

JUPITER BROTHERS

A MISSION FOR ALL MANKIND

EDUCATOR PACK

Discussion guide · content notes · vocabulary · classroom activities
for Book One of the Jupiter Brothers series · by Reed Renix



Ages 9–12 · Grades 4–6 · Middle-grade science fiction
ISBN 979-8-19198-108-6

Free to print, copy and share
reedrenix.com

JUPITER BROTHERS · BOOK ONE

Welcome, and please take this

This pack is free. It is not behind an email form, it is not a sample of a paid product, and there is nothing to sign up for. Print it, photocopy it, drop it in a shared drive, hand it to the teacher across the hall. That is what it is for.

Jupiter Brothers: A Mission for All Mankind is a middle-grade science fiction adventure about three brothers — aged thirteen, eleven and five — who are accidentally given impossible powers and sent across the galaxy to find the three elements that can repair a dying Earth. It is a big, loud, fast adventure. It is also, underneath, a book about being the oldest, being the youngest, being the one who feels everything too strongly, and missing home.

Everything in this pack was built from the finished manuscript, chapter by chapter. Every reference is to a chapter rather than a page, so it works whether your class has the paperback, the hardcover or the Kindle edition.

WHAT'S IN HERE

- **Reading level and fit** — measured, not estimated, with a note on why the grade number reads higher than the book feels.
- **Content notes** — everything you would want to preview before reading aloud, listed by chapter.
- **Discussion questions** — five sets, matched to natural stopping points, moving from recall to inference to judgment.
- **Vocabulary** — the invented terms, and the real words worth stopping for.
- **Curriculum links** — ELA, science and SEL, so the time is easy to justify.
- **Activities and writing prompts** — eight of them, most needing nothing but paper.
- **Two photocopiable student pages** — at the back, designed to survive a school copier.

The book at a glance



Title	Jupiter Brothers: A Mission for All Mankind
Series	Jupiter Brothers, Book One of an ongoing series
Author	Reed Renix
Format	6×9 paperback, 220 pages
ISBN	979-8-19198-108-6
Category	Middle-grade science fiction adventure · Ages 9–12
Book Two	Coming 2027

A note on spoilers. Pages 3 to 20 are written for you and not for the class; from page 5 onwards they give away the ending. The two student pages at the back — pages 21 and 22 — do not. Discussion sets Four and Five assume the book has been finished.

References throughout are to chapters, not pages, so they hold for the paperback, the hardcover and the Kindle edition alike.

SECTION 1

Reading level and fit

These figures were calculated from the complete manuscript text — every word of narrative and dialogue, front and back matter excluded.

MEASURED

Flesch–Kincaid Grade Level	6.5
Flesch Reading Ease	68.9 (standard / fairly easy)
Gunning Fog Index	8.7
Average sentence length	11.4 words
Words of three or more syllables	10.4%
Dialogue	roughly one paragraph in four opens with speech
Total length	approx. 37,000 words across 23 chapters
Average chapter	approx. 1,600 words — 8 to 12 minutes read aloud

WHO IT FITS

Interest age

8–12. The publisher's stated range is 9–12.

Independent reading age

9–11 for a confident reader; 10+ for a developing one.

Read-aloud age

7 and up. It reads aloud very well — short sentences, frequent dialogue, hard chapter endings.

Shelf comparison

Sits between an early chapter book and a full middle-grade novel in difficulty, but with the scale and stakes of the latter.

Lexile. This title has not been measured by MetaMetrics. Based on sentence length and vocabulary load, a reasonable estimate is **700L–790L**. Please treat that as an estimate and not as a reported measure.

Why the grade number reads higher than the book feels. A Flesch–Kincaid of 6.5 usually signals a harder read than this one is. The sentences here are short — 11.4 words on average, which is firmly fourth-grade territory. What lifts the score is the vocabulary: *bioluminescent*, *containment*, *resonance*, *frictionless*, *magmatic*. Long words in short sentences is exactly the profile that works for a reluctant reader with a high interest level. The line never gets tangled; the words get interesting. Most of the hard vocabulary is science and space vocabulary that a child who chose this book already half-knows, and nearly all of it is glossed by context within a sentence or two.

Why it works for a reluctant reader

- Chapters are short and almost all of them end on a hook — a reader who says “one more chapter” is only committing to eight minutes.
- Three protagonists at three very different ages means most readers find someone their own size.
- The youngest brother, Jay, is five, says little, and is repeatedly the one who solves the problem. This lands well with younger siblings and with children who are used to being talked over.
- The action is visual and physical — a robot fight, a deep-sea descent, a volcano climb, a coliseum. It sketches easily, which matters for readers who process by drawing.



Read-aloud stopping points

Five places to close the book where the class will complain. That is the goal.

STOP AFTER	LAST LINE	WHY
End of Ch. 5	<i>"...All three of us."</i>	The brothers lose contact with Earth. A quiet, heavy ending — good for a Friday.
End of Ch. 9	<i>"...Silas Vane was making his next move."</i>	The villain is revealed — and is already in front of them.
End of Ch. 14	<i>"Tomorrow, nine would stand."</i>	The strongest cliffhanger in the book. Stop here and they will beg.
End of Ch. 17	<i>"It was something else."</i>	A mystery is planted that is not answered for four chapters.
End of Ch. 21	<i>"He's going for the source of our power."</i>	Everything the reader believed about the story reorganizes itself.

Five sessions, start to finish

Read aloud, the whole book runs to roughly four hours. A confident Grade 5 reader will take about five hours over it independently. Five sessions maps cleanly onto the five discussion sets and onto the stopping points above.

#	READ	ALoud	DISCUSS	THEN TRY
1	Prologue – Ch. 5	~55 min	Set One	Activity 3 — Design a Power, Then Design Its Cost
2	Ch. 6 – 11	~50 min	Set Two	Activity 2 — What He Calls It
3	Ch. 12 – 16	~65 min	Set Three	Activity 4 — The Letter Home
4	Ch. 17 – 20	~45 min	Set Four	Activity 5 — Read It Out Loud
5	Ch. 21 – 22	~30 min	Set Five	Activity 7 — the debate, then Activity 1

The two student pages at the back are designed to run alongside: the Mission Log is filled in as you go, and Build the Fourth World lands best after the final session.

SECTION 2

Content notes

Nobody dies in this book. There is no profanity, no romance, no cruelty to animals, no injury described in detail, and no blood. The brothers are established in Chapter 2 as immune to anything on Earth, which removes most of the bodily fear from the action sequences — though the book deliberately reopens that limit once they reach Solara-V. The danger in this book is emotional far more often than it is physical.

WHAT IS NOT IN THIS BOOK

- ✓ No character death, on or off the page.
- ✓ No profanity. The humor is at the level of “kick some Boulderite butts” and an eleven-year-old scratching himself at breakfast.
- ✓ No romance.
- ✓ No graphic injury. Two rival competitors are hurt: one is struck by lightning and knocked down through the canopy into the predatory plants (Ch. 16, one sentence, and he is not seen again); the other has a leg trapped under his own pillar and frees it a page later (Ch. 18).
- ✓ No religious or political content.
- ✓ No animal is killed. One feather is taken from a living creature by force — see Chapter 16 below, which is a discussion point rather than a warning.

What to preview, chapter by chapter

Listed in the order you will meet them. Nothing here is a reason not to read the book — it is a list of the four or five places where knowing in advance helps.

Prologue & Ch. 1

Laboratory accident; children in peril

An experiment fails and three children are caught in the blast. They are found encased in crystal, frozen mid-step, and for a page nobody — including their parents — knows whether they can be brought out at all. It resolves within the chapter and no one is hurt. This is the most frightening sequence in the book for a young listener, and it arrives early in Chapter 1.

Ch. 3

A near-miss

Five-year-old Jay vanishes during a training exercise and two hydraulic plates slam shut where he had been standing. He is unharmed — he had shrunk — but the beat is played for real fear before it releases. He then stays five inches tall for two days, which some children find funny and some find unsettling.

Ch. 4 & Ch. 15

Climate collapse; evacuation footage

Earth is dying. Chapter 4 shows storm systems, dying forests and coastal flooding on a globe. Chapter 15 goes further: an intercepted news broadcast reports emergency relocation from named real cities — Portland, Sacramento, Los Angeles, Phoenix — and food and water shortages. It is brief and not graphic, but it is deliberately close to the real world. **Worth previewing if you have children affected by wildfire, flood, drought or displacement.**

Ch. 4–5

Separation from parents

The central emotional load of the book. Both parents stay behind; all three children leave. The goodbye is warm rather than traumatic, but the separation is permanent for the length of the novel and the signal home fails on the way out. Homesickness recurs throughout and peaks in Chapter 12.

Ch. 7–8, 11

Combat with machines

Two extended battles against mining machines — a three-legged harvester with a swarm of mechanical wasps, and a six-armed underwater drilling rig. Loud and destructive; the opponents are unmanned equipment, and the tone stays adventurous.

Ch. 11

Deep water; darkness; pressure

A twenty-mile descent into a lightless ocean trench, with the crushing pressure and the disappearing surface described at length. Genuinely atmospheric, and a specific caution for children who are frightened of deep water or enclosed spaces.

Ch. 12

Homesickness; the letters

Not a warning — a heads-up. The brothers write letters to their parents knowing no reply can ever come, and send them anyway. It is the most affecting chapter in the book and it makes children who are away from a parent, for any reason, feel it. Many teachers will want to plan for that rather than avoid it.

Ch. 14, 19–20

Ritual combat; a warrior culture

Two children accept a formal challenge against six adult warriors in a coliseum before a crowd of hundreds of thousands. The framing is sporting and ceremonial rather than lethal — it is a sacred contest with rules, horns, and elimination, closer to a tournament than a war — but the imagery is gladiatorial and the carvings on the doors depict conquest.

Ch. 16

Peril; taking from a living creature

Predatory plants seize Jackson and constrict him until he can barely speak. A rival competitor is struck by lightning and thrown through the canopy. Jackson then forces a feather from a living animal in flight. That last beat is not framed as cruelty by the book, and it is the single best ethics discussion in the novel — see Set Three, question 6, on page 11.

Ch. 17

Psychological pressure; a child's fear of disappointing a parent

The chapter to preview. A maze turns eleven-year-old James's memories against him. His father appears and says, "I thought we could rely on our sons." His mother says, "We needed you. All of you." His brothers' faces appear fractured across the walls, blaming him. There is no violence at all — the entire chapter is a child being told, in the voices he trusts most, that he has let everyone down. For most readers it is the most memorable chapter in the book. For an anxious reader it is the one that lands hardest.

Ch. 21–22

Adult betrayal; a parent's withheld past

Vane tells the brothers to their faces that he used them as instruments without their knowledge, calling them "unfortunate little lab rats," and that their mother was once his research partner — something she never told them. Then, after he has gone, J.E.N.N. recovers a classified file from his ship: Earth's collapse was not natural. He caused it, for profit, and built a fortress to leave in. No violence — but this is a sustained sequence about being deceived by adults, including one they love, and it is the emotional engine of the ending.

SECTION 3

The story, the cast, the worlds

TEACHER REFERENCE — CONTAINS SPOILERS

Decades ago, a teenage Julius Jupiter found a glowing meteor fragment a hundred feet down a mountain crevice. He spent his life studying it. Now, with Earth's climate systems failing beyond repair, he and his wife Jennifer attempt one last experiment to unlock its power — and the reactor discharges. Their three sons, Jackson (13), James (11) and Jay (5), are caught in the blast and emerge permanently changed: Jackson can fly and channel raw energy, James moves at supersonic speed and carries an electrical charge tied to his emotions, and Jay can alter his own mass and size at will — and thinks faster than any adult in the room.

Their parents cannot leave; the stabilizers holding Earth together need constant attention. So the boys go instead. Aboard a deep-space carrier piloted by J.E.N.N. — an artificial intelligence built in their mother's image, with her voice and her judgment — they cross the galaxy for three elements that can repair their world: the Ever-Seed of Verdant-9, the Clear-Pearl of Aquatica Prime, and the Black Solar Stone of Solara-V. The first two are already being stripped by someone else; the third belongs to a civilization that will not simply hand it over. And Silas Vane knows their family, knows their mother, and is always one planet ahead.

The cast

Jackson Jupiter age 13	Flight; golden energy projection	The oldest. Notices what other people miss — a habit he uses on photographs, terrain and his own brothers. Carries the leadership as a weight rather than a privilege. His fear is failing them.
James Jupiter age 11	Supersonic speed; electrical discharge	The middle. Loud, funny, first through every door, and the only brother whose power is tied directly to what he feels — the more intensely he feels, the stronger it gets. That is a gift and it is also the reason the maze nearly keeps him.
Jay Jupiter age 5	Mass density and size scaling; accelerated cognition	The youngest, and quietly the most capable. Says least, sees most. Wins the one trial his brothers could not. His arc is the smallest and the clearest: he stops trying to catch up.
J.E.N.N.	Ship's intelligence	Jupiter Exploratory Neuro Navigation, built in Jennifer Jupiter's image. Pilots the mothership, translates alien languages, and — in Chapter 12 — recognizes that what she feels for the boys is her own, not her programming.
Doc & Jennifer Jupiter		Two of the world's best scientists, holding a failing planet together from inside a hollowed-out mountain. Present for five chapters, felt for all twenty-three.
Silas Vane		Studied alongside the boys' parents at the Cavendish Institute. Strips planets with automated Harvesters and, in Chapter 9, calls it “consolidating.” The best classroom material in the book is in the gap between what he does and the words he chooses for it — and in what happens to that habit in Chapter 21.

The three worlds, the three elements

Verdant-9	Ch. 7-9	The Ever-Seed	A forest planet whose root network sings; every branch is connected through its harmonics. What it repairs is never stated.
Aquatica Prime	Ch. 10-11	The Clear-Pearl	Ocean world, no continents. A trench twenty miles deep. Restores ocean systems, temperature and coastlines.
Solara-V	Ch. 13-20	The Black Solar Stone	Three suns, thousands of volcanoes, no water, and two hundred billion Boulderites. Restores the atmosphere.

What the book is about, underneath

Brothers before powers. The book states its own thesis on the back cover — “their greatest power was never cosmic.” The structure proves it: each brother tries to win a trial alone and it is not enough. They only win when the three abilities are used as one move.

Being the oldest, being the youngest. Jackson takes responsibility nobody assigned him. Jay is underestimated by everyone including his family. Both threads resolve without anyone making a speech about them.

Feeling as a power source. James’s ability is literally driven by emotion. The book therefore treats emotional control as a skill to be trained rather than a weakness to be hidden — a rare and useful thing in a boys’ adventure story.

What we call the harm we do. In Chapter 9 Vane will not use an accurate verb for anything he does: not tearing, *consolidating*; not taking, *using what is available*. By Chapter 21 he has stopped bothering and says exactly what he did. The gap between those two chapters is the sharpest teaching opportunity in the novel.

Home, and not being able to reach it. The Telemat can send things home but nothing can come back. That one rule generates almost all the book’s feeling.

Chapter map

One line each, so you can find a scene without rereading a chapter to locate it.

CH.	TITLE	IN ONE LINE
Prologue	Julius Jupiter	A teenager rappels into a mountain crevice and finds a fragment of a dead star.
1	Jupiter Brothers Reborn	The experiment fails. Three boys come out of the crystal permanently changed.
2	The New Reality	Suits, powers, limits — and a throwing game that matters again eighteen chapters later.
3	Desperate Measures	A week of training. Jay vanishes and the hydraulic plates close on empty air.
4	The Mind Shaft	A dying Earth, a door marked SECTION 8, and a ship with their mother’s name on it.
5	The Deep Black	Launch. The signal home thins, flickers and goes out.
6	On Their Own	The mothership, the one-way mail slot, and a 0.001% power draw nobody explains.
7	The Singing Woods	A forest that sings, a grove that has gone silent, and the machine killing it.
8	The Battle for the Ever-Seed	The first real fight. The first win.
9	The Shadow in the Eye	Silas Vane introduces himself — and is already one planet ahead.
10	Aquatica Prime	An ocean world, a trench twenty miles deep, and three Breathers.
11	The Great Trench	The Clear-Pearl, the Vane-Hydra, and a camera that recorded everything.
12	Sunrise on the Mothership	A false dawn, a family breakfast, and three letters that can never be answered.
13	Welcome to Solara-V	Three suns, two hundred billion Boulderites, and a plan to ask politely.
14	Nine Will Stand	A coliseum, a Council of Elders, and a challenge two brothers accept for three.
15	The Rules	Three trials, one brother each — and a broadcast from a home running out of time.
16	The Lava Swamps of Vengathorn	Predatory plants, a feather taken from an apex predator, and a loss.
17	The Maze of Reflections	The maze turns James’s family against him. Something else leads him out.
18	Pillars of Moktar	Ten tons uphill, a dragon demon, and a boy who reads the rule, not the expectation.
19	Winner Take All	One victory each. The final challenge is explained.
20	The Crater of Disjunction	Gravity fails, the Putty Shot comes back, and Team Jupiter wins the Stone.
21	The Shadow of the Dread-Vane	A fortress arrives, a photograph is enhanced, and Vane knew their mother.
22	The Grand Design	Earth’s collapse was deliberate. The brothers choose which world to save.



SECTION 4

Discussion questions

Five sets, matched to natural stopping points. Every set moves from what happened, to what it means, to what you would have done. Choose three or four per session — they are not a worksheet.

R Recall — the answer is on the page

I Inference — the answer is between the lines

J Judgment — there is no answer

Italic notes below a question are for you — what to listen for, or where the answer sits.

SET ONE The Accident and the Choice

Prologue – Chapter 5

A failed experiment changes three brothers. A week of training finds their limits. Their parents show them a ship, and ask them to leave.

- R** Where did Julius Jupiter find the Source Stone, and roughly how long ago?
 - *A crevice about a hundred feet down inside a mountain cavern, in a remote glacier region, decades ago, when he was a teenager. Worth noting that he found it by choosing to descend into the dark alone.*
- R** What can each brother do now — and what is the limit on each ability?
 - *Jackson: flight and energy, but it erupts outward when he pushes. James: speed and electricity, tied to adrenaline and emotion. Jay: mass and size, but at first it fires like a reflex, “a hiccup or a cough.” Every power in this book comes with a named limit. Keep it in your pocket for the writing activity on page 18.*
- I** At the end of Chapter 1, Doc wonders whether he has “saved his boys or changed them into something the world wasn't ready for.” What is he actually afraid of? Is he thinking as a father or as a scientist?
- I** In the Putty Shot game, James uses his new speed to fix a bad throw. Jay throws both arms out and calls it. Jackson then ranks the game “Jay second, James third — and you know why.” Nobody explains the rule. What is the rule?
 - *That the powers do not come into the house games. The brothers enforce it themselves, in about four lines, without an adult. It is a small scene doing a lot of work.*
- I** Jackson notices a figure at the edge of an old photograph who is watching his parents instead of the demonstration. Why would an author show the reader something the characters do not understand yet? What is that technique called?
 - *Foreshadowing. This photograph returns in Chapter 21 and closes the story's biggest loop.*
- J** Doc and Jennifer stay behind and send all three children into deep space. Was that the right decision? Make the strongest case for it, then the strongest case against it.
- J** Jay is five years old. Should he have been allowed to go? Before you answer, find one thing in Chapters 1 to 5 that supports each side.

**SET TWO Two Worlds, One Enemy**

Chapters 6 – 11

A singing forest, a mining machine, a villain's face, and a trench four miles down. The brothers win twice and learn they are being watched.

- R** What does the Telemat do — and what is the one thing it cannot do?
- *It can send anything home to the Sanctuary from any distance, but the Sanctuary cannot send anything back. Jay works out the image himself: “like a mail slot in a door. Letters can go in, but they can’t come back out.” This single rule generates the entire emotional arc of Chapter 12.*
- R** The forest's message reads: “Come, all who seek the sacred seed. Only the worthy may proceed. Restore the heart. Reclaim the bloom. Or face the forest's coming doom.” What is being offered, and what is being demanded?
- *James calls it “either an invitation or a warning.” Jackson answers, “Both.” A good four lines for choral reading.*
- I** Silas Vane says he is not tearing the planets apart — he is *consolidating*. Why does he choose that word? What does a person gain by renaming what they are doing?
- *The central language lesson of the book. Watch what happens to this habit in Chapter 21, once he no longer needs them — he starts naming his own actions accurately. See the activity on page 18.*
- I** The Harvester loses the fight. Vane still calls it a success: “now, thanks to you, I have all the data I need.” What is the difference between losing a fight and losing a plan?
- *The machine was never meant to win. It was meant to make them use their powers where it could measure them — which is the whole book in one sentence, hidden in Chapter 9.*
- I** In the trench Jackson thinks: “He was the oldest. He had to notice the danger before it reached either of them.” Who gave him that job?
- *Nobody. He assigned it to himself, and he is thirteen. Ask the oldest children in the room whether that sounds familiar.*
- J** Before the dive, Jackson gives each brother a single instruction based on what each is likely to get wrong. What would your one instruction be, for the person you are most likely to be in a crisis?
- J** Vane's last words in Chapter 9 are, “And I know exactly where you're going next.” If you were Jackson, would you change the plan — or is changing the plan exactly what he wants?

SET THREE Homesick, and the First Trials

Chapters 12 – 16

A false sunrise, three letters that can never be answered, a coliseum, and a feather taken from the creature that rules the sky.

- R** Find three things J.E.N.N. does to lift the brothers when they are at their lowest. Two are in Chapter 12 and one is in Chapter 15.
- *Ch. 12: projects a sunrise over their mountain home into the bunkhouse and galley, and wakes Jay with a flock of holographic blue jays. Ch. 15: plays the family song and dims the bridge lights while they sing badly. Chapter 12 also holds the line that changes her: “For the first time, she recognized the feeling as her own.”*
- R** Each brother writes home differently. How?
- *James: six pages in nine seconds, every adventure. Jay: a drawing of the three of them on a purple planet, all exactly the same size. Jackson: starts four times, and sends three sentences. This is characterization doing a whole chapter's work in nine lines — and it is the model for the writing activity on page 19.*



- I** They know no reply can ever come. Why send the letters anyway? Why does Jay press the packet flat between both palms before it goes?
- I** Jackson's instruction before landing on Solara-V is: "We're going down there to *talk* to them." It does not work — they end up in a contest anyway. Was he wrong to try?
- I** The Boulderites will not simply hand over the Stone. Is that unfair, given that Earth is dying? What are they protecting?
 - *The chapter frames the choice as "Salvation against tradition." A strong class will notice that the brothers are the ones arriving uninvited and asking for something sacred.*
- J** Jackson takes a feather by force from a living creature that has done nothing to him. The book does not call this cruel. Should it? Does needing something badly change what you are allowed to take?
 - *The best ethics question in the novel. It also rhymes uncomfortably with what Vane does to whole planets — a comparison worth letting a class discover rather than pointing out.*
- J** Jackson gets the feather and still loses the trial. He says, "I still lost." James says, "But you got it." Which brother is right?

SET FOUR The Maze, the Mountain, the Crater

Chapters 17 – 20

Three trials. James is taken apart by his own memories, Jay outthinks a volcano, and the brothers finally stop trying to win alone.

- R** James finds two reliable clues inside the maze. What are they?
 - *The false reflections lag by a fraction of a second; and the scuffed, clouded floor — unlike the walls — shows him honestly, so he can see which way his body has already started to lean. He solves a maze about deception by looking at the one surface too worn out to lie.*
- I** The maze could show James monsters. Instead it shows him his father saying "I thought we could rely on our sons" and his mother saying "We needed you." Why is that worse? Which would frighten you more?
 - *Handle with care if you have an anxious reader. It is also the reason this chapter is the one children remember a year later.*
- I** Jay could have carried his own pillar to the summit. Instead he shrinks to the size of a nickel, hides in a crack, and throws a different pillar. Did he cheat? Read J.E.N.N.'s wording again: "*any* pillar to the core."
 - *He read the rule rather than the expectation. Everyone else read the expectation. Ask the class which one they usually read.*
- I** Jay is described as being "good at being small." He spends the first half of the book wishing he were bigger. What changed — his ability, or his opinion of it?
- I** The brothers win the final challenge using the Putty Shot — the throwing game from Chapter 2. Why would a writer bring back something so small from so early? What did the game teach them that a year of training could not?
 - *The payoff of a setup planted eighteen chapters earlier. If your class has done any work on story structure, this is the cleanest example in the book.*
- J** "Not one brother proving he was enough, but all three becoming enough together." Find two earlier places where somebody tries to win alone and it does not work.
- J** James decides not to tell his brothers about the figure that led him out. Why? Was he right to wait?

**SET FIVE The Truth About Vane**

Chapters 21 – 22

*A fortress the size of a city, a photograph enhanced, and the discovery that the disaster was never an accident.***ASSUMES THE BOOK HAS BEEN FINISHED**

- R** What did Vane actually want from the brothers, and how did he get it?
- *Not the elements — the energy signature of the Source Star. He needed them alive and fighting so his machines could record their power at its peak. He even helped James escape the maze, to keep him running.*
- R** What was the 0.001% power draw that J.E.N.N. detected in Chapter 6?
- *A concealed process that boarded before they cleared Earth's atmosphere and transmitted their readings for the entire mission. It is mentioned once, in passing, sixteen chapters before it matters. Readers who flagged it will be extremely pleased with themselves.*
- I** Vane calls them “living instruments” and “unfortunate little lab rats.” Each brother reacts differently. How?
- *Jackson calculates — he assembles the answer aloud. James takes it as guilt, then anger. Jay reaches for the kindest available explanation. Three responses to the same sentence; three different children.*
- I** Earth's collapse was deliberate. Go back to the Prologue and Chapter 4 and read them again with that knowledge. What has changed?
- *Everything the parents did — twelve years of stabilizers, the desperate final experiment, sending their children away — was a response to a crime nobody knew had been committed.*
- I** Jay says of their mother: “We're kids. Mom and Dad probably haven't told us everything yet. Maybe she was waiting.” Is that a good answer? When is an adult right to hold something back from a child?
- J** The final choice: go home, or follow Vane. Take a show of hands **before** you read the last four pages. Then ask — which brother finds this hardest, and why?
- *James. “He hadn't realized how much he missed home until the question was asked.” The loudest brother gets the quietest line in the book.*
- J** Jackson wonders whether the Source Stone was ever really lost — whether it had “been buying time...until it reached those capable of answering its call.” What is he suggesting? What do you predict Book Two is about?



SECTION 5

Vocabulary

Two lists. The first is the language the book invents, which children adopt fast and enjoy owning. The second is the real vocabulary worth stopping for — every word verified as appearing in the text, with the chapter where it first does real work.

The language of the Jupiter Brothers

Source Stone	Prologue	The meteor fragment Julius Jupiter finds inside the mountain. A surviving piece of a dead star.
Change Engine	Prologue	The untested machine built to draw power out of the Source Stone. Its failure begins the story.
the Sanctuary	Prologue	The Jupiter family's home and laboratory, hollowed out inside a mountain.
Section 8	Ch. 4	A sealed cavern in the mountain the boys never knew existed. The mothership is inside it.
J.E.N.N.	Ch. 4	Jupiter Exploratory Neuro Navigation. The ship's intelligence, built in their mother's image.
Telemat	Ch. 6	Transport pad. Moves people up to a thousand miles, and objects home to Earth — one way only.
Moto-Bar	Ch. 6	High-density recovery bars. James's metabolism runs at supersonic speed and needs feeding.
Breather	Ch. 10	A collar that seals into a helmet and adapts to each brother's ability. Lets them speak underwater.
Ever-Seed	Ch. 7	The element of Verdant-9. The book never says exactly what it repairs on Earth — the other two are spelled out. A useful gap.
Clear-Pearl	Ch. 10	The element of Aquatica Prime. Restores oceans, temperature and coastlines.
Black Solar Stone	Ch. 13	The element of Solara-V. Restores the atmosphere. A firestorm sealed under glass.
Seed Harvester	Ch. 7	Vane's three-legged mining machine. Drills Ever-Seeds out from under a living forest.
Swayers	Ch. 16	Predatory flora. Plants that hunt by heat and movement.
Vengathorn	Ch. 16	The apex predator of the lava swamps. The only creature that can look into all three suns without blinking.
Moktar-Solara	Ch. 18	The Dragon Demon. Four arms, six claws each, and a ring of liquid fire in its chest.
BolVaca-AnaSol	Ch. 13	What the Boulderites call themselves. Roughly translated: Solaran Boulderites.
Cinder-Shifter	Ch. 21	Vane's shape-mimicking machine. It wore Jackson's face.
Dread-Vane	Ch. 21	Vane's fortress-ship. Nearly a mile long, built from the profits of a ruined Earth.
Putty Shot	Ch. 2	A throwing game that has stood in the family's common room since Jackson was six. Remember it.



Where the names come from

Most of the invented names in this book are built from real roots. Cover the right-hand column and let students work them out before you confirm.

IN THE BOOK	BUILT FROM	WHICH MEANS	SO...
Verdant-9	Latin <i>viridis</i> / <i>verdant</i>	green, leafy, growing	A forest world.
Aquatica Prime	Latin <i>aqua</i>	water	An ocean world.
Solara-V	Latin <i>sol</i>	sun	A world with three suns.
Telemat	Greek <i>tele-</i>	far off, at a distance	Sends things a very long way.
Neuro (in J.E.N.N.)	Greek <i>neuron</i>	nerve, mind	A thinking navigation system.
Disjunction	Latin <i>dis-</i> + <i>unctio</i>	apart + joining	A crater where gravity comes apart.
Resonance	Latin <i>resonare</i>	to sound back	The frequency Vane is hunting.
Dread-Vane	English <i>dread</i> + a surname	—	Ask why a man would name his own ship this.



Thirty words worth stopping for

Nearly all of these are glossed by context within a sentence or two — the book teaches them as it goes. These are the ones worth naming out loud anyway.

crevice Prologue

a narrow crack or opening in rock

biometrics Ch. 1

measurements of a living body

volatile Ch. 2

unstable; likely to change suddenly

density Ch. 1

how much mass is packed into a space

contingency Ch. 3

a plan for something that might happen

dormant Ch. 4

inactive; sleeping but not dead

luminous Ch. 4

giving off light

harmonics Ch. 7

the pattern of tones that make up a sound

luminescent Ch. 7

glowing without being hot

indifferent Ch. 7

showing no interest or concern

consolidating Ch. 9

gathering separate things into one — Vane's word for stripping a planet

prototype Ch. 9

a first version, built to be tested

frictionless Ch. 10

with nothing to grip; perfectly smooth

cyclonic Ch. 10

turning in a spiral, like a storm system

abyss Ch. 11

a depth too great to measure

silt Ch. 11

fine sediment carried and dropped by water

iridescent Ch. 11

shifting color depending on the angle of light

catalyst Ch. 13

something that causes a change without being used up

territorial Ch. 13

defending an area as your own

resilient Ch. 13

able to take damage and recover

cadence Ch. 14

the rhythm and rise and fall of speech

tectonic Ch. 14

relating to the movement of a planet's plates

petrified Ch. 13

turned to stone — and also, frozen with fear

apex predator Ch. 16

the hunter at the top of a food chain

labyrinth Ch. 16

a maze; a structure designed to confuse

symmetry Ch. 17

matching, balanced form on both sides

seismic Ch. 18

relating to the shaking of the ground

magmatic Ch. 18

of molten rock beneath a planet's surface

mimic Ch. 21

something that copies the appearance of another

resonance Ch. 21

the particular frequency at which a thing vibrates



SECTION 6

Curriculum links

Codes are given so you can drop them straight into a plan. Grade 4–6 anchors are listed; adjust the grade digit to your class.

English Language Arts — Common Core anchors

STANDARD	WHAT IT ASKS FOR	WHERE IT LIVES IN THIS PACK
RL.4.1 / RL.5.1 / RL.6.1	Cite details and quote accurately when drawing inferences	Every question marked I in the discussion sets requires a page reference.
RL.4.2 / RL.5.2 / RL.6.2	Determine theme; summarize	“Their greatest power was never cosmic” — students test the claim against the three trials.
RL.4.3 / RL.5.3 / RL.6.3	Describe and compare characters; how a character responds and changes	Three brothers, one event, three reactions — Chapter 21 in particular.
RL.4.4 / RL.5.4 / RL.6.4	Determine word meaning, including figurative and connotative	The Vane euphemism activity sits exactly here.
RL.5.5 / RL.6.5	How a chapter or scene fits the overall structure	Putty Shot in Chapter 2, paid off in Chapter 20.
RL.4.6 / RL.5.6 / RL.6.6	Point of view; how it is developed	The narration moves between all three brothers and J.E.N.N.
W.4.3 / W.5.3 / W.6.3	Narrative writing with technique and detail	Activities 1, 4 and 5.
W.4.1 / W.5.1 / W.6.1	Opinion and argument with reasons and evidence	Activity 7, and every question marked J .
SL.4.1 / SL.5.1 / SL.6.1	Collaborative discussion; build on others' ideas	The discussion sets are built for it.
L.4.4 / L.5.4 / L.6.4	Use context and word roots to determine meaning	The word-roots table on page 14.
L.5.5 / L.6.5	Figurative language, word relationships and nuance	“Consolidating” versus “tearing apart”.

Science — NGSS performance expectations

STANDARD	WHAT IT ASKS FOR	WHERE IT LIVES IN THIS PACK
5-ESS3-1	Ways communities use science to protect Earth's resources and environment	The entire premise. Activity 6.
MS-ESS3-3	Monitor and minimize a human impact on the environment	Vane's Harvesters; the stabilizers; what the three elements actually do.
MS-ESS3-4	Human consumption of natural resources impacts Earth's systems	Chapter 22: the collapse was caused by extraction for profit.
MS-PS2-4	Gravitational interactions depend on mass	The Crater of Disjunction. Activity 6.
3-5-ETS1-1 / MS-ETS1-1	Define a design problem with criteria and constraints	Every power in the book has a stated limit. Activity 3.
3-5-ETS1-2 / MS-ETS1-2	Generate and compare multiple possible solutions	Three trials, three different approaches, one that works.

Social and emotional learning

The five CASEL competencies, and where the book does the work for you.

Self-awareness	James's power is driven by what he feels. He has to learn to name it before he can steer it.
Self-management	Chapter 16: "Power responds to will. Not panic." Jackson stops fighting and pulls the energy inward.
Social awareness	The Boulderites are not villains. They are a culture with a rite, and the brothers have to meet it on its terms.
Relationship skills	Three siblings who tease each other constantly and never once leave one behind.
Responsible decision-making	The final two pages: defend your own world, or protect everyone's.



SECTION 7

Activities and writing prompts

Eight of them. Six need nothing but paper. Every one is anchored to something the book actually does, rather than to the fact that it happens to be set in space.

01 Build the Fourth World

Writing · Worldbuilding · 45 min

Verdant-9 is forest. Aquatica Prime is water. Solara-V is fire. Earth needs one more element and the brothers are going somewhere in Book Two.

- 1 Choose one element or force nobody has claimed — ice, wind, sound, darkness, metal, time.
- 2 Name the planet using a real root, the way the book does. Give the root and its meaning.
- 3 Name the element the brothers must bring home, and say exactly what it repairs on Earth.
- 4 Design one guardian creature and one hazard. The hazard should not be the creature.
- 5 Write the four-line verse the planet uses to greet visitors, in the style of the Singing Woods (Chapter 7).

Extend: Swap worlds with a partner and write the paragraph where the mothership drops out of hyper-jump and the brothers see it for the first time.

02 What He Calls It

Language · Media literacy · 30 min

In Chapter 9, Silas Vane will not use an accurate verb for anything he does. “Not tearing,” he corrects. “Consolidating.” He does not steal, he is *using what is available*. Then, in Chapter 21, once the brothers are no longer useful to him, the softening stops and he describes exactly what he did.

- 1 Find three more places where Vane softens what he is describing. Chapter 9 is where he does it most.
- 2 Write each one twice: once in his words, once in plain honest words. Then compare with how he talks in Chapter 21.
- 3 Now do it in reverse. Give students three ordinary wrongs — breaking something and not saying, copying homework, leaving someone out — and have them write the sentence the person responsible would use.
- 4 Discuss: does choosing a softer word change what happened, or only who notices? And why does Vane stop choosing them once he has what he wants?

Extend: Collect examples from real packaging, advertising or a school newsletter. This is where the lesson stops being about a book.

03 Design a Power — Then Design Its Cost

Writing · Character · 30 min

Every ability in this book comes with a stated limit. Jackson’s energy erupts outward when he pushes. James’s is tied to adrenaline, so panic makes it worse. Jay’s fires like a reflex, “like a hiccup or a cough.”

- 1 Invent one power. One sentence.
- 2 Now write its limit, and make the limit come from the same place the power does.
- 3 Write a short scene — half a page — in which the power fails at the worst moment because of that limit.

Extend: Ask which is more interesting to read: the scene where the power works, or the scene where it does not. They will get there themselves.



04 The Letter Home

Writing · Voice · 40 min

In Chapter 12 the brothers write to parents who can never write back. James sends six pages in nine seconds. Jay draws the three of them the same size. Jackson starts four times and sends three sentences: *We're okay. We're together. We're still coming back.*

- 1 Choose one brother and write his letter in full.
- 2 Match the length to the character. James's should be exhausting. Jackson's should be under forty words and cost more.
- 3 Then write the reply the Sanctuary can never send.

Extend: A gentle differentiation: Jay's letter can be drawn. It is still an answer to the prompt, and it is what the book does.

05 Read It Out Loud

Speaking · Fluency · 25 min

Three short passages that work as scripts with almost no adaptation.

- 1 **The huddle**, Chapter 19, just before the final challenge — three voices, forty seconds, and a good class will find the rhythm on the second run.
- 2 **Three trials, three paths, three brothers**, Chapter 15, as they divide the trials — a six-word exchange that shows how a single line can be split between three characters.
- 3 **The Elder's declaration**, Chapter 14, at the end of the coliseum scene — one reader delivers the Boulderite line, a second delivers J.E.N.N.'s translation. Excellent for pacing and for pause.

Extend: Record it. Playback is the fastest fluency feedback there is.

06 Is the Trench Possible?

Science · Maths · 45 min

Aquatica Prime's trench opens four miles below the surface and the Clear-Pearl sits sixteen miles below that. J.E.N.N. says the pressure would crush a standard vessel instantly.

- 1 Water pressure rises by roughly one atmosphere for every 10 meters of depth. Convert 20 miles to meters, and work out the pressure at the bottom.
- 2 Compare it with Challenger Deep, the deepest point in Earth's ocean, at about 10,900 meters.
- 3 Is a trench 32 kilometers deep plausible on a real planet? What would have to be true about Aquatica Prime's size, gravity or crust?
- 4 Second problem, from Chapter 20: in the Crater of Disjunction gravity switches off at intervals. If Jay changes his *mass*, what happens to his *weight* when gravity disappears? Does his mass change too?

Extend: The book gets the physics broadly right and the scale deliberately wrong. Working out which is which is the lesson.



07 Do We Defend One World, or All of Them?

Debate · Argument · 40 min

The last two pages of the book are a genuine dilemma with no correct answer. Jackson lays it out and then asks it straight: *Do we go home, or do we go after Vane?*

- 1 Four corners, or a formal two-sided debate. Home / Pursue / Split up / Something else.
- 2 Every argument must cite one piece of evidence from the text.
- 3 Halfway through, make each side argue the opposite position.
- 4 Reveal what the brothers actually choose only at the end.

Extend: Ask the quiet question afterwards: *does it change your answer if you are the one who has to go, or the one waiting at home?*

08 Predict from the Title

Prediction · Inference · 10 min, repeatable

The chapter titles in this book are unusually good at promising something without giving it away. *The Mind Shaft. The Deep Black. Nine Will Stand. The Maze of Reflections. The Grand Design.*

- 1 Before reading a chapter, show only the title.
- 2 Each student writes one sentence predicting what happens.
- 3 Read the chapter. Compare. Keep score across the book.

Extend: By Chapter 14 the class will be reading the titles as clues rather than labels, which is the whole point.



Jupiter Brothers · Book One

Mission Log: Team Jupiter

Fill this in as you read. You will need it at the end.

NAME _____ CLASS _____

JACKSON

AGE _____

WHAT HE CAN DO _____
_____THE LIMIT ON HIS POWER _____
_____ONE THING ONLY HE COULD DO _____
_____**JAMES**

AGE _____

WHAT HE CAN DO _____
_____THE LIMIT ON HIS POWER _____
_____ONE THING ONLY HE COULD DO _____
_____**JAY**

AGE _____

WHAT HE CAN DO _____
_____THE LIMIT ON HIS POWER _____
_____ONE THING ONLY HE COULD DO _____

Careful: the story only tells you two of the three ages. The third is on the back cover. Work out which one is missing.

THE THREE ELEMENTS

One from each world. The book tells you exactly what two of them repair. For the third, make your best case.

PLANET	ELEMENT	WHAT IT REPAIRS ON EARTH	WHO OR WHAT GUARDED IT
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

TRACKING SILAS VANE

Three times he was already one step ahead. Write what he did, and how he knew.

- 1 _____

- 2 _____

- 3 _____

EVIDENCE HUNT

Find the page. Write the number.

- The one thing the Telemat cannot do _____
- The power draw J.E.N.N. cannot explain _____
- The photograph in the archive room _____
- The game the brothers play in Chapter 2 _____
- The word Vane uses instead of "stealing" _____

THE LAST QUESTIONThe back of this book says: **their greatest power was never cosmic**. Finish the sentence, and then find one moment in the story that proves you right.Their greatest power was _____



Jupiter Brothers · Book One

Build the Fourth World

*Verdant-9 is forest. Aquatica Prime is water. Solara-V is fire.
Yours is next.*

NAME _____ CLASS _____

The brothers have found three elements. Earth needs one more, and in Book Two they are going somewhere nobody has been. Design that place. Use the book as your model: every world in it has one element, one guardian, one hazard, and a name built from a real word.

THE PLANETPLANET NAME

_____THE REAL WORD OR ROOT IT COMES FROM, AND WHAT THAT MEANS

_____ITS ONE ELEMENT OR FORCE (ice? wind? sound? darkness? time?)

_____WHAT A VISITOR SEES FIRST

_____**THE PRIZE**WHAT THE BROTHERS MUST BRING HOME

_____WHAT IT LOOKS LIKE

_____EXACTLY WHAT IT REPAIRS ON EARTH

_____WHERE ON THE PLANET IT IS HIDDEN

_____**THE GUARDIAN**WHAT IT IS CALLED

_____WHAT IT CAN DO

_____THE ONE WEAKNESS A CLEVER FIVE-YEAR-OLD WOULD SPOT

_____**THE HAZARD**THE DANGER THAT IS NOT THE GUARDIAN

_____WHICH BROTHER IS IN THE MOST TROUBLE HERE, AND WHY

_____**THE GREETING**

On Verdant-9 the forest sings four lines at anyone who comes looking, in Chapter 7. It is an invitation and a warning at the same time. Write the four lines your world says. Make them rhyme.

DRAW IT The view from the ramp, the second the mothership lands.

THANK YOU

Take it, use it, pass it on

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If you use it, the author would genuinely like to know — what worked, what fell flat, what you had to rewrite on the way to the photocopier. A reply from a real classroom is worth more than any amount of guessing.

Book Two is coming in 2027. Silas Vane has a twenty-year head start, a flying fortress the size of a city, and the only map to the second Source Stone. He does not know that three brothers are already following him.

About the author

Reed Renix didn't invent the Jupiter Brothers. He watched them grow. Jackson, James and Jay are his nephews. The powers are made up. The rest — the arguing, the fearlessness, the five-year-old who is quietly the smartest person in the room — is just reporting.

Jupiter Brothers: A Mission for All Mankind is his first novel. He is currently writing Book Two, in which three brothers go looking for Silas Vane.



reedrenix.com

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