑

E is for EXPLANATION (The "Let Me Be Clear") - 3 sentences

- **What it is:** The part where you explain *why* your Topic Sentence is true. Expand on your idea. Assume the reader is slightly confused (or just not as brainy as you or has never had toast...).
- **The Vibe:** Helpful but firm. Use phrases like "This is because..." or "In other words..."
- **Example:** "This is because bread, when exposed to heat, transforms from a soft, boring dough into a crunchy vessel for butter." Now, say why this is amazing.

E is for EVIDENCE (The "Receipts") - 1-2 sentences

- **What it is:** Proof! You can't just say things; you have to prove them. Use a fact, a quote, a statistic, or a specific real-world example.
- **The Vibe:** Lawyer in a courtroom slamming a paper on the desk. "BAM! Evidence!"
- **Example:** "For instance, a 2024 study of my breakfast table showed that happiness levels increased by 200% when jam was applied to the toast."

A is for ANALYSIS (The "So What?") - 2-3 sentences

- **What it is:** The big brain moment. Link your evidence back to the main point. Explain the *consequence* or the *significance*. Why does this matter to the world?
- **The Vibe:** The philosopher looking at the stars.
- **Example:** "Therefore, toast is not merely food; it is a crunchy, warm vehicle for joy that prevents morning grumpiness and saves the world from chaos."

Choose ONE of the questions below and write a **short 11+ style paragraph** using TEEA. Aim for **7–8 sentences**.

- **Why** does the universe exist?
- **How** can you change the world?

Checklist:

- Clear **Topic** sentence that answers the question
- **Explanation** of how each piece of evidence proves your point
- At least **1 piece of Evidence** (examples, facts, or mini-stories)
- A final **Analysis** sentence that zooms out: what does this mean for humans / the future / you?

Contemplate, reflect, deliberate, muse, consider, ruminate, brood, speculate, THINK

Why does the universe exist?

(TEEA time!)

T: _____

E: _____

E: _____

A: _____

Vocabulary

Word	Definition
rely (v)	To depend on something or someone 🤝 "I rely on my cat to wake me up at 3 AM by knocking over every object in my room."
enlarge (v)	To make something larger or bigger 🔍 "He tried to enlarge his sandwich by adding three extra loaves of bread."
hence (adv)	As a result of something 🧭 "She forgot her umbrella, hence, she turned into a walking sponge after the rain."
alter (v)	To make changes to something 🔄 "He altered the time on all the clocks, so everyone thought it was breakfast all day."
crane (v)	To stretch or reach out 🦒 "The giraffe craned its neck so far that it almost touched the moon and tried to give it a mighty lick while it was at it."
evolution (n)	A process of gradual development over time 🌱 "The evolution of my humans has gone from hairy primate-looking beings hunched in trees to smartphone addicts hunched in chairs."
secure (v)	To make something safe or fixed 🗝️ "She secured her pet fish in a mini seat belt before going on a walk."
adapt (v)	To change or modify in response to the environment 🌱 "The lizard adapted by wearing sunglasses, a hat, and sipping lemonade in the desert heat."
consequence (n)	The result of an action or event 🎯 "The consequence of eating 1000 ice creams for Darlene was that ... well, it was a tragic end going out like that."
formulate (v)	To develop or plan something carefully 📝 "They formulated a plan to sneak past the sleeping dragon by reading Shakespeare to it, lulling it into a deep, uninterrupted sleep, just like teenagers reading it at school."

Vocabulary Review

Word: _____ Part of speech: _____ <u>Your</u> definition: Image association: Your sentence:	Word: _____ Part of speech: _____ <u>Your</u> definition: Image association: Your sentence:
Word: _____ Part of speech: _____ <u>Your</u> definition: Image association: Your sentence:	Word: _____ Part of speech: _____ <u>Your</u> definition: Image association: Your sentence:
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Sally 11+ Verbal Reasoning

BOOST: Copernicus Vocab

Missions



A. Synonym Switch

For each bold word, circle the closest meaning.

1. Copernicus had to **adapt** to new ideas about the heavens.

A) complain B) change C) ignore D) copy - Answer: _____

2. His ideas had a huge **consequence** for how people saw the universe.

A) reward B) holiday C) result D) argument - Answer: _____

3. He carefully **formulated** his theory before sharing it.

A) ruined B) developed C) hid D) memorised - Answer: _____

B. Antonym Attack

For each word, choose the opposite meaning.

4. **secure**

A) safe B) locked C) loose D) trusted - Answer: _____

5. **enlarge**

A) shrink B) grow C) stretch D) decorate

Answer: _____

C. Cloze Sentences

Use the vocabulary box to fill in each sentence with the most suitable word.

(Words: rely, alter, adapt, consequence, hence)

6. Copernicus had to _____ his ideas when he realised the data didn't match the old model.
7. Many people did not want to _____ on new science; they trusted tradition instead.
8. The Church feared the _____ of his ideas: people might question everything.
9. Life on Earth was full of disease and fear, _____ many people focused on heaven instead.
10. Scientists today must _____ to new discoveries all the time.

Jool Listening

▶ NICOLAUS COPERNICUS - The Sparks of Scientific Revolution

Illustrate the key ideas:

Where was Nicolaus Copernicus born, and who took care of him after his father passed away?

Apart from astronomy and astrology, what two subjects did Copernicus travel to Italy to study?

What is the main difference between Copernicus's "heliocentric" model and the "geocentric" model supported by the Church?

Why did Copernicus choose to dedicate his book, *De revolutionibus orbium coelestium*, to Pope Paul III?

Name two later astronomers mentioned in the text who adopted and refined Copernicus's ideas.

According to the text, what major historical shift or "revolution" did Copernicus's work help to start?

Maths...what...?

Jool Maths Mission - Orbits, Years & Big Brains

Copernicus wasn't just arguing with people; he was trying to **measure** things properly. Use these facts to answer the questions:

- Mercury orbits the Sun in about **88 days**.
- Venus orbits the Sun in about **225 days**.
- Earth orbits the Sun in about **365 days**.
- Mars orbits the Sun in about **687 days**.

Q1. Who's quickest? (1-step, warm-up)

Order the planets from **shortest** orbit to **longest** orbit:

_____ → _____ →
_____ → _____

Q2. How many extra days? (difference)

a) How many more days does Earth take to orbit the Sun than Mercury?

Calculation: $365 - 88 = \underline{\hspace{2cm}}$ days

b) How many more days does Mars take than Earth?

Calculation: $\quad - \quad = \underline{\hspace{2cm}}$ days

Q3. Mercury's busy year (multi-step)

In the time it takes Earth to go around the Sun **once** (365 days), Mercury can orbit several times.

a) How many full 88-day orbits fit into 365 days?

Hint: $88 \times 4 = \underline{\hspace{2cm}}$, $88 \times 5 = \underline{\hspace{2cm}}$

Number of **full** Mercury orbits in one Earth year: $\underline{\hspace{2cm}}$

b) How many days are left over after those full orbits?

$365 - (88 \times 4) = \underline{\hspace{2cm}}$ days left

Q4. Double the distance? (ratio concept)

Imagine a planet “X” takes **730 days** to orbit the Sun.

a) How many Earth years is that?

$$730 \div 365 = \underline{\hspace{2cm}} \text{ Earth years}$$

b) Planet X takes twice as long as Earth to orbit the Sun.

What is the **ratio** of Earth’s orbit time to Planet X’s orbit time?

Write your answer in simplest form.

$$\text{Earth : Planet X} = \underline{\hspace{2cm}} : \underline{\hspace{2cm}}$$

Q5. The year of the Super Calendar (word problem)

A group of scientists wants to design a “Super Calendar” that tracks **both** Earth and Venus orbits.

They decide the Super Calendar will end on the first day when both planets complete a whole number of orbits and meet again at the same starting point.

- Earth year: 365 days
- Venus year: 225 days

a) After 2 Earth years, how many days have passed? days

b) After 3 Venus years, how many days have passed? days

c) Find a number of days that is a multiple of both 365 and 225 (you can try 10 Earth years = 3650 days, 12 Venus years = 2700 days, etc.).

Circle one option that **could** be a Super Calendar length:

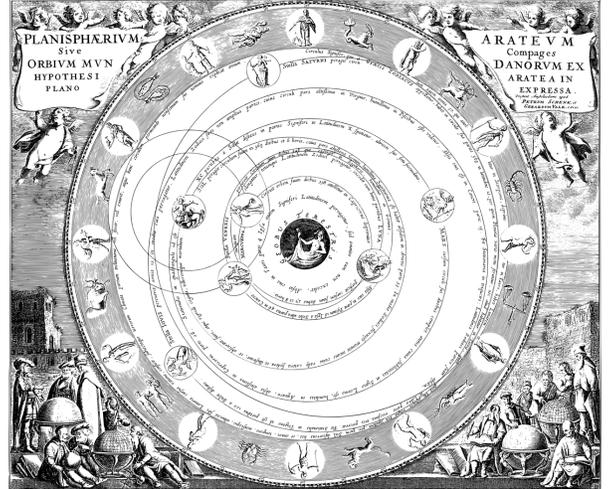
- 1,000 days
- 2,190 days
- 3,650 days
- 4,500 days

Explain your choice:

The Big Idea - Nicolaus Copernicus

Let me get this straight!

Sometimes, when you read about the ideas people used to have, you just can't help but chuckle at how impossibly silly it sounds. People thought the Earth was totally flat and we'd fall off if we sailed or **ventured** too far. Religions saw the stars as **celestial** beings of great power and prayed to them. Some even **sacrificed** things like goats and cows to **honour** them...I know. You see, humans just didn't know very much about life outside of this planet. How can you blame them? There were no telescopes for most of human history and most of the planet couldn't even read and write. The few people who could tended to be either very rich or very religious. Most religious scholars thought the Earth was at the centre of the universe - and we humans were sooooooooooooo special!



What's the main idea?

So what? (why does it matter?)

I'm the king of the world!

In history, there was a really infamous king in Assyria called Ashurbanipal. He was as wild as a lion and loved nothing better than beating other people up. He's also famous for calling himself the King of the World. He wasn't. He just didn't know that the world was much larger than he thought. It's like a kid at school being the president of the playground and thinking that means they are the president of all humanity. Humans - well the rich or religious people - thought they were the most important things in the universe because they couldn't see very far and didn't have much information. These rich and religious people would tell the poor and illiterate people what to think, which they did without asking too many questions. It needed someone to come along and say... "hang on just a swish of a wildebeest's tail!"

Main idea? _____

So what? _____

Hello, Nicky

The man who said that (he didn't) was Nicolaus Copernicus. He was actually a religious man and a faithful believer in Christianity. He had two main aims. He wanted to explain the heavens (you know, the place where people go to the afterlife) and also work out how to count the days in a year. There was just a huge problem. Everyone assumed the Sun orbited the Earth and nobody could figure out how to count. The other problem was that Earth was full of diseases like the Black Death and everyone was thinking, "Life on Earth is pretty awful! Where's heaven?". When you simply swapped in the Sun and said everything went around it, the logical flow of the planets and their orbits became **straightforward**. Mercury needed 88 days, Venus needed 225, Earth needed an Earth year, and so on, and so forth. The problem was... dun dun dun... everyone was too scared to say this was a fact because it would upset literally everyone who thought the Earth was in the middle. Copernicus spent his whole life trying to say his idea was true, but until his last day alive, the world thought it was just a theory and hypothesis. However, WE believe him, which probably made no difference to his own misery, sadly. Oh, well.

Main idea? _____

So what? _____

What emotions do you imagine Nicky felt while working on his ideas in his time? Illustrate and label them:

Reading Comprehension: 11+ Reading & Inference - Copernicus vs. The Crowd

Read “*Let me get this straight!*”, “*I’m the king of the world!*”, and “*Hello, Nicky*” carefully. Then answer the questions in full sentences unless the question says otherwise.

Questions

1. Main Idea

In your own words, what is the main message of the section “*Let me get this straight!*”?

2. Supporting Detail (Multiple Choice)

Which one of these was **NOT** a reason people had strange ideas about the universe?

- A) Most people couldn’t read or write
- B) There were no telescopes
- C) Everyone had perfect scientific training
- D) Religious leaders controlled knowledge

Answer: _____

3. Inference

Why did rich and religious people have so much power over what others believed?

4. Analogy

In “*I’m the king of the world!*”, Ashurbanipal is compared to “a kid at school being the president of the playground.”

What does this comparison tell us about his understanding of the world?

5. Word in Context

In the text, the writer says people thought humans were “sooooooooooooo special!”

What is the writer really saying about human attitude here?

6. Cause and Effect

According to “*Hello, Nicky*”, why did swapping the positions of the Sun and Earth make the planets’

orbits easier to understand?

7. True / False / Not Given

Tick one box for each statement:

a) Copernicus was completely against religion.

True False Not given

b) People immediately accepted his idea that the Earth orbits the Sun.

True False Not given

c) Some people feared his theory would upset their view of heaven.

True False Not given

8. Open Response

Why might people at the time have found Copernicus' ideas *frightening* rather than exciting?

9. 11+ Style "Author's View"

What is the writer's attitude towards old beliefs about the universe? (e.g. respectful, mocking, curious, angry?)

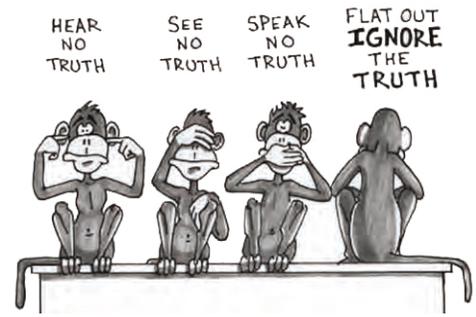
Use evidence from the text to support your answer.

10. Big Thinking

Do you think people today are *less* likely to believe strange ideas just because "everyone" says they are true? Explain your view.

Show the people the **truth!**

Poor Nicolaus Copernicus. Nobody wanted to even let people read his book because his ideas would be too controversial. Think of two ways that Nicky could have shown the world that Earth orbited the Sun without upsetting people with his book:



Illustrate it:

Explain it:

Blank space for illustrating the answer.

Blank space for explaining the answer, with horizontal lines for writing.

Blank space for illustrating the answer.

Blank space for explaining the answer, with horizontal lines for writing.



It may seem like a crazy conspiracy theory, but they're a real thing:

https://en.wikipedia.org/wiki/Modern_flat_Earth_beliefs

What is a CONSPIRACY THEORY anyway?

Why do people believe in them?

Find an example or two and explain why you think people believe or have believed it to be true: <https://www.britannica.com/topic/conspiracy-theory>



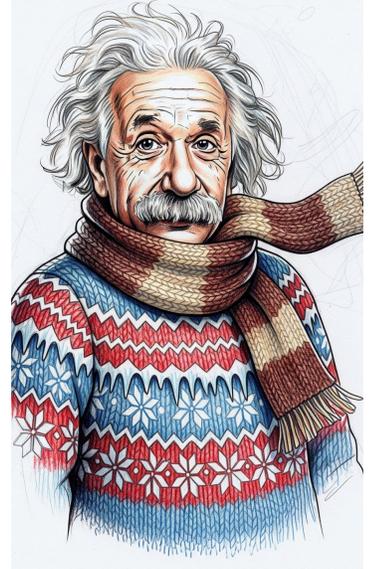
Logic Puzzle - Who

Believed What?

Help Uncle Al...Brrrr...t

- Asha loves any idea with secret societies.
 - Ben only believes things if there's strong scientific evidence.
 - Cara believes anything she sees in a dramatic video online.
- Drew used to believe in a flat Earth, but changed his mind after reading lots of books.

Uncle Al...Brrrr...t



Use this information to answer the questions.

1. Who is most likely to fall for a conspiracy theory about lizard people running the government?

A) Asha B) Ben C) Cara D) Drew

Answer: _____

2. Who is least likely to believe a conspiracy theory about the Moon landing being fake?

3. Two of the friends are invited to a secret meeting about a new conspiracy theory. One of them refuses to go because they don't want to be tricked again.

Which friend is this most likely to be, and why?

4. Which friend would Copernicus probably like the most, and why?



Timed Writing

Challenge - How to

Change

EVERYTHING

You have 20 minutes or Copernicus is for it!

Write a short essay answering this question:



“How did Copernicus change everything, and what does his story teach us about changing the world today?”

Use this structure:

Intro: Who Copernicus was & the problem he faced

Middle 1: What he discovered and why people resisted

Middle 2: Why his ideas mattered for science and ordinary people

Conclusion: What modern students (like you) can learn from him about courage and truth

Include:

At least 2 key facts from this unit

At least 3 of this week’s vocabulary words

Clear paragraphs and joined-up reasoning [TEEA style!]

