

# ***Time for the Stars* Lesson Plan**

By  
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## **Introduction:**

*Time for the Stars* is the tenth of the juveniles Robert Heinlein wrote from the late forties through the early sixties. The series is widely regarded as the finest science fiction ever written for young people; many, including Grandmaster Jack Williamson, believe them to be the best science fiction Robert Heinlein ever wrote.

*Time for the Stars* was one of the works that incorporated twins, which Heinlein's wife Ginny loved. A work that explains Einsteinian relativity as well as any work of fiction ever has, *Time for the Stars* also challenges conventional attitudes towards siblings.

We hope you find the following lesson plans helpful, and that you will choose *Time for the Stars* or another Heinlein work to use in your classrooms. We would like to hear from you about your own experiences using Heinlein's works. Please email us!

## **Edition Used:**

I have used the 1990 Scribners hardbound edition.

## **Date of Publication / Dedication:**

*Time for the Stars* was finished in November, 1955, and published for the Christmas trade in 1956.

## **Chapter Summaries / Discussion Notes:**

Each chapter will be summarized, and pertinent details and issues explicated. Any of the details might be turned into extra credit questions, which require the student to do research on the internet or in a library. Heinlein often inserted historical, scientific, and literary references into his novels, as a way of gently urging the reader to explore these references. Vocabulary words which students may have difficulty with will be suggested, with particular attention paid to words Heinlein invented (which, unless we've adopted the word, won't be found in a dictionary).

I strongly urge that students learn vocabulary not by checking the dictionary, but by the following procedure: 1) say the word aloud (this begins to fix the word in long-term memory); 2) look for roots (Spanish speakers often have an advantage here, since the longer Latinate words in English often have a simple Spanish root, as in the word "facilitate"; 3) use context to make TWO guesses as to what the word means; 4) then, and only then, check the dictionary. Students need to be reminded to learn new vocabulary words, because they will often choose to simply skip the word they don't know, or in running to the dictionary, will fail to permanently learn the new word as they only place the definition into short-term memory. I require my students to learn at least seven new words a week; in this, Heinlein is very helpful, because he actually used a more

sophisticated vocabulary in his juveniles than in his adult fiction. If teachers do not encourage students to acquire the new vocabulary, students often have a hard time with Heinlein's juveniles for precisely that reason: they are more difficult than today's more controlled, simplistic vocabulary in most young adult novels.

## CHAPTER ONE

Tom, our narrator, compares his life with those of famous men. Napoleon, Alexander and Einstein started young; he, on the other hand, has no idea how any of this happened.

He wasn't even supposed to be born; he and Pat were only supposed to be one child... which means his parents have to pay taxes on him, since he and his brother are the fourth and fifth children, and there is a tax-exempt limit of three. He has three older sisters: Faith, Hope, and Charity.

His father absolutely hates the child limit; pointing out that youngest children, such as Ben Franklin, add much to human progress. His mother usually starts soothing his father at that point in the tirade. He loves history, which is why the twins are named after Patrick Henry and Thomas Jefferson; they also have names from their mother, who loves art: Michelangelo and Leonardo da Vinci.

His father is angry over having to pay the taxes for them, asks for a seven-person home, and the twins have to deal with sleeping on the couch in the living room. Their father wants to emigrate; their mother doesn't.

They are always short of money. They only have one robot, poor people! Pat always seem to finagle things so Tom does the dishes.

They manage to have fun (and trouble) even though they're poor.

Tom wants to clear up the idea that being a twin is fun. You're stuck with each other – but it doesn't guarantee love.

Pat is right-handed; Tom is left-handed. Tom always feels like Pat gets the bigger piece of the cake – or both pieces. Pat even convinced his parents that Tom ate both pieces – and Tom is still angry about it. Tom is writing all this down, because Dr. Devereaux asked him to do so. He and Pat are identical twins.

Pat just is first in the pecking order; there's nothing Tom can do about it.

Having a twin means you're never alone.

Mr. Geeking of the Long Range Foundation contacts them. He wants to do research on the twins. Their father vents his frustrations. Mr. Geeking tells him he isn't from the government. Their father calms down. The Long Range Foundation likes to spend money on projects the government won't touch – and ones that won't have any benefit for a long, long time. They were the ones who financed space travel (this book occupies the same universe as *Tunnel in the Sky*: Ortega's torch is mentioned). They have made tons of money from their projects.

They want the twins to spend a half day testing with them. Pat finagles some money.

## CHAPTER TWO:

Pat and Tom go to the LRF, to find many, many twins there. They don't really like other twins. They do like the pretty red-headed twin sisters. Tom actually prefers blondes, like Maudie Kauric – both the boys have been dating her for a year, although Tom usually ends up with her friend Hedda Staley (there may need to be some discussion of what dating was like when Heinlein wrote this: going steady and dating have become conflated somewhat in our day).

The twins take their physical exams. Then Dr. Arnault interviews them, and gives them the standard Rhine card test for telepathy. Tom doesn't think they have ESP. Pat whispers to Tom to pay attention. Dr. Arnault takes Pat to a different room, hooked up by microphone. After the initial tests, she wants to give Tom an injection. He grills her about it, and then explains that sitting on tacks over the years has made him cautious. He makes her write down what she is injecting him with, then gives it to him in a sealed envelope. Dr. Arnault appears to hypnotize Tom, it gets dark, and Pat "talks" to Tom.

The twins are asked to return the next day. Pat got more money to come back. They go down a drop shaft (free fall, of sorts), and then Tom reads the note: simple saline solution. The twins realize they were hypnotized – and that they talked without being in the same room. Tom never saw or heard Mabel asking the questions.

Then Tom thinks he's hungry – and Pat suggests stopping for a sandwich.

## CHAPTER THREE:

They return for more tests; for a solid hour, they use telepathy. The twins get a contract for research with the LRF. They explain that twins are more likely to be telepathic, because they come from the same egg, and are thus 'tuned-in' like radios. It's possible for others, but very rare.

The boys continue dating Maudie.

Project Lebensraum is about to be explained to them. Dr. Arnault explains that the brain hears and sees, which is why Tom hears Pat's voice, without using his ears (he gets this explanation after thinking too much about the process, and losing the ability for a week).

Project Lebensraum is all about needing space; overpopulation is making life harder and harder. So, the LRF is going to send out starships – but they need a way to communicate back, to let Earth know where the good planets are, so they can be settled. Telepathy is instantaneous, not limited by the speed of light, and signal strength isn't weakened by distance. They want to keep one member of each set of twins on Earth, and send the other member on the ships. The twins will be cared for, very well. But whichever one stays will age, while the one who goes out will remain younger – Einsteinian physics, meet Heinlein's readers!

Pat plans on being the twin that goes into outer space.

The redheads leave in indignation; Pat gives them a razzberry.

Tom is upset at having to be the one who stays behind.

## CHAPTER FOUR:

They have a family meeting. Since Uncle Steve is there, Pat decides to bring it up. Pat points out the free education. Uncle Steve explains each of them will make more money than both he and their father put together. The deal is for one of them to make a voyage in the *Lewis & Clark*.

Their mother is opposed to them going. The boys leave it their brother-in-law Frank to annoy their parents so much they will agree. Pat thinks they've got it. But then their father asks how long the voyage will be, and they confess: a century.

Their mother faints.

Uncle Steve takes them out to get them out of the house. He assures them their parents will agree to let them go. He explains that when you're right and the other person is wrong, the best thing to do is to shut up and let the facts speak for themselves, and give the other person time to figure out a way to admit it. He tells the boys to keep their mouths shut instead of trying to argue.

They talk about Project Lebensraum.

Pat then offers up a new argument: this way, their parents get to keep one boy at home. Pat stops himself from saying Tom will stay, but that's what he intends. Uncle Steve tries to explain that logic never answers an emotional argument.

Uncle Steve then explains the odds; it's highly unlikely that the one who goes to space will ever return. Tom 'whispers' to Pat that the matter of who is going is not settled.

Uncle Steve explains about why their mother will not be happy that one is going to be safe.

Exploration is dangerous; sooner or later, you will die. One of the boys is going to die.

## CHAPTER FIVE:

Pat is going to be the one going. Tom isn't sure how that happened. Pat got Tom to sign first, which made him the one staying home, but he tells them it is better not to argue so the parents will sign. Later on, Tom complains to his father, he refuses to help because his mother has already begun grieving for Pat.

Pat goes to training. Tom realizes he misses him being around. Tom's now on Pat's sleep schedule, which makes his day start at 2am. Tom starts paying money for boarding, and also, buys a new watch since Pat took his with him. He also has to start eating what the LRF tells him, to keep him healthy; his medical care is extensive.

Maudie calls him, and they date. She accidentally calls him Pat. They argue. Maudie tells him he has a will to fail, that he has always let Pat walk all over him. Tom wonders if he let Pat go because he is afraid.

He is about to kiss Maudie for the first time, when Pat "calls" him. Pat tells him to kiss her, so Tom doesn't. He starts to think about what life will be like, here with Maudie.

Pat has an accident skiing. He is paralyzed from the waist down. He comes home. Tom is now worried about not having the money any more. Mr. Howard shows up; now Tom has to go to the training. Their father is furious. Pat calls for him; he tells

Tom what to do, and to shut up. He also puts Tom down: “You never did have any will power.” Pat tells Tom he’s doing this for himself, to have a pampered life.

Tom leaves two days later. His father tries to have “the talk” with him before he leaves; school has already explained all that to him. Maudie kisses him goodbye, but only after Pat tells her to do so.

## CHAPTER SIX:

Tom doesn’t have time to catch up on all the training. He will have to study onboard.

Each ship will take about a dozen telepaths; accidents will happen, and no way to make spares.

We meet all the telepaths.

There are telepaths to link back to Earth, and ones to link with other ships as well.

Uncle Alfred is the oldest, and he reaches out to Tom. Uncle Alfred is tied to his great niece, Sugar Pie. He has raised her since her parents died, and they were able to use ESP after they died. Uncle Alfred is the most peaceful, happy man Tom has ever known.

They get to the *Lewis & Clark*. Dusty Rhodes insists that Tom is in his spot; he moves. Dusty is also ignoring the rules; he decides to go look at the control room. An officer orders Dusty to strap in. Pat tunes in; Tom says he expected more of a sendoff. We get a great narrative scene, from both Tom’s perspective, and from Pat’s. Heinlein loves takeoffs!

Dusty asks Tom to let him out of the straps. Tom thinks he should say please; later, he wishes he had. Dusty is going to be trouble.

## CHAPTER SEVEN

Tom discovers that Uncle Steve is on board with him!

Pat is told, so their mother can know Steve is with Tom.

Steve has been promoted to Major. He will be in charge of the exploration on each planet. Steve tells him to always find time to sleep and eat; there will be times when neither will be possible.

Tom meets all the heads of the different departments.

Dr. Devereaux is the head psychiatrist.

Tom goes to take his turn in communications. Pat wants him to wait; Tom says he has to do it now. This is work.

Tom thinks about sending roses to Maudie, but he will have to go through Pat. Pat is his attorney, in charge of his money. Tom realizes there is no point to going over bridges you’ve burned behind you.

School is set up on board. Uncle Alfred signs up for everything. Steve signs up too. Education is the best way to fill the hours of boredom.

Boredom is the greatest enemy on board.

They send such a large number to provide a stable social group. 200 is the minimum for safety.

Tom has extra duty. When he doesn’t do well farming, he goes to work washing bottles in the lab.

He and Dusty don't get along; Dusty is rude, never says please and thank you, and is a slob. He also doesn't bathe enough. Tom locks up his camera the next time he leaves it on Tom's bed, only to find that Dusty broke into his locker and took it back. Dusty also leaves all of Tom's clean shirts dirty. Tom thinks about complaining, only to find that Dusty has complained about Tom first.

The captain asks Tom to tell him the full story. Dusty is the only one who can transmit and receive pictures. The problem with Dusty is that he's a genius with the maturity of a five year old. The captain says he needs to be disciplined, and only the captain to do it. The captain is moving Dusty into the cabin across from his. He tells Tom to leave Dusty alone – but never to be a doormat.

#### CHAPTER EIGHT:

Pat is going to get an operation. The Relativist calls Tom for extra duty. He calibrates the twins. They are investigating what the word "simultaneous" means in Einsteinian terms. Dr. Babcock explains relativity.

There is some "slippage" in communication speed.

Pat undergoes surgery with Tom linked in; Tom feels the knife goes in.

Tom thinks Pat must have died, but Pat is fine.

Pat is able to walk again.

#### CHAPTER NINE:

Tom is trying to figure out why he isn't happy.

They enjoy the news from Earth the most.

Terrible news: the *Vasco de Gama* is lost.

The slippage between Earth and the ship starts to be noticeable; Pat has his birthday before Tom.

Tom's birthday comes a week later.

Uncle Steve comes to Tom to find out what's wrong. Dr. Devereaux begins to counsel Tom. Lesson #1: he doesn't like his brother Pat. Pat has used and abused him. That dislike is in conflict with the message constantly pounded into his head that siblings are supposed to love each other. Pat likes Tom, like a man likes a dog. He sees Tom as a weakling,. Lesson #2: neither twin wanted to go on this trip. Both Tom and Pat wanted to be the one left behind. Pat's accident wasn't an accident. There was zero damage to Pat's spinal cord; it was all in his head. Tom tries to get his head around all this. Tom has three choices: 1) keep going as he is, and get crazy; 2) keep going as he is, and run the risk of going crazy; 3) dig into his mind and figure things out. He chooses the third; he starts to keep a journal. That's what we've been reading so far.

#### CHAPTER TEN:

They're decelerating to their first destination, Tau Ceti.

Pat is going to get married to Maudie.

Tom gets to know Pru.

They get very attracted to each other. They kiss, but then Pru's sister Patience rejects Tom. That ends things.

Tom spends more time with Uncle Alf. He is able to talk with Sugar Pie through Uncle Alf. Dr. Devereaux hypnotizes Tom, and now he can hear Sugar Pie himself – and Uncle Alf. Uncle Alf is happy somebody will be there for Sugar Pie if something happens to him.

Pat gets married.

## CHAPTER ELEVEN:

Once Tom admits how he feels about Pat, he doesn't feel that way any more. They work out a better relationship.

The closer they get to the speed of light, the harder it is to communicate. Finally they lose touch completely.

Pru is the only one who really likes it – now she can really kiss someone!

Pat finally gets in touch – it's been two years. He is under sedation and drugs to be able to break through.

Pat has a child.

Tom and Pat have almost nothing in common now; Pat is eleven years older, with a seven year old daughter, Molly. They send a picture of her through Dusty.

Tom is able to talk to Molly now.

Maudie won't let the next child learn how to talk to Uncle Tom.

## CHAPTER TWELVE:

The chief planetologist finds several planets around Tau Ceti, and gets to name them. One is named Constance, after his daughter. They go over how hard it is to find planets like Earth. Hopefully, not taken yet.

They explain Bode's Law about the distribution of planets.

They reach Constance.

Pat tells them about the Bartlett Brothers business he started, which included money from Tom's income.

Tom wants to go with the exploration party. Uncle Steve refuses.

They land in water, and maintenance begins.

The captain rules that no communicator will go ashore; they contemplate a strike. Uncle Alf talks them out of it.

Uncle Alf also works out a way for them to go dirtside too.

The captain tries to order that only Uncle Alf will go ashore; Uncle Alf talks the captain out of it.

They will be allowed to sightsee, once safety is secured.

They go ashore, and bring test animals. Everything seems fine, other than a fever everybody catches and survives.

Tom gets to go dirtside, and he loves being outside, and feeling rain again.

He looks at the stars.

## CHAPTER THIRTEEN:

It turns out the fever wasn't harmless. Many died. Dusty is now a vegetable. He can only talk to Molly and his great-niece Kathleen. He can still talk to Pat, but it takes great effort. Maude died.

Only Uncle Alf can still talk easily to his original contact.

They found nothing on Beta Hydri.

War breaks out at home.

Tom has no idea what a Fardie is when Kathleen talks about it.

Communications are getting harder. Ships are going missing.

They find nothing at the next system. On to Beta Ceti.

Tom would like a picture of his great-grandniece Vicky.

## CHAPTER FOURTEEN:

They reach Beta Ceti.

Vicky is dating now.

Language is changing back home.

Vicky isn't even really related any more to him – only very, very distantly.

On Elysia, disaster strikes. Their boats get attacked and sucked under the water.

A few of them manage to escape in the copter. The things come ashore and get the rest of their people. His Uncle Steve may be among the dead. The sea creatures are intelligent and have unknown water-driven technology.

They arrange a rescue party. They fail. Tom watches his Uncle die.

## CHAPTER FIFTEEN:

Those who are left alive decide they have to leave. Nothing else can be done.

So: back to Earth, or the next system? Tom suggests that he will be the only one capable of communicating with Earth shortly. They decide to go ahead anyways.

Tom wants to talk to his Uncle Steve...but he's dead. His parents died already as well. The other communicators want to go back home. They ask Tom to speak privately to the captain.

The captain used the torch against the behemoths.

Tom goes to talk with the new captain; the captain tells him he is under arrest for mutiny.

## CHAPTER SIXTEEN:

He talks to Vicky. She can tell he is worried.

They want to hook up his cabin so he can stand watches from there. Tom refuses; a man under arrest has no duty.

Someone sends him a note of support.

Mutiny is on the move.

“The Captain is right even when he is wrong.”



Heinlein gives us a treatise on the need for authority in space (or any other mission).

The captain summons him; all charges have been dropped.

Tom goes back to work.

There are complications over the communications schedule back home; Tom tries to explain this to the captain. He doesn't understand.

They receive new orders: stay put, a Foundation ship is coming: the *Serendipity*. A new type of ship: an irrelevance ship that can get past light speed. They arrive, and install a new drive. They're going to put the *Lewis & Clark* into a museum.

Telepathy led to the new space drive, since it proved Einstein was wrong.

They'll be home after lunch.

## CHAPTER SEVENTEEN:

They come home. They get medals.

They are known as Rip van Winkles.

The language feels odd.

They meet Sugar Pie – she is the same age as Uncle Alf.

Nobody comes to meet Tom.

Tom says goodbye to the Captain, who doesn't know if he has a job any more, since torchships are obsolete.

They're all rich, but what to do with their lives now?

Everybody forgets them quickly.

Tom realizes he needs an enormous amount of education – and re-education.

The women don't even wear hats....

There is now weather control, but no wheels.

Pat is 89 and rich. He wants to know if it was fun.

Tom gives him the answer he wants to hear: yes.

Pat wants him to take over the business now.

Tom tells him no – he's going to run his own life. He will decide for himself.

He meets the rest of the family. Vicky comes down – and they decide to get married.

## Chapter Tests / Quizzes:

Personally, I do not care for many published textbook tests/quizzes, as I often find them to not fit what we have actually discussed in class, or what the students have themselves found in the text. I therefore tend to make up my own quizzes and tests, and I also rely heavily on questions about relationships, more than I do questions about specific details of the books. I teach very poor readers, and I am far more concerned that they understand what is happening between the characters, than I am in what color shirt a particular character is wearing, or some other pithy little detail that teachers dealing with very good readers might ask to make sure that their students have read. I check to make sure they've read by insisting that they answer the following kinds of questions using specific details (and by always asking a question about the end of the chapter), but I allow them to choose the details themselves to fit the question. I train them to answer

questions this way by giving them several sample questions, then answering them on the board, using their input to craft a model response. I hope that the following questions are useful for quizzes and tests, as well as for classroom discussion. Again, I expect students to use specific details from the novel to answer these questions. If the extra credit questions seem appropriate for your class, you can add them to the quizzes, or use them as extra credit homework assignments.

#### CHAPTER ONE:

1. What is good about being a twin?
2. What is bad about being a twin?
3. How does Tom feel about his brother Pat?
4. What is the Long Range Foundation?
5. What do they want with the twins?
6. What does Pat get out of them?

#### CHAPTER TWO:

1. What kind of tests do the twins take?
2. What does Tom realize on the way home?

#### CHAPTER THREE:

1. What is Project Lebensraum? Explain the roles the twins will each play.
2. What is Tom afraid is going to happen?

#### CHAPTER FOUR:

1. Describe the contract the boys are offered.
2. What is the name of the ship?
3. Why does their mother faint?
4. What are the risks of going on the *Lewis & Clark*?

#### CHAPTER FIVE:

1. Which twin is going?

2. What is it like with only one of them at home?
3. What does Tom ask his father to do? Why won't his father do it?
4. What happens to Pat?
5. What does Pat arrange?

#### CHAPTER SIX:

1. Who is Uncle Alfred?
2. Describe the takeoff of the *Lewis & Clark*.

#### CHAPTER SEVEN

1. Describe life on board.
2. Why take classes?
3. What is wrong with Dusty?
4. How is the captain going to do about it?

#### CHAPTER EIGHT:

1. What does Tom learn about relativity?
2. What happens to Pat?
3. What happens to Tom as a result?

#### CHAPTER NINE:

1. Explain, in detail, what Dr. Devereaux teaches Tom.

#### CHAPTER TEN:

1. What happens to Tom seeing Pru?
2. What happens between Tom and Uncle Alf and Sugar Pie?
3. What happens with Pat?

#### CHAPTER ELEVEN:

1. What do they have to do to be able to communicate?
2. What happens with Pat?
3. Whose picture does Tom get?
4. What change happens in the communication network?

#### CHAPTER TWELVE:

1. Why do the communicators threaten to strike?
2. How do they work it out?

#### CHAPTER THIRTEEN:

1. What did the supposedly harmless fever do to them?
2. How successful are they in finding planets?
3. What horrible thing happened back home?
4. Who is Vicky?

#### CHAPTER FOURTEEN:

1. What happens on the planet?

#### CHAPTER FIFTEEN:

1. What do they decide they need to do now?
2. What does Tom get in trouble for?

#### CHAPTER SIXTEEN:

1. What surprise comes in this chapter?

#### CHAPTER SEVENTEEN:

1. How are they welcomed home?
2. How does Tom show that he is now a man, and not a child?
3. What happens when he finally meets Vicky?

### **Extra Credit Questions:**

1. Why does having the twins read from *The Comedy of Errors* make sense?
2. Why name the ship the *Lewis & Clark*?
3. Why does Uncle Steve bring up King Solomon?
4. What point is Uncle Steve trying to make by referencing the Parable of the Lost Sheep?
5. Why call the returnees Rip van Winkles?
6. Why does Pat call the two of them the Picture of Dorian Gray?

**Vocabulary Words** (these are all words I've had students ask me about): The vocabulary in this novel is considerably less complicated than almost all the other Heinlein juveniles.

p. 4: recollection; vague; basis; discriminatory; soothingly; supernumeraries; inevitable

p. 5: emigration; earmarked; subsidize

p. 15: reticent

p. 28: folderol

p. 42: furlough

p. 89: empirical

p. 120: serendipitous

p. 121: siblings

p. 140: scuttlebutt

p. 144: flabbergasted

p. 179: incidentally

### **Essay Questions and Projects:**

1. Write an essay describing and discussing the four famous men the twins are named after, and explain what that tells us about their parents, as well as the influence these names have had on the boys. Conclude with a discussion of why Heinlein would want his readers to know who these men were.
2. Research the work Dr. Rhine did on ESP at Duke university. What is the current thinking in the scientific community about Dr. Rhine's work? Write an essay detailing your findings.
3. What special abilities do twins have? Do some research, and write an essay exploring what we have learned about twins since Heinlein wrote *Time for the Stars*.

4. Research the current possibilities for traveling faster than light. Present your findings in an essay.