

## ***Space Cadet Lesson Plan***

By  
Robert James, Ph.D.

### **Introduction:**

*Space Cadet* is the second 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.

*Space Cadet* was based on the emotional experience of going through Annapolis. The original title for the manuscript was *Hayworth Hall*. Heinlein wrote the book while traveling in a small trailer with Virginia Heinlein, who would become his third wife in 1948. Money was extremely tight, and Heinlein had a hard time getting started on the book, as well as getting stuck about halfway through the book trying to figure out the best ending for the story. This was his wife Ginny's first experience with serious writer's block (and one of the few in Heinlein's career). His original ending, to have his hero be forced to bomb his own home town, simply wasn't going to fly in the juvenile market.

Financially, this novel proved to be the basis of a financial windfall, as it was adapted into the early science fiction tv series, *Tom Corbett: Space Cadet*. It also gave English the phrase "space cadet", used primarily today as a term of insult – which is certainly not how Heinlein meant it.

We hope you find the following lesson plans helpful, and that you will choose *Space Cadet* 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:**

These lesson plans are keyed to the Del Rey paperback edition, as that is the most readily available.

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

The manuscript for *Space Cadet* was finished in December 1947. He cut the manuscript from 73,000 words to 70,000 to satisfy his editor's requests (the book was substantially different from *Rocketship Galileo* that she wasn't quite sure what to do with all the technical detail). The book was published by Scribners for the Christmas trade in 1948.

### **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

Matt Dodson receives notification that he has qualified for his final examinations for entry into the Space Patrol. He worries about failing them. Matt meets Tex Jarman, a fellow candidate. They are riding in some form of rapid transit system (the chairs rock to handle acceleration and deceleration). They arrive at Hayworth Hall, the Earth headquarters of the Space Patrol.

What is striking is that Heinlein is displaying his constant belief in the equality of all human ethnic groups: while Matt and Tex are from middle America, and more than likely white (one is never quite sure with Heinlein), there are two dark-skinned boys in turbans, and a boy from Africa.

Tex is hungry; Matt shares a candy bar with him.

One of the great moments of prediction occurs: Heinlein has a portable phone go off in Matt's pocket, and he takes it out to talk to his father. This is one of the earliest predictions of cell phones, and students may need to be told that such things didn't exist when Heinlein wrote the book. Tex said he packed his so he wouldn't have to talk to his parents.

The boys see the wreck of the *Kilroy*, the first interplanetary vessel – no survivors. (In the first edition, the *Kilroy* went to the moon; in later printings, including the *Del Rey*, it went to Mars). The wreck has been replicated here, since the original site was in Africa. They meet two other boys, Oscar Jensen, and Pierre Armand. Oscar seems to be protecting Pierre (Pete). They check in, using their thumbprints. They go into orientation. Another boy makes fun of Tex being a cowboy. Oscar is from Venus, and has only seen a horse in a zoo. Pete is from somewhere else. Matt and Tex have odd numbers, and are called forward by a cadet, who has an unusual stance while he's standing. Another boy asks the cadet for help with all his luggage, and the cadet tells him to ship it all back home; he's only allowed 20 pounds.

Matt strips down for his physical exam, "naked as an egg." He is run through an automatic shower, called a "refresher." Matt goes through his exam, and admits to his

recent operation on his Achilles' heel. He is issued his uniform, based on automatic measurements. He is interviewed by an older civilian, Mr. Kelly, asking him why he wants to be in the Patrol. Matt says he doesn't know right then; the man chuckles. Matt is offered the merchant service; he says he won't and finally admits he wants the respect an officer gets. A clock announces that it is "thirteen o'clock" and that the clock is "hungry." They go to lunch.

## CHAPTER TWO:

Matt gets lost on the way to eat. When another candidate makes fun of him, the cadet at the table shuts him down; there is nothing wrong with an honest answer (this is one of the lessons Heinlein wants to teach; unlike his first juvenile, *Rocketship Galileo*, he doesn't come out and highlight it. Cadet Sabbatello makes him order a full meal. Another rule: never ask another cadet where he is from (good classroom discussion: does knowledge of origins allow discrimination? Or is privacy merely being placed front and center?).

Matt goes through more tests. One of the tests checks his capacity to keep a spot of light in a circle – then the chair starts rotating and turning upside down, then smoke comes in. Another test, to drop beans into a bottle with your eyes closed, seems to be more about honesty than anything else. Others seem to be about figuring out the test is impossible. Quite a few candidates didn't make it through the first day of tests.

Cadet Sabbatello warns them not to eat much for breakfast the next day. The Commandant himself, Commodore Arkwright, may be coming to see them. The Commodore had his eyes burned out (which happened during a heroic rescue). Matt goes to his room, to find the boy who had made fun of Tex is his roommate, Girard Burke. Girard has claimed the bottom bunk. The shower has "robot massage" but no "shave mask." Matt wants to try and get along with Girard. Tex offers to be Matt's permanent roommate, and Matt agrees. They go to see the Kilroy, only to discover that there is a long line. Burke leaves. Matt and Tex look at the displays (which includes a map of the dark side of the moon from the *Kilroy*, which is a remnant of the first edition having it go to the moon).

They find the memorial to Dahlquist, who saved the Patrol from a coup d'etat (see Heinlein's story about this, "The Long Watch.") Girard Burke enters, and ridicules the display as propaganda. He tells them there are three other displays to the martyrs of the Space Patrol. Matt offers to punch Burke in the nose, and Tex offers to help. They go back to their room, and Matt feels homesick.

## CHAPTER THREE:

They wake up, and go to breakfast. Cadet Sabbatello warns them again about not eating; he warns Pete, but then Pete tells him he is from Ganymede, and won't get "dropsick." Pete weighs three times what he normally would on Earth. They go to the trainer, where they will be accelerated down the cliff, then back up, so they can test for free fall response and acceleration. Matt passes the test for three gravities, although one candidate passes out, and another freaks out. He then goes through the five gravity test, and throws up. Another candidate has nose bleeds, and is taken out. He then undergoes

the seven gravity test, and gets a nosebleed himself. Matt wonders if he will ever get used to freefall.

Matt goes on to the next test for flight on a rocket. They watch one take off. Matt boards. One candidate quits. Matt gets to see the Earth from orbit. They land. Matt wants to see a ship land on hits rockets, but the next one crashes.

#### CHAPTER FOUR:

Matt is back in his room, upset about the crash, and the eleven who died. Burke comes back, acting like nothing happened; his father is rich, and he's been in space. Matt is furious that Burke doesn't care about those who were killed. Burke claims the whole thing was faked, in order to drive out the cowards. Matt promises himself that he will outlast Burke, no matter what.

Matt talks to Sabbatello, who tells him the crash was real. A mass has been scheduled. Matt goes to the swearing in. Tex is given the duty to answer for those who died. The commandant enters, and tells them they are to be a band of brothers, and that all of space is now their home; all of the human race is now their family, and their responsibility. Their job is to be "soldiers of freedom" and a "true and gentle knight." Matt and the others are sworn in.

#### CHAPTER FIVE:

Heinlein explains the workings of Hayworth Hall.

Matt gets his uniform, and is told to learn the regulations. When he goes to eat, he is instructed on table manners. Tex has to lose weight. Tex also has to reduce how much stuff he takes with him to space, and doesn't want to leave the pictures of all the girls he likes behind. Matt tells him to take the harmonica, and leave the pics behind (after he has them copied into microfiche). Burke tells them how to cheat on the weight allowance. Matt is temporarily in charge; he accidentally gives the Scout salute rather than the Patrol salute.

They head into outer space, to the school ship *Randolph*. They enter freefall, but Matt isn't sick. The boys swim around in zero gee. The rules of freefall movement are explained. They watch the Earth.

Tex relates how he forced a superior officer to put orders in writing; Tex is told to relay to Matt that the Patrol doesn't like space lawyers. Tex explains how older cadets are very much in charge of them, and can order to do almost anything legal. The whole point of eating pie with a fork is to learn appropriate customs, since everyone comes from different cultures.

What is most surprising about space is that it is boring.

They arrive on the *Randolph*.

#### CHAPTER SIX:

Cadet Lopez shows them around the *Randolph*. Lopez tells them they have to learn how to astrogate, and how the ship works. They eat. Matt loses his way again. Tex and Matt room with Pete and Oscar. They get a tutor, Mr. Wong. Heinlein launches

one of his earliest tirades against the state of education for the young. “Your real job is to learn how to think.” Because if one can think clearly, one can act morally. Matt feels overwhelmed, but Mr. Wong assures him it’s possible. They actually accelerate learning through hypnosis and drugs. Matt learns to speak Venerian in one session.

#### CHAPTER SEVEN:

The sergeant is teaching the cadets how to move in freefall. Matt is very proud that he made it across to the other side.

Matt works on learning Martian history, to please Mr. Wang. He thinks about learning in the simulator. Matt chooses to join the space polo team. Matt does his first space walk, and three cadets get pulled off the ship surface, caught by their safety line, Matt asks what would have happened if they couldn’t get back, and the sergeant explains the rescue procedures, and what it would be like to die in space.

Matt loves to watch Earth from space. He always looks like his home in Des Moines, Iowa. The sergeant teaches them how to use the jets to move around in space. Matt does well. So does Tex, which keeps Matt from bragging.

#### CHAPTER EIGHT:

. Tex and Matt go on their first liberty. Matt gets to pilot on the way to Terra Station.

On Paradise Walk, Tex tries to pick up a girl and fails. She points them to a church social hall, where they can dance. They go to a bar instead. Tex gets drunk on mint juleps, which the others don’t like. The others eat, and then Lieutenant Wong comes in. The boys take care of Tex while he sobers up. Matt buys some chocolate-covered cherries, and then gives them to Tex to try and make him feel better. They explode on the way back. Tex gets a demerit. Tex admits he’s never had a drink before.

#### CHAPTER NINE:

Life flies by on the *Randolph*. Matt discovered that he isn’t as good at math as he thought he was. The boys make up the Hog Alley band. Matt drops out to spend more time in space polo. The major activity on the ship is the bull session, talking about everything and anything. He also enjoys a class called “Doubt”, where they try and take apart each and every holy cow. The idea was to encourage thinking outside the box. Burke always thinks the most orthodox opinions; Matt enjoys taking him apart with questions.

Matt finds out Pete is homesick and tries to comfort him. Tex offers to let him come visit Texas; Pete invites them both to Ganymede. One of the older cadets, Arensa, explains that he’s quitting. He can’t take the thought of having to nuke a city. (This is the first time the Space Patrol’s primary purpose is mentioned). Arensa leaves his guitar with Tex.

Matt goes to the moon to practice airless landings. Matt is becoming a good pilot.

Sergeant Dodson tries to talk Matt into joining the space marines. Matt is so tired of working hard academically, that he talks to Wong about it. Wong says it would be too

easy for him. Wong explains the history of the Space Patrol, and how they guard nuclear weapons: their purpose is to prevent fighting. He explains that there are three type of men: Those motivated by money, by pride, and by ethics and a higher purpose. The Space Patrol is entirely made up of the third type.

Wong decides to drill Matt on nothing but astrogation for weeks, and he finally starts to get it.

Matt then takes up the position of senior cadet, greeting the raw recruits, in an exact mirror of how he was greeted.

#### CHAPTER TEN:

Matt returns home for a visit. Everything feels smaller. He has the spaceman's walk.

His girl has chosen someone else to be with.

He and Tex return to space.

He recalls a night with his father, explaining elliptical orbits and bomb inspections. He explains how he made a mistake, but corrected it. Matt's mother is upset about the talk of bombing; Matt's father insists that North America would never be bombed, since the Space Patrol is mostly North American. Matt realizes they would, in fact; he also realizes he can't go home again.

Matt admits to Wong that he thought about not coming back from leave. Matt explains his father's argument; Wong explains that no man would be forced to bomb his own home town. Morality isn't black and white.

#### CHAPTER ELEVEN:

The boys get their first postings. Matt and Oscar are on the same ship, the *Aes Triplex*. Burke has resigned. Tex wangles a berth on the *Aes Triplex* as well.

They are ordered to report to the captain, who is a tough bird named Yancey. Matt decides he likes him, even though the captain wants him to clean up his uniform. Their ship is going to look for the lost *Pathfinder*. Heinlein outlines the various duties on board, including the hydroponics. The captain likes the pansies Matt grows. Matt gets credit for the idea in a report home; the captain then grills him for being behind on his studying while they play chess.

They search for the *Pathfinder*.

#### CHAPTER TWELVE:

Matt and Thurlow are on watch. They talk about a variety of things, including the idea the asteroids were a planet, the difference between people in the Patrol and those not in the Patrol, the Martian claim to living in two different worlds simultaneously (this is a preview of *Red Planet* and *Stranger in a Strange Land*). They find the *Pathfinder*. They begin the investigation into the accident that killed all on board. They hold services for the dead. They argue about whether or not the fifth planet destroyed itself from nuclear weapons. They decide to repair the *Pathfinder* and bring it home.

## CHAPTER THIRTEEN:

Matt helps repair the *Pathfinder*. Captain Yancey keeps all the cadets, and sends his experienced crew over to the *Pathfinder*. Matt and his friends talk about home, promotions, and the like; they kid each other. The captain teaches them. They get mail. The *Pathfinder* found its way home. Pete sends them a message from Ganymede.

They get a mission to go to Venus; they can barely make it, but they agree to go. Matt and his friends are sent down to investigate the trouble.

## CHAPTER FOURTEEN:

They land on Venus.

They forgot to set the brakes (the gyros). The jeep rocket topples over. Thurlow is unconscious. Thurlow was the one who forgot to set the gyros. They get out, and the ship sinks. They set Oscar's arm. They have next to nothing, but they have a compass. They're going to look for the *Gary*, which is their mission. They rig a way to carry Thurlow, then reach open water. Oscar attempts to contact the natives. One of the Little People shows up, then goes away, then returns with questions. The Little People take the party to their leader underwater. The Little People imprison them. Oscar describes their culture. They get fed.

They find that Burke is captured too. He was the captain of the *Gary*. Burke explains that the Little People have killed his entire crew.

## CHAPTER FIFTEEN:

Burke confesses that he kidnapped one of the Little People's leaders. The Little People attacked and killed his crew. They argue about what to do. Oscar proceeds to take charge, and wants to fix the problem before a full-scale war erupts. He thinks Burke is legally imprisoned. He believes Burke is a murderer. Burke continues to be difficult. Oscar convinces the Little People to let him talk to their leader. Oscar uses his knowledge of their culture to rescue the situation. Tex remembers this is "pie with a fork."

## CHAPTER SIXTEEN:

Oscar begins to establish proper diplomatic relations. He finds out the swamp Burke wants is tabu because it is poisonous. Oscar squeaks out of having to stay there permanently. The Little People offer to take Burke's head apart, so they can figure out how to fix Thurlow. Burke isn't seen as people, but a dangerous animal. They examine the *Gary* only to find out it's wrecked. The Little People have no idea they come from another planet. The Little People help salvage the jeep, but worms have eaten away the metals. The Little People give them the log of the *Astarte*, and then take them there.

## CHAPTER SEVENTEEN:

Once they enter the *Astarte*, they discover nothing has changed in a hundred years, because the Little People sealed it. The boys talk about flying it. They discuss what it will take. They then discover that the Little People can replicate maple syrup, which means they might be able to make rocket fuel.

Burke decides to come with them after all, and Oscar arrests him. They enroll the crew, and call roll. They take off.

## CHAPTER EIGHTEEN:

They return. Thurlow is fine. Matt receives his commission. Matt fought Burke. All is well.

### **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 has Matt been selected for? What is he nervous about?
2. How are the entrance exams?
3. Why is Matt joining the Patrol?

## CHAPTER TWO:

1. What is the testing like?



2. What is Girard Burke like?
3. What happens at the Dahlquist display?
4. How does Matt feel at the end of the chapter?

#### CHAPTER THREE:

1. How does Matt do on the tests?
2. What happens at the end of the chapter?

#### CHAPTER FOUR:

1. What does the oath of service mean?

#### CHAPTER FIVE:

1. What is the point of ordering Tex to eat pie with a fork?
2. What is being in space like?

#### CHAPTER SIX:

1. What is the purpose of education?
2. How do they teach in the Patrol?

#### CHAPTER SEVEN:

1. What does Matt learn to do in this chapter?

#### CHAPTER EIGHT:

1. What happens to Tex on the first leave?
2. What happens to the cherries?

#### CHAPTER NINE:

1. What kind of men make up the Patrol?
2. What does Wong help Mike learn?
3. What does Matt do at the end of the chapter?

#### CHAPTER TEN:

1. What does Matt's father say could never happen?
2. What is Wong's response to that?
3. What subject is Matt now teaching?

#### CHAPTER ELEVEN:

1. What innovation does Matt come up with?
2. What are they searching for?

#### CHAPTER TWELVE:

1. Describe one of the topics Matt and the other watch officers discuss.
2. What does Captain Yancey suggest happened to cause the asteroid belt.
3. What do they do with the *Pathfinder*?

#### CHAPTER THIRTEEN:

1. What do Matt and his friends hope for?
2. Why are they going to Venus?

#### CHAPTER FOURTEEN:

1. What accident occurs?
2. What happens with the Little People?
3. Who do they find in prison?

#### CHAPTER FIFTEEN:

1. What stupid things has Burke done?
2. How does Oscar save them all? Be sure to include the concept of pie with a fork.

#### CHAPTER SIXTEEN:

1. What lost thing do the Little People reveal?

CHAPTER SEVENTEEN:

1. How do the boys manage to escape?

CHAPTER EIGHTEEN:

1. How does the book end?

**Extra Credit Questions:**

CHAPTER ONE:

1. Why is Heinlein using the simile of “prairie schooners”? What is he trying to suggest?
2. Why name the ship the *Kilroy*?

CHAPTER THREE:

1. Where is Ganymede? Why would that make Pete immune to being dropsick?

CHAPTER FOUR:

1. Why is Saint Barbara the patron saint of rockets?

CHAPTER TEN:

1. Find a translation of the title.

CHAPTER ELEVEN:

1. Translate the *Aes Triplex*. Why name the ship that?

CHAPTER SIXTEEN:

1. Why name a ship on Venus the *Astarte*?

**Vocabulary Words** (these are all words I’ve had students ask me about):

p. 7: elimination

p. 9: preparatory

p. 11: ornate

p. 13: topsy-turvy; remnant; clutching

p. 16: august; personages; rotunda

p. 22: adequate; austere; hydraulic; adjoining

p. 23: sauntered

p. 25: squabbling  
p. 26: moderately  
p. 29: contemptuous; mustered  
p. 44: hightail  
p. 50: reveille; hastily; insignia  
p. 55: meridian; ecliptic  
p. 56: tangency; fussy  
p. 58: indoctrinated  
p. 60: deuce  
p. 63: tarry; monotony  
p. 65: mutual; clumps; stragglers  
p. 67: imperceptibly  
p. 76: skirmish; traction  
p. 100: repertoire  
p. 101: detriment; abolished  
p. 114: vigorously  
p. 115: matriarch  
p. 143: glamorized  
p. 152: interminable  
p. 155: succored  
p. 177: enticement  
p. 178: alabaster  
p. 179: tripe  
p. 180: assumption  
p. 201: decommission  
p. 202; translucent  
p. 213: crawl  
p. 214: procession

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

1. Research the origins of portable phones, in order to display the originality of Heinlein's story. Suggestions would include early science fictional mentions, but also walkie-talkies in WWII, and the development of phones tied to a landline, up to modern cell phones. How has society changed because of the development of the cell phone? Was Heinlein correct in its usage?
2. Go read "The Long Watch" by Heinlein, and compare that version of the Space Patrol with this novel. Look particularly at the ideas being promoted as the finest and worst human beings can hold.
3. Why use the Valhalla theme from Wagner's *Gotterdammerung* for the Dahlquist display? What do those two scenes have in common? Bring the piece to class, play it, and present your answers.

4. How are freedom, peace, and law intertwined? What happens when you remove one of those from society? What happens when one is favored over the others? Research history, and find examples when each of those factors were given too much power.
5. What do you think about the kind of education they get in the Patrol? What do you think we could do today to get that kind of education, to learn how to think? Compare the education in the Patrol with that of your own school.
6. Research the history of the use of hypnosis to teach. Does it work? Why, or why not?
7. Play the game of Doubt in chapter 9. Choose any of the topics suggested, or come up with your own.
8. Heinlein breaks men up into three groups: those motivated by money, by pride, and by ethics and ideas. Write an essay in which you compare the three motives. Select representative men and women who would be good exemplars of each type, and then finish by arguing their relative merits.
9. Research the actual conditions on Venus, compared with how Heinlein presents them.