

“No Bamboozlement Here”: Teaching Yann Martel’s *Life of Pi* across the Curriculum

The article examines Yann Martel’s novel, Life of Pi, in the context of providing instruction across the high school curriculum.

In Chapter 3 of *Moby Dick*, Ishmael, in a “towering rage,” questions his landlord concerning Queequeg, the savage “purple rascal” harpooner, he has yet to meet. “What sort of bamboozling story are you telling me?” he nervously asks after learning that Queequeg is peddling shrunken heads—and on the Sabbath, no less (Melville 811). Yann Martel makes use of the same mellifluous warning in the *Life of Pi* “Author’s Note” foreshadowing young Pi’s life that is filled with bamboozling questions. While visiting India, the note’s narrator recalls a friend’s warning that Indians speak “funny English,” using words like “bamboozle” (Martel vii). Martel’s narrator persona makes good use of the word disputing expensive train fare. “*You’re not trying to bamboozle me, are you? . . . There is no bamboozlement here*” (viii). Thus *Life of Pi* is set in motion with this comical allusion, the first of many Melville references.

Because of its broad topical scope, Martel’s novel presents an extraordinary opportunity to engage students and faculty in an exciting, diverse adventure. The 2013 Academy Award–winning movie version, the universal lure of tigers, the odyssey of survival, and the combination multidimensional interlocking metaphors provide a rich platform for collaborative teaching. From A to Z, astronomy to zoology, students may select from numerous exploratory cross-curricular options. Differentiated learning is achieved because students are allowed to work in discrete personal interest areas while simultaneously executing close reading in search of connectivity clues concerning Pi’s

search for the nature of life. The appeal for students, beyond the special effects of the 3D movie, is the novel’s expansive application to virtually every high school department. Students connect with Pi’s search for the nature of life through whichever curricular framework seems most meaningful to them, applying diverse interests, backgrounds, and capabilities to solve the novel’s bamboozling intricacies. Motivation is enhanced, especially if the puzzle piece a student selects, researches, and subsequently presents to the class yields personal enlightenment and intellectual discovery.

***Pi* as a Unit: Designing and Building**

Serendipitously, *Life of Pi* has been taught collaboratively in our school since 2005–06. The initial joint effort, conducted in a twelfth-grade English class and a Comparative Religions elective, consisted of a few shared class meetings and team-taught discussions after the teachers discovered they had assigned the same novel. That year’s classes were significantly enhanced because Hindu, Muslim, and Christian class members were enthusiastically receptive to comparative analysis of Pi’s creative practices combining all three. Muslim students were particularly motivated to share the compassionate, peaceful nature of Islam in response to their negative experiences following 9/11. Moreover, Pi’s teacher-friend, Satish Kumar, an atheist, and a devout Sufi Muslim baker by the same name provided additional dimensions to discussion (Martel 25). Pi’s personal condemnation of agnosticism (64) completed the philosophical spectrum.

After 2006 the unit expanded and evolved, driven mostly by collaborative efforts by English, history, and math faculty. The unit has been modified, tailored, and expanded every year since, as new ideas and projects have been generated.

Table 1—labeled Catalogue—is just that. Each year's selection of *Pi* unit components from the table depends on many variables including faculty relationships, interests, capabilities, and class composition. A list of prospective student projects is tailored every year to facilitate individual student research and presentation development, one of several cross-curricular unit activities. Presentations are limited to 15 minutes, include audiovisual components, and explain how the topic connects to the book. (Some students found and developed topics not on the list based on their own discoveries in the novel. These were added to the Catalogue.) The unit takes about eleven classes, depending on reading pace and availability of computers and library resources.

In addition to individual student cross-curricular projects and limited traditional English class study, the *Pi* unit includes several class/team-oriented projects. The most popular, perhaps, is the Lifeboat Construction Competition, a process that demands close reading (see Figure 2). The class is divided into three teams, each tasked with building a simulated lifeboat using specifications from the text. Depending on the time of year the unit is taught, this competition may be conducted either outdoors or inside the school where space requirements can be met. Each team brings supplies (usually string, rope, stakes, cardboard, and paper) to construct Pi's lifeboat to scale, equip it, and populate it as specified in the novel—including the enormous tiger named Richard Parker. Teams develop their plan in advance of construction day. On that day they have 45 minutes to complete their boats, after which the team captain gives a tour to three faculty judges who have checklists derived from the text delineating the boat characteristics and equipment. A demonstration of pitch and roll of the boat, as described in the book, is required by each team to show the radical nature of Pi's terror. Boat capacity is 32 and must be demonstrated by embarking the class. The judges decide a victor and make awards based on checklist compliance and team creativity.

Another successful activity is tasking students to identify and list Pi's numerous aphorisms from the text. One of Pi's books, *The Imitation of Christ* (76), makes extensive use of aphorisms to simplify religious ideas. As students make their way through the novel, they begin to recognize that Pi's narrative voice emulates this style. Through Pi's clever aphorisms, students understand the novel's style and structure. From a mathematical perspective, $C = \pi d$ seems to be the same type of aphoristic expression that Pi often uses.

If zoos are nearby, field trips or tailored individual zoo visit assignments yield enlightened perspectives linked to the novel's animals. (Many students from our school visited the National Zoo in Washington, DC, returning with observations, excellent videos, and personal adventure stories of the Washington Metro.)

Perhaps many students already know or at least intuitively perceive how disparate elements of their lives overlap and intertwine. Just the appearance of a math or science teacher inside an English class to talk about elements of *Life of Pi* confirms student perceptions. The truth of the Hindu principle, "all destinies are intertwined," represents the ultimate learning outcome (Iyer x). More examples of specific cross-curricular unit activities follow.

Mathematics

A math teacher interested in *Life of Pi* was invited as a guest instructor to three twelfth-grade English classes to present pi (π) from his perspective. π , an irrational number, its decimal expansion trailing infinitely, emerges as a universal metaphor that students can "touch" as they calculate its value. The teacher organized students in groups of three and tasked them to calculate the ratio of any circle's circumference to its diameter in an effort to derive the value of π . Students used a wide variety of circular objects and measuring devices. Just like Archimedes and other mathematicians from cultures worldwide, students quickly uncover π 's universality, its continuity, its perfection—deriving the same result, regardless of the circular object tested. In the last few years this lesson has included extracts from Mario Livio's perfectly titled book, *Is God a Mathematician?* Students consider the supernatural power of math in general and π in particular (Livio). Thus,

TABLE 1. Catalogue of Cross-Curricular Opportunities

TOPIC CATEGORY	POSSIBLE TOPICS FOR STUDENTS	SYNOPSIS OF SELECTED PRESENTATIONS
Comparative Religions “A plague upon fundamentalists and literalists!” (Martel 49).	<ul style="list-style-type: none"> • Hinduism • Christianity • Islam • Judaism • Mysticism • Atheism • Comparative Religions 	Pi as a teen adopts three religions simultaneously. His graduate work (as an adult) in religion includes studying a 16th-century Jewish mystic, Isaac Luria (Innes). Pi’s adaptability provides comedy and serious consideration. Students explore individual religions or perform meaningful comparison-contrast. Students taking comparative religion classes link Pi to other class work. Several pertinent articles are available (Innes; Wood).
Mathematics “To be a castaway . . . is to be a point perpetually at the centre of a circle; . . . caught in a harrowing ballet of circles” (Martel 215–16).	<ul style="list-style-type: none"> • “Pi” calculations (3.14); Pi spends 227 days at sea—(22/7=3.14) • Waves, wave theory • Rational versus irrational numbers • Mathematical patterns in nature 	The derivation of Pi’s name is presented in a comic scene. However, the serious implications of the number π , its relationship to life , and its role in the universe are also considered. There are many websites and several books exclusively devoted to π . Recent supercomputer calculations have yielded new discoveries concerning its never-ending nature. Mathematics students gain perspective when they consider numerical and abstract relationships between life and the cosmos as well as some of the most famous equations in mathematics (Baker).
Zoology “I have heard nearly as much nonsense about zoos as I have God and religion” (Martel 15). (Tigers considered below.)	Depending on the counting process, there are about 100 animals in the novel. Some are studied by the narrator in the zoo, in graduate school, and aboard the lifeboat in the middle of the Pacific.	Pi’s father, a zookeeper with dubious business sense, teaches his sons about animals. Other lessons on “territorial imperative,” survival of the fittest, animal instincts, adaptability, and natural selection are illustrated. Students considering individual animals quickly discover symbolic, scientific, and cultural implications.
Marine Biology “phosphorescent green bubbles, the wake of speeding fish” (Martel 175).	Stranded on a lifeboat, Pi learns quickly about life at sea. Sea turtles, whales, flying fish, sharks, and many others visit and ultimately save Pi and Richard Parker.	The grandeur and enormity of the sea from the perspective of a drifting lifeboat are accompanied by debilitating boredom. Pi painstakingly discovers how sea life operates. When students consider these difficulties through their research on individual animals, they empathize with the horrors of Pi’s plight and celebrate his successes.
Navigation, Sea-keeping, Naval Science “Father said, ‘We’ll sail like Columbus’” (Martel 88). “The stars meant nothing to me My family lived by one star alone: the sun” (Martel 193).	Shipwrecks, celestial navigation, practical seamanship, lifeboat design, buoyancy calculations, supertanker bow waves, and the array of survival equipment all pose questions.	Young Pi, who has never been to sea, makes observations and discoveries that his predecessor mariners, boat builders, and engineers have documented over centuries. Building a simulated lifeboat to Pi’s exact dimensions using desks, string, a tarpaulin, and students as animal occupants is a great student-driven exercise, particularly in a competition (see discussion above and Figure 2).
History, Political Science, Globalism “Mrs. Gandhi’s dictatorial takeover . . . broke Father’s back” (Martel 78).	The text is global—Pondicherry to Portugal, Bombay to Tomatlan. The politics of French-occupied India, Mrs. Gandhi’s policies, immigration to Canada, and international ship ownership represent possible student project topics.	Mrs. Gandhi’s policies are so repressive to Pi’s parents that they decide to leave India. Students gain appreciation for this important historical figure. Some students consider the export and import of zoo animals, noting how little regulation there is compared to migrating humans. Supertankers in the global economy form a powerful presentation for students interested in business or economics. One student’s research indicated that there has never been a zoo in Pondicherry.

continued

TABLE 1. Catalogue of Cross-Curricular Opportunities (*continued*)

TOPIC CATEGORY	POSSIBLE TOPICS FOR STUDENTS	SYNOPSIS OF SELECTED PRESENTATIONS
<p>Geography: India, Mexico, Canada, Japan, USA, France There are "nit-picking bureaucrats from Pondicherry to Minneapolis" (Martel 89).</p>	<p>Maps of Pi's journey, shipping routes, prevailing currents (e.g., west to east), locations of animals in the wild, and climate comparisons can be considered.</p>	<p>Students produce a variety of maps demonstrating how the novel fits together. The ship sinks "midway to Midway" and the lifeboat's path as it drifts east (and not west) presents an unexpected outcome. Animal habitats (e.g., locations of tigers in the wild), fish species locations (Pi's food supply), ecosystems, and great circle routes attract students interested in geography.</p>
<p>Meteorology, Oceanography "There were many seas. The sea roared like a tiger. The sea whispered in your ear . . . [it] clinked like small change in a pocket; thundered like avalanches; was dead silent" (Martel 215).</p>	<p>Following the shipwreck, Pi makes many observations about the weather. His religious rituals are linked to the natural patterns. Weather in the equatorial Pacific, the sun, moon, and stars, and the prevailing Pacific currents all provide research opportunities.</p>	<p>Excerpts from the movie version of <i>Pi</i> and others such as <i>The Perfect Storm</i> or <i>Castaway</i> demonstrate the horrors (and beautiful nature) of storms. Echoes of <i>Robinson Crusoe</i> pitting man against nature offer comparisons to Pi's trials. Pi's religious thinking is linked to these natural phenomena, just as many religious and mythological constructs are similarly linked to natural phenomena such as the sun and moon.</p>
<p>Psychology, Physiology "One terror at a time, Pacific before tiger" (Martel 107).</p>	<ul style="list-style-type: none"> • Dehydration • Starvation • Seasickness • Psychosis • Grief • Fear and despair • Pain and suffering • Alter-egos (the tiger) 	<p>Pi's 227 days at sea yield many opportunities to assess and diagnose his symptoms including dehydration. Pi's grief over the death of his parents and brother, his decisions to continue attempts at survival, his prioritization of fear (tiger versus ocean), his discoveries and victories—all reveal psychological and physiological lessons. Students taking advanced biology, nursing, emergency healthcare, or psychology courses present findings in context.</p>
<p>Business and Commerce "[R]unning a zoo is a hotelkeeper's worst nightmare" (Martel 13).</p>	<ul style="list-style-type: none"> • Zoo management • Hotel management • Merchant shipping • Oil commerce • Restaurants • Boat construction • International trade • Ship ownership and registration 	<p>Business and commerce are not part of Pi's deeper set of observations and analysis but form a framework for the novel. Pi notes details of zoo operations and comments on his father's business managing a hotel. Comparing and contrasting the two businesses lead to useful character analysis. Shipping plays a crucial role in the plot. When a tanker passes Pi's lifeboat, the ship speeds by without stopping. Students consider why and how this could happen.</p>
<p>Literature</p>	<p>Poe, William Blake (see Tiger below), Melville (Atwood), Shakespeare, Defoe (Atwood; Innes; Wood), Swift (Atwood; Innes), Eliot, Coleridge, Hopkins (Cobb), Shelley (Atwood; Cobb), Byron (Cobb), Crane (Cobb), Stephenson (Cobb), Homer, Hemingway, Becket (King), Nabokov (Mishra), Bunyan (Boyagoda), <i>Aesop's Fables</i> (Boyagoda), Rushdie (Boyagoda)</p>	<p>Good research is available to aid students in providing linkages and interpretation; however, many of Martel's hidden puzzles are probably yet to be solved. Imagery, symbols, comedy, marine biology, seamanship, animals, and even naval science terms appear to be drawn from <i>Moby Dick</i> (more than 50 references). Some students attempt parallel readings (e.g., "The Open Boat," <i>The Old Man and the Sea</i>).</p>
<p>Tigers "Prusten is the quietest of tiger calls" (Martel 163–64).</p>	<ul style="list-style-type: none"> • Blake's "The Tyger" • Tigers as a universal symbol (China, Korea, India, Western countries) • Tigers in literature • Tigers in sports • Tigers in the wild, habitats, behaviors • International conferences on saving the tiger 	<p>William Blake's poem "The Tyger," with its religious questioning and Blake's accompanying tiger engraving, forms a powerful novel companion. Richard Parker, Pi's alter ego, becomes a complex multifaceted symbol. Students performing tiger research find unexpected global appreciation spanning hundreds of years. Shakespearean tiger references occur 30 times in 19 plays (Padel). Several recent books and many websites are devoted to the tiger's beauty, mystique, and endangered status.</p>

religion, mathematics, and the symbolic nature of the novel merge.

Martel's artistry and literary themes extend student discoveries in math and science. The Japanese merchant ship *Tsimtsum*, in which Pi's family and zoo animals embark, sinks "midway to Midway" in the vast circular Pacific's deepest point (Martel 101). Pi's supplications to his god(s) pour forth. Martel fills his text with dozens of spiraling circular metaphors with Pi (π) at the center.

Animals

The student project list includes more than a hundred animals that make star or cameo novel appearances. Exploring individual animals in the context of biology, zoology, oceanography, marine science, and ecology, for example, presents rich cross-cutting opportunities. Students are tasked to consult with their biology teachers for connectivity to their ongoing science curriculum. (An upcoming unit demonstration we have planned involves fish dissection to illustrate the physical difficulties Pi faced in killing and eating raw fish.) Pi's vegetarian lifestyle turned this survival necessity into a painful moral decision. "I was now a killer. I was now as guilty as Cain" (Martel 183).

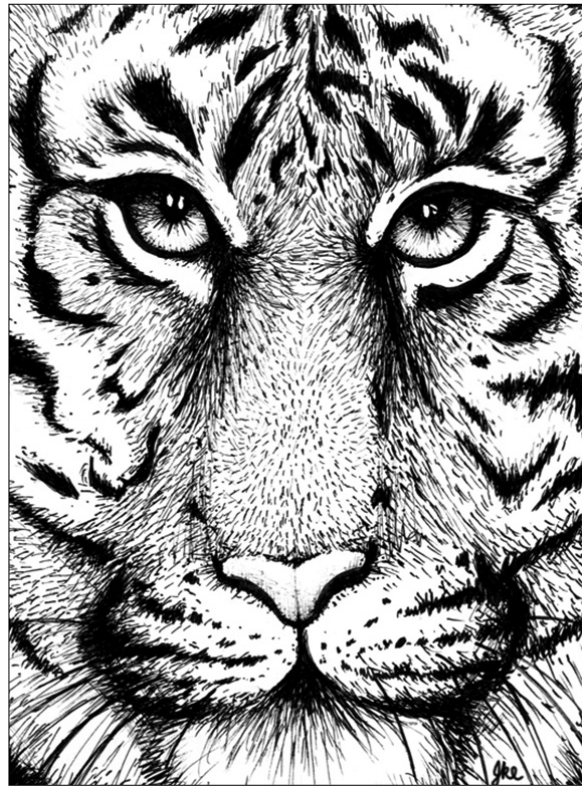
Mythological, religious, philosophical, historical, or sociological frameworks used to consider this same "ark" of animals yield different student perspectives. Richard Parker, the 450-pound Bengal tiger, for example, becomes a symbol for survival, deity, and respect for life's values.

Other Critical Perspectives

Other exploration opportunities through lenses including history, science, mathematics (π was just one example), art (see Figure 1), cinematography, and business abound. Meteorology, oceanography, astronomy, ecology, physiology, naval science, and various forms of engineering are important underpinnings to Pi's adventures.

Students interested in psychology explore Pi's motivations and state of mind when the necessities of life suddenly disappear. The shipwreck results in Pi's lifeboat entrapment in company with Richard Parker and several other terrified animals. ("[O]ne terror at a time," Pi's aphorism suggests, "Pacific

FIGURE 1. Student artist Jordan Engebret's rendition of Richard Parker, the 450-pound Bengal tiger in *Life of Pi*.



before tiger" [Martel 107]). Students interested in medicine observe Pi in extremis but coping with physical challenges including exposure, malnourishment, and dehydration, ultimately causing depression, despair, and surreal hallucinations.

Globalism and nationalism, particularly as they relate to India, Canada, Mexico, Japan, and the United States, are demonstrated with student-generated case studies. Business, commerce, capitalism, political science, and their intersections with governments and diverse societies are topics that push the narrative forward for some students. Indra

Gandhi's regime, for example, causes Pi's family to forsake their zoo in the French section of India, Pondicherry, and migrate to Canada. Considering how politics affects lives produces lively discussion.

The novel is paradise for literature students. As noted, Melville makes an immediate appearance.

Martel's artistry and literary themes extend student discoveries in math and science.

The Gospels, Poe, Blake, Defoe, Eliot, Swift, Coleridge, Hopkins, Shelley, Byron, Crane, Homer, Shakespeare, and others make contributions. Poe's *The Narrative of Arthur Gordon Pym* and its brutal, bloodthirsty story aboard the American brig, *Grampus*, includes a character named Richard Parker (Pi's tiger companion) who is involved in a cannibalism incident while adrift at sea. Pym's trusty dog is named Tiger (Poe 1003). Short examples from Poe's text juxtaposed with *Pi* create a set of allusions for student consideration.

Even students not intrigued by literature or even reading find connection points in *Life of Pi*. Teacher testimony concerning disciplines beyond English departments magnifies these connections—not just with Pi. Students can be persuaded to examine life in the same way that Mr. Kumar, Pi's teacher, takes stock of the zoo. Kumar takes "the pulse of the universe, and his stethoscopic mind always confirmed to him that everything was in order, that everything *was* order" (Martel 26). Students may see in Pi an example of one who, having expressed serious doubts about gods and belief systems, then comes to embrace many gods and religions out of appreciation and respect for the underlying theme of love for all.

Included below are a few anecdotes to illustrate student involvement in applying cross-curricular perspective.


An environmentally conscious student who spends his summers surfing and plans to study earth science in college gave the class an impas-

sioned presentation on tropical storm formation. Using animated graphics, he demonstrated the genesis and massive power of typhoons. His stories illuminated meteorology while garnering empathy for Pi, lost at sea, at nature's mercy.

A nursing student presented the class with a comprehensive portrayal of dehydration. The physiological and psychological breakdown of the body accompanied by passages from *Pi* showed Martel's care in presenting the medical realities of "water, water every where, nor any drop to drink" (Coleridge). Her clinical presentation demonstrated her own passion for treating patients as she explained how Pi's body was healed. Because she had treated dehydrated patients, her perspective was as captivating as it was credible.

An AP calculus student demonstrated derivations of π , its history, and the implications of its calculation using super computers. She noted, for example, that π has been calculated to more than a billion places. A few brief repetitions or patterns in the decimal expansion occur, but not until the hundred-millionth place. She pointed to Martel's many quotations describing life in the center of multiple circles, the everlasting calculus of life. Pi's life shows the intricate interlocking of mathematical, natural, philosophical, and religious mysteries and riddles.

A student with a dance background researched the Kathakali Dance, an Indian folk dance tradition (Martel 152). Tigers are compared to these dancers. The student explained the history, color symbolism, music, costumes, and cultural implications. She performed a sample dance for the class.

Just as Ishmael expects a "bamboozling story," many might be suspicious of Martel's wild adventure tale. A tale of a tiger and a teen Indian boy stranded on a lifeboat mid-Pacific sounds bizarre. However, *Life of Pi* presents a rich instructional opportunity for today's high school curriculum as educators pursue differentiated learning across a diversified population. 

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FIGURE 2. Students construct their own lifeboat using the specifications provided in *Life of Pi*.



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READWRITETHINK CONNECTION

Lisa Storm Fink, RWT

In the article students learn about all aspects of *Life of Pi*. In the ReadWriteThink.org lesson plan "Gaining Background for the Graphic Novel *Persepolis: A WebQuest on Iran*," students work in small groups to research a specific topic related to Iran, using a WebQuest to focus their research on relevant and reliable information. After the research is complete, students present their information to the class through a technology-enhanced presentation. This helps students to gain background information on Iran to appreciate more fully the experiences of Marjane, the main character of *Persepolis*. <http://www.readwritethink.org/classroom-resources/lesson-plans/gaining-background-graphic-novel-1063.html>

Kate and Paul Farmer Awards

The Kate and Paul Farmer Awards are given to authors of the best articles published in *English Journal* during the previous volume year. Eligible entrants must be high school teachers. Winners of the 2013 awards are **Michael Thier**, for "Cultural Awareness Logs: A Method for Increasing International-Mindedness among High School and Middle School Students" (July 2013, Vol. 102.6), and **Chris Gilbert**, for "Changing the Lens: The Necessity of Visual Literacy in the ELA Classroom," (March 2013, Vol. 102.4).

Honorable Mentions were awarded to **Steffany Comfort Maher** for "Using *To Kill a Mockingbird* as a Conduit for Teaching about the School-to-Prison Pipeline," (March 2013, Vol. 102.4) and **Jim Burke** for "Generating Minds," (July 2013, Vol. 102.6).

Awards were presented at the NCTE Annual Convention during the Secondary Section Luncheon on Saturday, November 23, 2013. The Hopkins award was not given in 2013.