

Our School Mascot: Fort Hayes Red Tails

In 1988, the Fort Hayes Alternative Arts High School welcomed its first group of students on surplus grounds of a Civil War-era U.S. Army post. The school's founders had a unique vision for the time: *Create a school where the arts, academics and career programs would be blended, where challenging and collaborative learning would occur and where diversity in all students would be embraced.* By the time our first cohort of students graduated, the Fort Hayes Alternative Arts High School had a little over 200 students enrolled and was just establishing itself as a small but vibrant program tucked away among the derelict buildings of an old, nearly-forgotten army post.

Over the years, our school has grown into the Fort Hayes Metropolitan Education Center, encompassing a career center, an arts-focused middle school and a world-class college preparatory high school. Students come here, study and specialize in the visual and performing arts, prepare for college and grow into promising young scholars, the whole time immersed in these grounds' long and consequential history.

The Tuskegee Airmen were soldiers assigned to a segregated Army Air Corps program set up to train African American soldiers to fly and maintain combat aircraft in World War II. Air Corps officials built a facility at Tuskegee Army Air Field in Alabama and flight training took place at the Tuskegee Institute. When the pilots painted the tails of their fighter planes red, the distinctive look earned them the nickname "Red Tails."

When Fort Hayes Arts & Academic High School was founded we were given, perhaps appropriately, the "Eagles" as a mascot. But, given our unique history as an historical military post, our long history of service to the African American community, and the fact that we currently have at least one family of red-tailed hawks that call our grounds home, we felt a perhaps more appropriate mascot would be the "Red Tails".

In the Fall of 2019, we commemorated our new mascot by inviting a living member of the Tuskegee Airmen to attend a school-wide ceremony. Corporal Don Elder and his wife, along with members of the Tuskegee Airmen Memorial Chapter (Central Ohio) and a number of other distinguished veterans graciously attended the ceremony.

In the weeks and months to come, keep an eye out for Fort Hayes Red Tails insignia, for this as well as our school crest represent a distinguished history as well as a promising future.



The Story of the Tuskegee Airmen, a.k.a. the “Red Tails”



Prior to World War II, the situation for African-American aviators was even more grim than soldiers and sailors in the other branches of the armed forces. The Army Air Corps had completely barred blacks from their ranks while the other branches limited roles assigned to black servicemen to cooks and supply. The basis for this decision was an Army War College report called “The Use of Negro Manpower in War,” which stated that blacks were unfit for combat duty.

Civil rights organizations and the black press, combined with congressional legislation, successfully fought this policy, resulting in the formation of the 99th Air Pursuit Squadron based at the Tuskegee Institute, Alabama, in June 1941. History would know this squadron as the Tuskegee Airmen.

The first class of pilots to go through flight school had 12 cadets and one officer, Capt. Benjamin O. Davis Jr. They earned their wings in March of 1942 at the segregated Tuskegee Army Air Field, becoming the nation’s first black military pilots. Despite this, the unit had to wait to receive combat orders.



During its training, the 99th Squadron was commanded by white officers, and maintained a policy of racial segregation; a policy the airmen resented. Later that year, they petitioned Washington to allow the Tuskegee Airmen to serve in combat.

In response, a hearing was convened before the House Armed Services Committee to determine whether the Tuskegee Airmen "experiment" should be allowed to continue. The committee accused the Airmen of being incompetent based on the fact that they had not seen any combat. The majority of the Committee decided in the Airmen's favor, and the 99th Pursuit Squadron soon joined two new squadrons out of Tuskegee to form the all-black 332nd Fighter Group

After months of delays by the War Department, Tuskegee Airmen were sent to Europe to fight, where, under Davis’ command, they flew 1,578 combat and bomber escort missions, destroyed or damaged 400 enemy aircraft, sank an enemy destroyer and destroyed numerous enemy installations.

American bomber crews nicknamed the Airmen the “Red Tails” after the red markings painted on the rear of the unit’s fighter planes.



One of their more famous missions occurred on March 24, 1945. Escorting a group of B-17 bombers on a 1,600-mile mission to attack a tank assembly plant near Berlin, Germany. In addition to protecting the bombers, the Red Tails shot down three brand new German jet fighters and provided Army Intelligence with valuable tactical information on the aircraft.

As a result, the Red Tail Squadron was awarded a Distinguished Unit Citation.

By 1945, 992 pilots had trained at Tuskegee Airfield; 335 would be deployed, 66 were killed in action and 32 were shot down and became prisoners of war. They received numerous awards, including 96 Distinguished Flying Crosses, several Silver Stars, eight Purple Hearts, 14 Bronze Stars, 744 Air Medals, the Croix de Guerre and the Red Star of Yugoslavia. The Red Tails received two Distinguished Unit Citations. Davis, who in 1936 was the first African American to graduate from West Point Military Academy, would later retire as an Air Force lieutenant general and the nation’s second African American general officer.



Far from failing as originally expected, the personal drive of those who flew for the Red Tails had resulted in some of the best pilots in the U.S. Army Air Corps. Nevertheless, the Tuskegee Airmen continued face racism. Their combat record did much to quiet those directly involved with the group (notably bomber crews who often requested them for escort), but other units continued to dismiss the Red Tails.

All of these events appear to have simply stiffened the Airmen's resolve to prove

themselves. After the war, the Tuskegee Airmen once again found themselves isolated. In 1949, the 332nd entered the yearly gunnery competition and won. After segregation in the military was ended in 1948 by President Harry S. Truman with Executive Order 9981, the Tuskegee Airmen found themselves in high demand throughout the newly formed United States Air Force.

On March 29th 2007, the Tuskegee Airmen were collectively awarded a Congressional Gold Medal at a ceremony in the U.S. Capitol rotunda. The medal is currently on display at the Smithsonian Institution.

The airfield where the airmen trained is now the Tuskegee Airmen National Historic Site.

The Red-Tailed Hawk

Buteo jamaicensis

Type: Bird of Prey/Raptor

Diet: Carnivore

Average life span in the wild: 21 years

Size: Body, 18 to 26 in (45 to 65 cm); wingspan, 38 to 43 in (1.1 to 1.3 m)

Weight: 24.3 to 51.5 oz. (690 to 1,460 g)



This is the most widespread and familiar large hawk in North America. Red-tailed hawks are bulky and broad-winged and designed for effortless soaring. Wide variations in color and pattern can be found in different regions of North and Central America, but all adult red-tailed hawks have the copper-colored tail that gives them their common name. From nearly white to black, these raptors range from Alaska to Panama and from California to the West Indies.

Red-tailed hawks tend to keep the same territory their whole life; it can be as large as 9.6 square miles (25 square kilometers). The birds defend their area with aerial displays of steep dives and climbs, the mated pair gliding together.

Keen-eyed and efficient hunters, these birds are very adaptable and have widely embraced human habitats. They are commonly seen perched on light poles or circling slowly over open fields, looking for prey such as mice, ground squirrels or rabbits.

Red-tailed hawks, like all raptors, have excellent vision. They can see colors, like most humans can, as well as those in the ultraviolet range. This means that the hawks can perceive colors that humans cannot see. Red-tailed hawks are diurnal hunters but see black and white well enough to also hunt at dusk, the time when nocturnal wildlife, especially rodents, begin to awaken and move around.

They often soar in high circles and have a distinctive shrill cry. Their nesting sites are variable, usually in tall trees, on cliff ledges, or on towers or ledges on buildings. Their nests usually consist of a bulky bowl of sticks, lined with finer materials.

Juvenile red-tailed hawks, no matter where they live, do not have red tails. In fact, the youngsters are a much lighter color than their parents, but their feathers change color gradually over several molts.

The Red-tailed Hawk has a thrilling, raspy scream that sounds exactly like a raptor should. At least, that's what Hollywood directors seem to think. Whenever a hawk or eagle appears onscreen, no matter what species, the shrill cry on the soundtrack is almost always a Red-tailed Hawk.

Source: National Geographic, San Diego Zoo

Name: _____ Social Studies Teacher: _____

**Fort Hayes Arts & Academic High School 2024-25
9th Grade World History/Humanities (Adams, Reed, Merry)
Summer Assignment Worksheet**

Welcome to the 2024-2025 school year at Fort Hayes Arts & Academic High School. Read the attached articles (“Our School Mascot: The Fort Hayes Red Tails,” “The Story of the Tuskegee Airmen, a.k.a. the ‘Red Tails’” and “The Red-Tailed Hawk”) and answer the questions below. *This assignment will be DUE the first week of school.*

1. In what year was Fort Hayes Alternative Arts High School founded?
2. What was the school founders’ “unique vision” for the school?
3. What three schools make up the Fort Hayes Metropolitan Education Center?
4. Who were the Tuskegee Airmen?
5. Why were they called the “Red Tails?”
6. What was Fort Hayes’ *original* mascot?
7. What reasons are given for changing our mascot to the Red Tails?

8. List three interesting or extraordinary facts from the Tuskegee Airmen article:

1)

2)

3)

9. List three interesting or extraordinary facts from the “Red Tailed Hawk” article:

1)

2)

3)

10. How does knowing some of the important history of Fort Hayes affect your feelings about coming here?

11. Have there been any members of your family who came here, either as a soldier or a student?

12. As a Fort Hayes student, list 3 goals you have for yourself:

1)

2)

3)



**9th Grade World History/Humanities
(Adams, Reed, Merry)**

Fort Hayes Arts & Academic High School 2024-25
10th Grade American History (Adams, East)
Summer Assignment Reading

Odyssey of the 166th Infantry
By Cyrus Moore III, Ohio World War I Centennial Committee
June 25, 2019

America Enters World War I

At the outbreak of fighting in 1914, the United States remained on the sidelines of World War I, adopting the policy of neutrality favored by President Woodrow Wilson while continuing to engage in commerce and shipping with European countries on both sides of the conflict.

Neutrality, however, was increasingly difficult to maintain in the face of Germany's unchecked submarine aggression against neutral ships, including those carrying passengers. In 1915, Germany declared the waters surrounding the British Isles to be a war zone, and German U-boats sunk several commercial and passenger vessels, including some U.S. ships.

Widespread protest over the sinking by U-boat of the British ocean liner *HMS Lusitania*—traveling from New York to Liverpool, England with hundreds of American passengers onboard—in May 1915 helped turn the tide of American public opinion in favor of war against Germany.

In early 1917, at the height of World War I and as the American Expeditionary Force was taking shape to go fight in Europe, Ohio contributed the 4th Infantry, Ohio National Guard, to the 42nd "Rainbow" Division. The division earned the nickname "Rainbow" early in its existence because it was comprised of National Guardsmen from states across the country, and stretched over the United States like a rainbow. Ohio's regiment became the 166th Infantry, made up of men from National Guard companies throughout the state and stationed at the **Columbus Barracks (later renamed Fort Hayes)**.

The 42nd Division landed in Europe in August of 1917, the first National Guard division to arrive in France, well-before most other U.S. divisions. It immediately began training in trench warfare. In 1918, the division served with the French and first saw combat when the Allies countered a German spring offensive. Until the Armistice, the 42nd fought in heavy action on the Western Front. When the armistice went into effect on November 11, 1918 effectively ending the fighting, the 166th Infantry was on Western Front. As a decorated combat division, the War Department gave the 42nd Rainbow Division the honor of being part of the Army of Occupation.

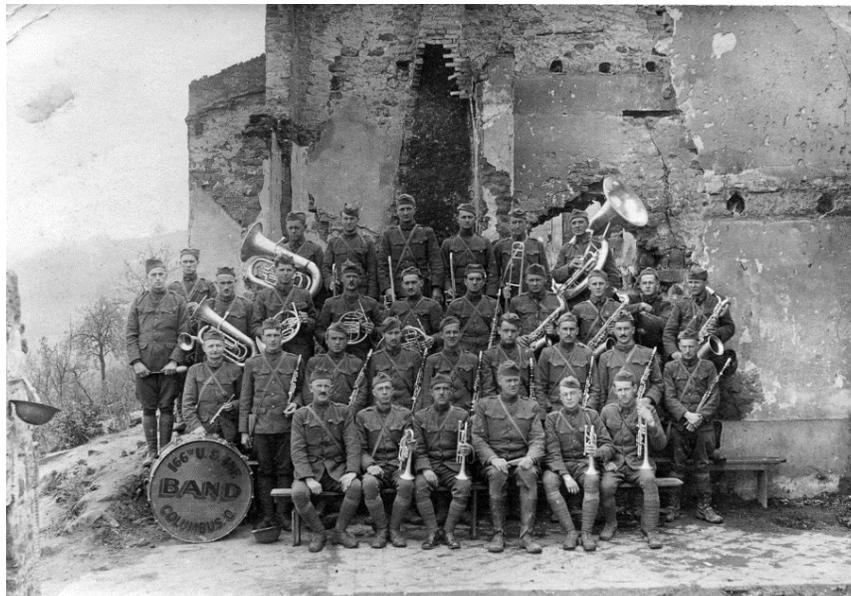


A group of officers of the 166th Infantry Regiment in France. Source: Ohio Memory.

On December 3, 1918, the 166th Regiment entered Germany territory for the first time. The 166th Infantry took up positions and the Ohioans assembled at Columbus Barracks spent four months, keeping a watch on the Rhine.

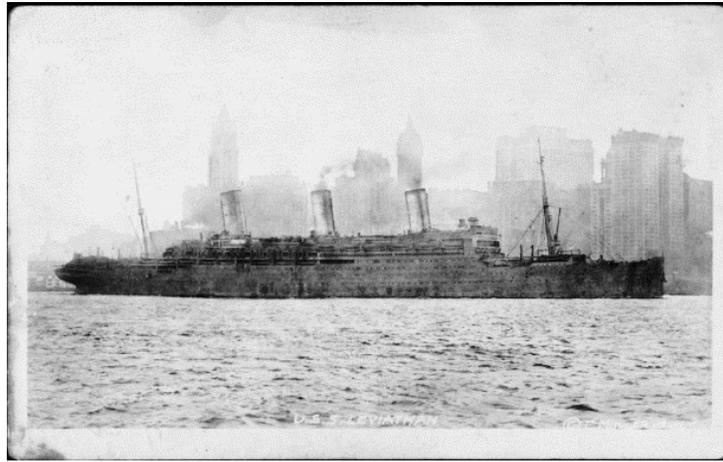
On April 6, 1919, two years after Congress declared war on Imperial Germany, and two months before the war would formally end with the Treaty of Versailles, the 42nd Rainbow Division began moving out of Germany. Shortly after receiving praise from the commander of the American Expeditionary Force General John “Blackjack” Pershing, the men received word that they would be going home.

Men were loaded onto trains and taken to a port in France to be sent home on ships. There was a delay, however, when the massive transport ship *Leviathan* needed to take on coal. Eager to get back to the states, the men volunteered to shovel the coal themselves. Encouraged by the regimental band and a burning desire to go home, hundreds of men loaded the fuel until by nightfall the ship was ready to go. On April 17, the *Leviathan* set sail.



166th Infantry Band in Europe. Source: Ohio Army National Guard Digital Collection

The *Leviathan* entered New York harbor on April 25, 1919. The soldiers of the 166th were almost home. A large crowd welcomed the ship, and Ohio Governor James M. Cox met the returning veterans. Saying goodbye to comrades from other states, the Ohioans boarded trains and on May 10 were back in Ohio. In Columbus a grand parade welcomed the men home. Their final stop was Camp Sherman, where they received their bonuses and honorable discharges. The 166th was the last Ohio National Guard unit to receive discharges, and had spent more time in Europe than any other unit from Ohio.



USS Leviathan in New York Harbor. Source: Ohio Memory



Company B, 166th Infantry Regiment, "just returned from France." Source: Ohio Army National Guard Digital Collection

Today, in front of the Shot Tower at Fort Hayes Arts and Academic High School is a field of ceramic poppies crafted and installed entirely by Fort Hayes students to honor the 1,700 men of the 166th Infantry Regiment. 260 of these poppies are white, representing those men who never came home.

Fort Hayes would continue to serve as a vital U.S. Army post in one form or another for many decades after World War I, with the last active units being reassigned to the Defense Service Center Columbus in 2008.

For a full account of the 166th Infantry Regiment during the war, see *Ohio in the Rainbow; Official Story of the 166th Infantry, 42nd Division, in the World War* by Raymond Minshall Cheseldine. (Columbus; The F.J. Heer printing co., 1924.)

WORLD WAR I

THE ONSET OF WAR

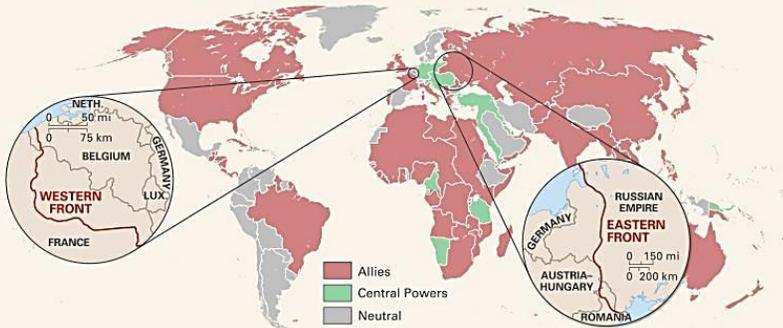
On June 28, 1914, Archduke Francis Ferdinand of Austria-Hungary was assassinated in Sarajevo by Gavrilo Princip, a Bosnian Serb nationalist.



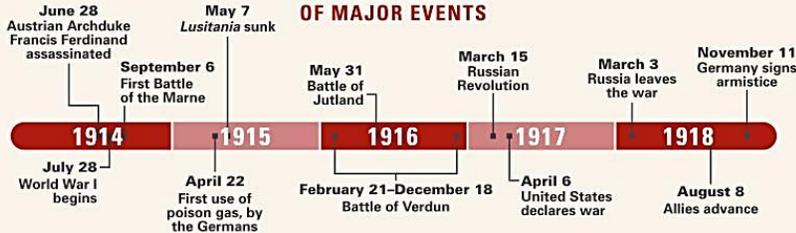
WAR FIRSTS

- chemical warfare
- gas masks
- flamethrowers
- steel helmets
- tank battles
- aerial warfare
- aircraft carrier
- IQ tests
- guide dogs
- a blood bank
- women enlisted
- filmed propaganda
- military use of X-rays
- wireless communication

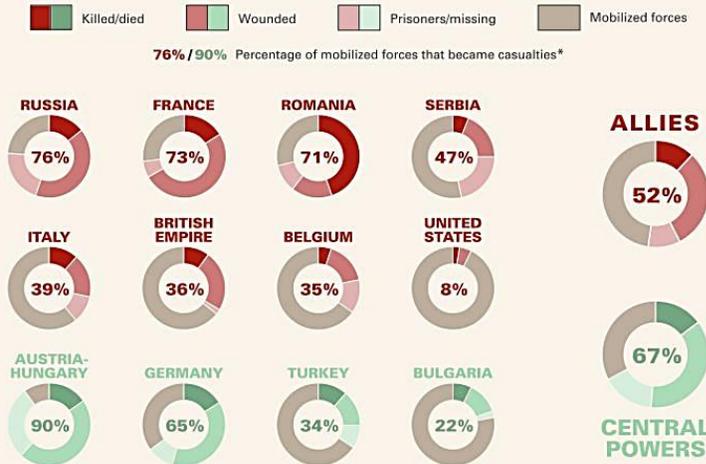
THE WAR TO END ALL WARS



TIMELINE OF MAJOR EVENTS



CASUALTIES OF MAJOR COUNTRIES INVOLVED



EUROPE IN 1914



EUROPE BEFORE/AFTER



Fort Hayes Arts & Academic High School 2024-25
10th Grade American History (Adams, East)
Summer Assignment Worksheet

Name: _____ Period: _____

Directions: After reading the brief article about Fort Hayes' involvement in WWI, answer the following questions.

10. Early on in World War I, the U.S. remained on the sidelines, adopting the policy of _____.
11. Why was this difficult for the U.S. to do?
12. The sinking of the _____ helped turn the tide of American public opinion in favor of war against Germany.
13. As part of the 42nd _____ Division, Ohio's regiment was the _____ Infantry, made up of men from National Guard companies throughout the state and stationed at the Columbus Barracks, which was later renamed _____.
14. When did the 166th Infantry enter the war?
15. What was the *Leviathan*?
16. True/False: The 166th infantry Ohio National Guard spent more time in Europe than any other unit from Ohio.
17. What is the significance of the ceramic poppy field in front of the Shot Tower?
18. Looking at the map (The War to End All Wars section), what country was the Western Front located in?
19. The timeline shows major events of WWI. On what date did the United States finally enter the war?

20. Who suffered more casualties in WWI, the Allied Powers or Central Powers? What countries suffered the most casualties for both?

21. Describe the map of Europe before and after the war? What happened to existing countries?

22. How does knowing some of the important history of Fort Hayes affect your feelings about coming here?

23. Have there been any members of your family who came here, either as a soldier or a student?

24. As a Fort Hayes student, list 3 goals you have for yourself:

1)

2)

3)

25. What is our school mascot?

The First Thanksgiving

by Nora Smith

Nearly four hundred years ago, a great many of the people in England were very unhappy because their king would not let them pray to God as they liked. The king said they must use the same prayers that he did; and if they would not do this, they were often thrown into prison, or perhaps driven away from home.

"Let us go away from this country," said the unhappy Englishmen to each other; and so they left their homes, and went far off to a country called Holland. It was about this time that they began to call themselves "Pilgrims." Pilgrims, you know, are people who are always traveling to find something they love, or to find a land where they can be happier; and these English men and women were journeying, they said, "from place to place, toward heaven, their dearest country."

In Holland, the Pilgrims were quiet and happy for a while, but they were very poor; and when the children began to grow up, they were not like English children, but talked Dutch, like the little ones of Holland, and some grew naughty and did not want to go to church any more.

"This will never do," said the Pilgrim fathers and mothers; so after much talking and thinking and writing they made up their minds to come here to America. They hired two vessels, called the Mayflower and the Speedwell, to take them across the sea; but the Speedwell was not a strong ship, and the captain had to take her home again before she had gone very far.

The Mayflower went back, too. Part of the Speedwell's passengers were given to her, and then she started alone across the great ocean.

There were one hundred people on board - mothers and fathers, brothers and sisters and little children. They were very crowded; it was cold and uncomfortable; the sea was rough, and pitched the Mayflower about, and they were two months sailing over the water.

The children cried many times on the journey, and wished they had never come on the tiresome ship that rocked them so hard, and would not let them keep still a minute.

But they had one pretty plaything to amuse them, for in the middle of the great ocean a Pilgrim baby was born, and they called him "Oceanus," for his birthplace. When the children grew so tired that they were cross and fretful, Oceanus' mother let them come and play with him, and that always brought smiles and happy faces back again.

At last the Mayflower came in sight of land; but if the children had been thinking of grass and flowers and birds, they must have been very much disappointed, for the month was cold November, and there was nothing to be seen but rocks and sand and hard bare ground.

Some of the Pilgrim fathers, with brave Captain Myles Standish at their head, went on shore to see if they could find any houses or white people. But they only saw some Indians, who ran away from them, and found some Indian huts and some corn buried in holes in the ground. They went to and fro from the ship three times, till by and by they found a pretty place to live, where there were "fields and little running brooks."

Then at last all the tired Pilgrims landed from the ship on a spot now called Plymouth Rock, and the first house was begun on Christmas Day. But when I tell you how sick they were and how much they suffered that first winter, you will be very sad and sorry for them. The weather was cold, the snow fell fast and

thick, the wind was icy, and the Pilgrim fathers had no one to help them cut down the trees and build their church and their houses.

The Pilgrim mothers helped all they could; but they were tired with the long journey, and cold, and hungry too, for no one had the right kind of food to eat, nor even enough of it.

First one was taken sick, and then another, till half of them were in bed at the same time, Brave Myles Standish and the other soldiers nursed them as well as they knew how; but before spring came half of the people died and had gone at last to "heaven, their dearest country."

But by and by the sun shone more brightly, the snow melted, the leaves began to grow, and sweet spring had come again.

Some friendly Indians had visited the Pilgrims during the spring, and Captain Myles Standish, with several of his men, had returned the visit.

One of the kind Indians was called Squanto, and he came to stay with the Pilgrims, and showed them how to plant their corn, and their peas and wheat and barley.

When the summer came and the days were long and bright, the Pilgrim children were very happy, and they thought Plymouth a lovely place indeed. All kinds of beautiful wild flowers grew at their doors, there were hundreds of birds and butterflies, and the great pine woods were always cool and shady when the sun was too bright.

When it was autumn the fathers gathered the barley and wheat and corn that they had planted and found that it had grown so well that they would have quite enough for the long winter that was coming.

"Let us thank God for it all," they said. "It is He who has made the sun shine and the rain fall and the corn grow." So they thanked God in their homes and in their little church; the fathers and the mothers and the children thanked Him.

"Then," said the Pilgrim mothers, "let us have a great Thanksgiving party, and invite the friendly Indians, and all rejoice together."

So they had the first Thanksgiving party, and a grand one it was! Four men went out shooting one whole day and brought back so many wild ducks and geese and great wild turkeys that there was enough for almost a week. There was deer meat also, of course, for there were plenty of fine deer in the forest. Then the Pilgrim mothers made the corn and wheat into bread and cakes, and they had fish and clams from the sea besides.

The friendly Indians all came with their chief Massasoit. Every one came that was invited, and more, I dare say, for there were ninety of them altogether.

They brought five deer with them, that they gave to the Pilgrims; and they must have liked the party very much, for they stayed three days.

Kind as the Indians were, you would have been very much frightened if you had seen them; and the baby Oceanus, who was a year old then, began to cry at first whenever they came near him.

They were dressed in deerskins, and some of them had the furry coat of a wild cat hanging on their arms. Their long black hair fell loose on their shoulders, and was trimmed with feathers or fox-tails. They had their faces painted in all kinds of strange ways, some with black stripes as broad as your finger all up

and down them. But whatever they wore, it was their very best, and they had put it on for the Thanksgiving party.

Each meal, before they ate anything, the Pilgrims and the Indians thanked God together for all his goodness. The Indians sang and danced in the evenings, and every day they ran races and played all kinds of games with the children.

Then sometimes the Pilgrims with their guns, and the Indians with their bows and arrows, would see who could shoot farthest and best. So they were glad and merry and thankful for three whole days.

The Pilgrim mothers and fathers had been sick and sad many times since they landed from the Mayflower; they had worked very hard, often had not had enough to eat, and were mournful indeed when their friends died and left them. But now they tried to forget all this, and think only of how good God had been to them; and so they all were happy together at the first Thanksgiving party.

All this happened nearly four hundred years ago, and ever since that time Thanksgiving has been kept in our country.

Every year our fathers and grandfathers and great-grandfathers have "rejoiced together" like the Pilgrims, and have had something to be thankful for each time.

Every year some father has told the story of the brave Pilgrims to his little sons and daughters, and has taught them to be very glad and proud that the Mayflower came sailing to our country so many years ago.

1491

By Charles C. Mann

On March 22, 1621, a Native American delegation walked through what is now southern New England to meet with a group of foreigners who had taken over a recently deserted Indian settlement. At the head of the party was an uneasy alliance: Massasoit, the *sachem* (political-military leader) of the Wampanoag confederation, a loose coalition of several dozen villages that controlled most of southeastern Massachusetts; Samoset, sachem of an allied group to the north; and Tisquantum, a distrusted captive, whom Massasoit had reluctantly brought along as an interpreter.

Massasoit was a skilled politician, but the dilemma he faced was dire and complex. About five years before, most of his people had fallen to a terrible outbreak of disease. Whole villages had been wiped out. It was all Massasoit could do to hold together the remnants of his people. Adding to his problems, the disaster had not touched the Wampanoag's longtime enemies, the Narragansett Indians to the west. Soon, Massasoit feared, they would take advantage of the Wampanoag's weaker numbers and overrun them. The only solution he could see was fraught with perils of its own because it involved foreigners—people from across the sea.

By 1621, Europeans had been visiting New England for at least a century. Shorter than the Natives, oddly dressed and often unbearably dirty, the pale-skinned foreigners had peculiar blue eyes that peeped out of bristly, animal-like hair that covered their faces. They were irritatingly talkative, prone to lying and deceit and often surprisingly incompetent at what seemed to Indians like basic tasks. But they also made useful and beautiful goods—copper kettles, glittering colored glass and steel knives and hatchets—unlike anything else the Native Americans had ever seen. Moreover, they would exchange these valuable items for the cheap furs that the Indians used as blankets.

Over time, the Wampanoag, like other Native societies in coastal New England, had learned how to manage the European presence. They encouraged the exchange of goods, but would allow their visitors to stay only for brief, carefully controlled visits. Those who overstayed their welcome were forcefully reminded of the limits of Indian hospitality and directed back to their ships. At the same time, the Wampanoag fended off Indians from the interior, preventing them from trading directly with the foreigners. In this way the shoreline groups had put themselves in the position of classic middlemen, overseeing both European access to Indian products and Indian access to European products. Now, because he had to, Massasoit had decided to permit the newcomers to *stay* for an unlimited time—provided they formed a military alliance with the Wampanoag against the Narragansett.

Tisquantum, the interpreter, had turned up at Massasoit's home a year and a half before. He spoke fluent English because he had lived for several years in Britain. Because of this, Massasoit worried that in a crisis Tisquantum might side with the foreigners. He had been keeping Tisquantum in a kind of captivity since his arrival, monitoring his actions closely. And he refused to use him to negotiate with the colonists until he had a more trustworthy method of communicating with them.

Samoset had arrived a few weeks before, at the request of Massasoit. Because Samoset spoke a little English, Massasoit had first sent him, not Tisquantum, to meet with the foreigners. On March 17, 1621, Samoset walked unaccompanied and unarmed into the circle of rude huts in which the British were living. The colonists saw a robust, tall and healthy man wearing only a loincloth; his straight black hair was shaved in front but flowed down his shoulders behind. To their amazement, this almost naked man greeted them in broken but understandable English. He left the next morning with a few presents,

returning a day later with five “talle proper men” with three-inch black stripes painted down the middle of their faces. The two groups talked, each checking out the other, for a few hours.

Now, on the 22nd, with Massasoit and the rest of the Indian company hidden from view, Samoset walked into the foreigners’ ramshackle base. They spoke with the colonists for about an hour. Growing impatient, Massasoit and the rest of the Indian party suddenly appeared at the crest of a nearby hill, on the banks of a stream. Alarmed, the Europeans withdrew to a hill on the other side of the stream, where they had placed their few cannons behind a half-finished stockade. A standoff ensued.

Finally, colonist Edward Winslow wearing a full suit of armor and carrying a sword, waded through the stream and offered himself as a hostage. Massasoit’s brother took charge of Winslow, and Massasoit crossed the water himself, followed by Tisquantum and 20 of Massasoit’s men, all unarmed. The colonists took the group to an unfinished house and gave them some cushions on which to sit. Both sides shared some of the foreigners’ homemade whiskey and settled down to talk, with Tisquantum translating.

Massasoit wore the same deerskin shawls and leggings as his fellows and, like them, had covered his face with bug-repelling oil and reddish-purple dye. Around his neck hung a pouch of tobacco, a long knife and a thick chain of the prized white shell beads called *wampum*. In appearance, Winslow wrote afterward, he was “a very lusty man, in his best years, an able body, grave of countenance, and spare of speech.” The Europeans, who had barely survived the previous winter, were in much worse shape. Half of the original colony had died of starvation and now lay underground beneath wooden markers painted with death’s heads; most of the survivors were malnourished.

The meeting between the Wampanoag and the English colonists marked a critical moment in American history.

“A FRIENDLY INDIAN”

The foreigners called their colony Plymouth; they were the famous Pilgrims. As schoolchildren learn, at that meeting the Pilgrims obtained the services of Tisquantum, more famously known as Squanto. In the 1970s, when I attended high school, a popular history text was *America: Its People and Values*. Nestled among colorful illustrations of colonial life was a succinct explanation of Tisquantum’s role:

“A friendly Indian named Squanto helped the colonists. He showed them how to plant corn and how to live on the edge of the wilderness. A soldier, Capt. Miles Standish, taught the Pilgrims how to defend themselves against unfriendly Indians.”

My teacher explained that maize was unfamiliar to the Pilgrims and that Squanto had demonstrated the proper way to plant it—sticking the seed in little heaps of dirt, accompanied by beans and squash that would later twine themselves up the tall stalks. And he told the Pilgrims to fertilize the soil by burying fish alongside the maize seeds. Following this advice, my teacher said, the colonists grew so much maize that it became the centerpiece of the first Thanksgiving.

The story in *America: Its People and Values* isn’t wrong, so far as it goes. But the impression it gives is entirely misleading in its simplicity.

Tisquantum *was* critical to the colony’s survival. He moved to Plymouth after the crucial meeting and spent the rest of his life there, during which time he indeed taught the Pilgrims agricultural methods, though some believe Tisquantum actually picked up the idea of fish fertilizer from European farmers, who had used the technique since medieval times. But *America: Its People and Values* never

explains why he so readily helped the people who had invaded his homeland. This lack of attention is typical of a larger failure to consider Indian motives, or even that Indians might have motives.

Much the same is true of the alliance Massasoit negotiated with Plymouth. From the Indian point of view, why did he do it? The alliance was successful from the Wampanoag perspective, for it helped to hold off the rival Narragansett. But it was a disaster from the point of view of New England Indian society as a whole because it ensured the survival of Plymouth Colony, which spearheaded the great wave of British immigration to New England, which in turn would lead to the end of Native Americans in the region. All of this was absent not only from my high-school textbooks.

This omission dates back to the Pilgrims themselves, who credited the lack of Native resistance to the will of God. "Divine providence," the colonist Daniel Gookin wrote, favored "the quiet and peaceable settlement of the English." Later writers tended to credit European success to European technology. In a contest where only one side had rifles and cannons, historians said, the other side's motives didn't really matter. By the end of the 19th century, the Indians of the Northeast were thought of merely as rapidly fading background details in the saga of the rise of the United States, "Marginal people who were losers in the end." But to accuse the Pilgrims of being greedy racists simplifies the issue too much. Whether the cause was the Pilgrim God, Pilgrim guns or Pilgrim greed, Indian defeat was seen as inevitable; Indians could not have stopped colonization, and in this view, they hardly tried.

SQUANTO

More than likely, Tisquantum was not the name he was given at birth. In that part of the Northeast, *tisquantum* referred to rage, especially the rage of *manitou*, the spiritual power at the heart of coastal Indians' religious beliefs. When Tisquantum approached the Pilgrims and identified himself by that name, it was as if he had stuck out his hand and said, "Hello, I'm the Wrath of God."

Nor did Tisquantum think of himself as an "Indian," any more than the inhabitants of the same area today would call themselves "Western Hemisphereans." As Tisquantum's later history would make clear, he regarded himself first and foremost as a citizen of Patuxet, one of the dozen or so villages in what is now eastern Massachusetts and Rhode Island that made up the Wampanoag confederation. The Wampanoag, in turn, were part of an alliance with the Nauset, which comprised some 30 groups on Cape Cod, and the Massachusett, several dozen villages clustered around Massachusetts Bay. All of these people spoke Massachusett, a member of the Algonquian language family, the biggest in eastern North America at the time. In Massachusett, the name for the New England shore was the Dawnland, the Place Where the Sun Rose. The inhabitants of the Dawnland were the People of the First Light.

Unlike the upland hunters, the Indians on the rivers and coastline did not roam the land; Each village had its own distinct mix of farming, fishing and hunting.

In the Wampanoag confederation, one of these communities was Patuxet, where Tisquantum was born at the end of the 16th century. Tucked into the great sweep of Cape Cod Bay, Patuxet sat on a low rise above a small harbor, filled with sandbars so shallow that children could walk from the beach hundreds of yards into the water before it reached their heads. To the west, maize hills marched across the sandy hillocks in parallel rows. Beyond the fields, a mile or more away from the sea, rose a forest of oak, chestnut and hickory, open and park-like, the underbrush kept down by expert annual burning. "Pleasant of air and prospect," as one English visitor described the area, Patuxet had "much plenty both of fish and fowl every day in the year." Runs of spawning Atlantic salmon, sturgeon, striped bass and American shad filled the harbor.

Tisquantum's childhood *wetu* (home) was formed from arched poles lashed together into a dome covered in winter by tightly woven rush mats and in summer by thin sheets of chestnut bark. A fire burned constantly in the center, the smoke venting through a hole in the roof. The *wetu*'s multiple layers of mats, which trapped insulating layers of air, were "warmer than our English houses," sighed the colonist William Wood. It was also less leaky than the typical English cottage. Wood did not conceal his admiration for the way Indian mats "deny entrance to any drop of rain, though it come both fierce and long."

Pilgrim writers universally reported that Wampanoag families were close and loving—more so than English families, some thought. Europeans in those days tended to view children as moving straight from infancy to young adulthood and work around the age of 9. Indian parents, by contrast, regarded the years before puberty as a time of playful development, and they kept their offspring close by until they married. Boys like Tisquantum explored the countryside, swam in the ponds at the south end of the harbor, and played a kind of soccer with a small leather ball; in summer and fall they camped out in huts in the fields, weeding the maize and chasing away birds. Archery began at age 2. By adolescence, boys would make a game of shooting at each other and dodging the arrows.

The primary goal of Dawnland education was molding character. Men and women were expected to be brave, hardy, honest and uncomplaining. Chatterboxes and gossips were frowned upon. "He that speaks seldom and opportunely, being as good as his word, is the only man they love," Wood reported. When Indian boys came of age, they spent an entire winter alone in the forest, equipped only with a bow, hatchet and knife. These methods worked to create tough and resourceful young men, Wood added. "Beat them, whip them, pinch them, punch them, if [the Indians] resolve not to flinch for it, they will not."

Tisquantum's childhood was probably even more rigorous than that of his friends, for it seems that he was selected to become a *pniese*, a kind of bodyguard to the sachem. To master the art of ignoring pain, prospective *pniese* had to subject themselves to such experiences as running barelegged through brambles. And they fasted often to learn self-discipline. After spending their winter in the woods, *pniese* candidates came back to an additional test: drinking bitter gentian juice until they vomited, repeating this process over and over.

Patuxet, like its neighboring settlements, was governed by a sachem who enforced laws, negotiated treaties, controlled foreign contacts, collected tribute, declared war, provided for widows and orphans, and allocated farmland. The Patuxet sachem was under to the great sachem in the Wampanoag village to the southwest, and through him to the sachems of the allied confederations of the Nauset in Cape Cod and the Massachusetts around Boston. Meanwhile, the Wampanoag were rivals and enemies of the Narragansett and Pequots to the west and the Abenaki to the north.

Sixteenth-century New England was home to 100,000 Native people or more, a figure that was slowly increasing at the time. Most of them lived in shoreline communities, where rising numbers were beginning to change agriculture from an option to a necessity. These larger settlements required more centralized administration; natural resources like good land and spawning streams, though not scarce, needed to be managed. In consequence, boundaries between groups were becoming more formal. In competition for land and resources groups pushed against each other harder and harder. Political tensions were constant.

Armed conflict was frequent but brief and mild by European standards. The cause was usually the desire to avenge an insult or gain status, not conquest. Most battles consisted of quick raids in the forest. Attackers slipped away as soon as retribution had been exacted. Losers quickly conceded their

loss of status. Women and children were rarely killed, though they were sometimes abducted and forced to join the victors. Captured men were often tortured. Now and then, as a sign of victory, slain foes were scalped, and in especially large clashes, adversaries might meet in the open, as in European battlefields, though the results, Roger Williams, founder of Rhode Island Colony, noted, were “farre less bloody, and devouring then the cruell Warres of Europe.”

Inside the settlement was a world of warmth, family and familiar custom. But the world outside was “a maze of confusing actions and individuals fighting to maintain an existence in the shadow of change.”

And that was before the Europeans showed up.

“BEAUTIFUL OF STATURE AND BUILD”

British fishing vessels may have reached the region as early as the 1480s and areas to the south soon after. In 1501, just nine years after Columbus’ first voyage, a Portuguese adventurer abducted more than 50 Indians from Maine. Examining the captives, he found to his astonishment that two were wearing items from Venice: a broken sword and two silver rings.

The earliest written description of the People of the First Light was by an Italian sailor commissioned by the king of France in 1523 to discover whether one could reach Asia by rounding the Americas to the north. Sailing north from the Carolinas, he observed that the coastline everywhere was “densely populated” and smoky with Indian bonfires and settlements. The ship anchored in Narragansett Bay, near what is now Providence, RI. He was one of the first Europeans the Natives had seen, perhaps even the first, but the Narragansett were not intimidated. Almost instantly, 20 long canoes surrounded the visitors. Cocky and graceful, the Narragansett sachem leapt aboard: a tall, long-haired man of about 40 with multicolored jewelry dangling about his neck and ears, “as beautiful of stature and build as I can possibly describe,” the sailor wrote.

His reaction was common. Time and time again Europeans described the People of the First Light as strikingly healthy specimens. Eating a nutritious diet, working hard but not broken by it, the people of New England were taller and healthier than those who arrived in dank and smelly ships, half-starved and malnourished.

Evidence suggests that Indians tended to view Europeans with disdain. Europeans, Indians told other Indians, were physically weak, sexually untrustworthy, atrociously ugly and just plain smelly. (The British and French, many of whom had not taken a bath in their entire lives, were amazed by the Indian interest in personal hygiene.) Indians were disgusted by handkerchiefs in particular: “They place what is unclean in a fine white piece of linen, and put it away in their pockets as something very precious, while we spit it upon the ground.”

For 15 days, the sailor and his crew were the Narragansett’s honored guests—though the Indians kept their women out of sight after hearing the sailors’ “irksome clamor” when females came into view. Much of the time was spent in friendly barter. To the Europeans’ confusion, their steel and cloth did not interest the Narragansett, who wanted to swap only for “little bells, blue crystals, and other trinkets to put in the ear or around the neck.” On his next stop, the Maine coast, the Abenaki *did* want steel and cloth—demanded them, in fact. The Indians denied the visitors permission to land; refusing even to touch the Europeans, they passed goods back and forth on a rope over the water. As soon as the crew members sent over the last items, the locals began “showing their buttocks and laughing.” Mooned by the Indians! The Europeans were baffled by this “barbarous” behavior, but the

reason for it seems clear: unlike the Narragansett, the Abenaki had experience in dealing with Europeans.

Throughout the 1500s, Europeans were regular visitors to the Dawnland, usually fishing, sometimes trading, occasionally kidnapping Natives as souvenirs. By 1610, one historian has estimated, Britain alone had about 200 vessels operating off New England; hundreds more came from France, Spain, Portugal and Italy. With striking uniformity, these travelers reported that New England was thickly settled and well defended. In 1605 and 1606, Samuel de Champlain visited Cape Cod, hoping to establish a French base. He abandoned the idea; Too many people already lived there. A year later, the British nobleman Ferdinando Gorges tried to found a community in Maine. It began with more people than the Pilgrims' later venture in Plymouth and was better organized and supplied. Nonetheless, the local Indians, numerous and well armed, killed 11 colonists and drove the rest back to their ships.

Tisquantum probably saw Champlain and other European visitors, but the first time Europeans are known to have affected his life was in the summer of 1614. A small ship hove to, sails a-flap. Out to meet the crew went the Patuxet. Almost certainly the sachem would have been with them; he would have been accompanied by his pniese, including Tisquantum. The strangers' leader was a sight beyond belief: a stocky man, even shorter than most foreigners, with a bushy red beard that covered so much of his face that he looked to Indian eyes more beast than human. This was Capt. John Smith of Pocahontas fame.

According to Smith, he had lived an adventurous and glamorous life. As a youth, he claimed, he had served as a privateer (pirate) and was captured and enslaved by the Turks. He escaped and awarded himself the rank of captain. Later he actually became captain of a ship and traveled to North America several times. On this occasion he had sailed to Maine with two ships, intending to hunt whales. The party spent two months at sea but failed to catch a single one. The fallback plan, Smith wrote later, was "Fish and Furs." He assigned most of the crew to catch and dry fish in one ship while he sailed up and down the coast with the other, bartering for furs.

Despite Smith's peculiar appearance, Tisquantum and his fellows apparently gave him a tour, during which he admired the gardens, orchards and maize fields, and the "great troupes of well-proportioned people" tending them. At some point a quarrel occurred and bows were drawn, Smith said, "fortie or fiftie" Patuxet surrounding him. His account is vague, but it seems likely that the Indians were hinting at a limit to his stay. In any case, the visit ended happily enough, and Smith returned to England. He had a map drawn of what he had seen, persuaded Prince Charles to look at it, and curried favor with him by asking him to award British names to all the Indian settlements. Then he put the maps in the books he wrote boasting of his adventures. In this way Patuxet acquired its English name, Plymouth, and the region became known as New England. Smith left his lieutenant, Thomas Hunt, behind in Maine to finish loading the other ship with dried fish.

Without consulting Smith, Hunt decided to visit Patuxet, and, once there, he invited some Indians to come aboard. The thought of a summer day on the foreigners' vessel must have been tempting. Several dozen villagers, Tisquantum among them, canoed to the ship. Without warning or pretext the sailors tried to shove them into the hold. The Indians fought back. Hunt's men swept the deck with small-arms fire, creating "a great slaughter." At gunpoint, Hunt forced 19 survivors, including Tisquantum, belowdecks, then sailed with them to Europe, stopping only once, at Cape Cod, where he kidnapped seven Nauset.

In Hunt's wake, the outraged sachems of the Wampanoag and Nauset confederacies vowed not to let foreigners rest on their shores again. Because of the "worthlesse" Hunt, another English explorer noted "a warre [was] now new begunne between the inhabitants of those parts, and us."

Despite European guns, the Indians' greater numbers, knowledge of the terrain and superb archery made them fearsome enemies. About two years after Hunt's kidnappings, a French ship wrecked at the tip of Cape Cod. Its crew built a rude shelter with a defensive wall made from poles. The Nauset, hidden outside, picked off the sailors one by one until only five were left. They captured the five and sent them inland. Another French vessel anchored in Boston Harbor at about the same time. The Massachusetts killed everyone aboard and set the ship on fire.

"GOD'S GOOD PROVIDENCE"

Upon leaving England, the Mayflower pilgrims had refused to hire the experienced John Smith as a guide, on the theory that they could simply use the maps in his book. In consequence, as Smith later crowed, the hapless Mayflower spent several weeks scouting Cape Cod for a good place to land, during which time many colonists became sick and died. Landfall at Patuxet did not end their problems. The colonists had intended to produce their own food, but had neglected to bring any cows, sheep, mules or horses. (They may have had pigs.) To be sure, the Pilgrims had intended to make most of their livelihood not by farming but by catching fish for export to Britain. But the only fishing gear the Pilgrims brought was useless in New England. Only half of the 102 people on the Mayflower made it through the first winter.

How did even that many survive? In his history of Plymouth Colony, Governor William Bradford himself provides one answer: robbing Indian houses and graves. The Mayflower landed first at Cape Cod. An armed company of Pilgrims staggered out. Eventually they found a deserted Indian habitation. The newcomers—hungry, cold, sick—dug open burial sites and ransacked homes, looking for underground stashes of food. After two days of nervous work, the company hauled ten bushels of maize back to the Mayflower, carrying much of the booty in a big metal kettle the men had also stolen. "And sure it was God's good providence that we found this corn," Winslow wrote, "for else we know not how we should have done."

The Pilgrims' lack of preparation was typical. Expeditions from France and Spain were usually backed by the state, and generally staffed by soldiers accustomed to hard living. English voyages, by contrast, were almost always funded by investors who hoped for a quick cash-out. Even when they focused on a warmer place like Virginia, they persistently selected as colonists people ignorant of farming; with the hope of fleeing religious persecution uppermost in their minds, the Pilgrims, alas, were an example. Multiplying the difficulties, the would-be colonizers were arriving in the middle of a severe, multiyear drought. Jamestown and the other Virginia forays survived on Indian charity—they were totally dependent on the kindness of Indians. The same held true for the adventurers in Plymouth.

Inexperienced in agriculture, the Pilgrims were also not woods people. Huddled in their half-built village that first terrible winter, the colonists rarely saw the area's inhabitants, except for the occasional shower of brass- or claw-tipped arrows. After February, glimpses and sightings became more frequent. Scared, the Pilgrims hauled five small cannons from the Mayflower and placed them on a hill facing inland. After all the anxiety, their first contact with Indians went surprisingly well. Within days Tisquantum came to settle among them. And then they heard his stories.

TISQUANTUM'S STORY

No record survives of Tisquantum's journey across the Atlantic, but Hunt, who had kidnapped Tisquantum and others, would have tied or chained and jammed the Indians into whatever dark corner of the ship was available. Presumably they were fed from the ship's cargo of dried fish. Smith took six weeks to cross the Atlantic to England. There is no reason to think Hunt went any faster. The only difference was that he took his ship to Málaga, on Spain's Mediterranean coast. There he intended to sell all of his cargo, including the human beings.

In fact, Hunt managed to sell only a few of his captives before local Roman Catholic priests seized the rest—the Spanish Church vehemently opposed brutality toward Indians. (In 1537 Pope Paul III had proclaimed that “Indians themselves indeed are true men” and should not be “deprived of their liberty” and “reduced to our service like brute animals.”) The priests intended to save both Tisquantum's body, by preventing his enslavement, and his soul, by converting him to Christianity, though it is unlikely they succeeded in that. In any case, Tisquantum convinced the Church to let him return home—or, rather, to try to return. He got to London, where he stayed with a shipbuilder with investments in New England. The shipbuilder apparently taught Tisquantum English while maintaining him as a curiosity in his home. Meanwhile, Tisquantum persuaded him to arrange for passage to North America on a fishing vessel. He ended up in a tiny British fishing camp on the southern edge of Newfoundland. It was on the same continent as Patuxet, but between them were a thousand miles of rocky coastline and the Micmac and Abenaki alliances, which were at war with one another.

Because traversing this unfriendly territory would be difficult, Tisquantum began looking for a ship to take him to Patuxet. Securing passage on another fishing vessel, he set out in May of 1619 for his home in Massachusetts.

THE EUROPEANS' SECRET WEAPON

What Tisquantum saw on his return stunned him. From southern Maine to Narragansett Bay, the coast was empty. What had once been a line of busy communities was now a mass of abandoned homes and untended fields overrun by blackberries. Scattered among the houses and fields were skeletons bleached by the sun. Gradually he realized he was sailing along the border of a cemetery 200 miles long and 40 miles deep. Patuxet had been hit with special force. Not a single person remained.

Looking for his kinsfolk, Tisquantum went marched inland. The settlements they passed were full of the untended dead. Finally, Tisquantum's party encountered some survivors, a handful of families in a shattered village. These people sent for Massasoit, who appeared with a captive French sailor, a survivor of the Cape Cod shipwreck. Massasoit told Tisquantum what had happened:

One of the shipwrecked French sailors had learned enough Massachusetts to inform his captors before dying that God would destroy them for their misdeeds. The Nauset scoffed at the threat. But the Europeans carried a disease, and they spread it to the Natives. Based on accounts of the symptoms, the epidemic was probably of viral hepatitis, likely spread by contaminated food. The Indians “died in heapes as they lay in their houses,” the merchant Thomas Morton observed. In their panic, the recently infected fled from the dying, unknowingly carrying the disease with them to neighboring communities. Behind them the dead were “left for crows to prey upon.” Beginning in 1616, the disease took at least three years to exhaust itself and killed up to 90 percent of the people in coastal New England.

Massasoit had directly ruled a community of several thousand people and held sway over a confederation of as many as 20,000. Now his group was reduced to 60 people and the entire confederation to fewer than a 1,000. Both the Indians and the Pilgrims believed that the sickness

reflected the will of divine forces. The Wampanoag came to the obvious conclusion: “their gods were punishing them.”

Similarly, The Pilgrim Governor Bradford is said to have attributed the plague to “the good hand of God,” which “favored our beginnings” by “sweeping away great multitudes of the natives. . . that he might make room for us.” Indeed, more than 50 of the first colonial villages in New England were located on Indian communities emptied by disease. The epidemic left the land “without any [people] to disturb or appease our free and peaceable possession thereof, from when we may justly conclude, that GOD made it so.”

The New England epidemic also created a political crisis. Because the hostility between the Wampanoag and their rivals, the Narragansett had kept them from contacting one another, the Narragansett were largely spared. Now Massasoit’s people were not only nearly wiped out, they were in danger of being taken over. After learning about the epidemic, the distraught Tisquantum was seized by Massasoit, perhaps because of his association with the hated Europeans.

Once again, Tisquantum tried to talk his way out of a jam, filling Massasoit’s ears with tales of the English, their cities and powerful technology. Tisquantum said, according to a colonist who knew him, that if Massasoit “Could make [the] English his Friends then [any] Enemies yet were to[o] strong for him”—in other words, the Narragansett—“would be Constrained to bow to him.” Massasoit demurred, apparently keeping Tisquantum in a kind of house arrest. Within a few months, word came that a party of English had settled at Patuxet. The Wampanoag observed them as they suffered through the first punishing winter. Eventually Massasoit concluded that he should ally with them—compared to the Narragansett, they were the lesser of two evils. Still, only when the need for a more skilled translator became unavoidable did he allow Tisquantum to meet the Pilgrims.

Massasoit told the Pilgrims that he was willing to leave them in peace (a bluff, one assumes, since driving them away would have taxed his limited resources). But in return he wanted the colonists’ assistance with the Narragansett. To the Pilgrims, Massasoit’s motive for the deal was obvious: the Indian leader wanted guns. “He thinks we may be [of] some strength to him,” Winslow said later, “for our [guns] are terrible to them.”

From today’s perspective, though, it seems likely that Massasoit had a subtler plan. He probably wanted more to confront the Narragansett with the unappetizing prospect of attacking one group of English people and stirring up greater trouble with the English. If this interpretation is correct, Massasoit was trying to incorporate the Pilgrims into the web of Native politics. Not long before, he had expelled foreigners who stayed too long in Wampanoag territory. But with the entire confederation now smaller than one of its former communities, the best option seemed to be to allow the Pilgrims to remain. It would turn out to be a drastic, even fatal, decision.

THE FIRST THANKSGIVING

Tisquantum worked hard to prove his value to the Pilgrims. He was so successful that when some anti-British Indians abducted him, the colonists sent out a military expedition to get him back. Never did the newcomers ask themselves why he might be making himself essential. But from the Pilgrims’ accounts of their dealings with him, the answer seems clear: the alternative to staying in Plymouth was returning to Massasoit and renewed captivity.

Recognizing that the colonists would be unlikely to keep him around forever, Tisquantum decided to gather together the few Native survivors of Patuxet and reconstitute the old community at a site near Plymouth. More ambitious still, he hoped to use his influence on the English to make this new

Patuxet the center of the Wampanoag confederation, thereby stripping the sachemship from Massasoit. To accomplish these goals, as Governor Bradford later recounted, he intended to play the Indians and English against each other.

The scheme was risky, not least because the ever-suspicious Massasoit had sent one of his pnie, Hobamok, to Plymouth as a monitor. Sometimes Hobamok and Tisquantum worked together, as when the pair helped the Pilgrims negotiate a treaty with the Massachusett to the north. They also helped establish a truce with the Nauset of Cape Cod after Governor Bradford agreed to pay back the losses caused by the colonists' earlier grave robbing.

By fall the settlers' situation was secure enough that they held a feast of thanksgiving. Massasoit showed up with "some ninety men," Winslow later recalled, most of them with weapons. The Pilgrim militia responded by marching around and firing their guns in the air in a manner intended to convey menace. Gratified, both sides sat down, ate a lot of food and complained about the Narragansett. *Ecce Thanksgiving.*

All the while, Bradford wrote, Tisquantum "sought his own ends and played his own game." Secretly he tried to persuade other Wampanoag that he could better protect them against the Narragansett than Massasoit. In case of attack, Tisquantum claimed, he could respond with as many Indian troops—plus the Pilgrims. To advance his case, Tisquantum told other Indians that the foreigners had "buried in the ground" a cache of the agent that had caused the epidemic and that he could manipulate them into unleashing it.

Even as Tisquantum attempted to sow the seeds of distrust of Massasoit among the Indians, he told the colonists that Massasoit was going to double-cross them by leading a joint attack with the Narragansett on Plymouth. Then he tried tricking the Pilgrims into attacking the sachem.

In the spring of 1622, Tisquantum went with a delegation of Pilgrims to the Massachusett in Boston Harbor. Minutes after they departed, according to Bradford, one of the surviving Patuxet "in seeming great fear" informed the settlers that the Narragansett and Massasoit were planning to attack. Apparently Tisquantum believed that the colonists, upon hearing this news, would rise up and kill Massasoit. Since Tisquantum was away, his hands would seem clean. Instead, everything went awry. Upon hearing the news of an impending attack, Bradford ordered the firing of a cannon to call back the delegation, including Tisquantum. Meanwhile Hobamok, who had acquired some English, indignantly denied the rumor. Then in a move that Tisquantum had not anticipated, Bradford sent Hobamok's wife to Massasoit's home to find out what he was up to. She reported that "all was quiet." When Massasoit found out about the plot, he demanded that the Pilgrims send Tisquantum to him for a quick execution.

Bradford refused; Tisquantum's language skills were too vital. "Tisquantum is one of my subjects," Massasoit said. "You Pilgrims have no jurisdiction over him." And he offered a load of furs to sweeten the deal. When the colony still would not surrender Tisquantum, Winslow wrote, Massasoit sent a messenger with a knife and told Bradford to lop off Tisquantum's hands and head. To make his displeasure even clearer, he summoned Hobamok home and cut off all contact with the Pilgrims. Nervous, the colonists began building defensive fortifications. Between mid-May and mid-July, their crops withered for lack of rain. Because the Wampanoag had stopped trading with them, the Pilgrims would not be able to supplement their harvest.

Now a marked man, Tisquantum was unable to take a step outside of Plymouth without an escort. Nonetheless, he accompanied Bradford on a trip to southeast Cape Cod to negotiate another pact. They were on the way home when Tisquantum suddenly became sick. He died after a few days. In

the next decade tens of thousands of Europeans came to Massachusetts. Massasoit shepherded his people through the wave of settlement, and the pact he signed with Plymouth lasted for more than 50 years. Only in 1675 did one of his sons, angered by the colonists' laws, launch what was perhaps an inevitable attack. Indians from dozens of groups joined in. The conflict, brutal and sad, tore through New England.

The Europeans won. Historians attribute part of the victory to Indian unwillingness to match the European tactic of massacring whole villages. Another reason was manpower—by then the colonists outnumbered the Natives. Groups like the Narragansett, which had been spared by the epidemic of 1616, had been crushed by a smallpox epidemic in 1633. A third to half of the remaining Indians in New England died of European diseases. The People of the First Light could avoid or adapt to European technology but not to European germs. Their societies were destroyed by weapons their opponents could not control and did not even know they possessed.

Fort Hayes Arts & Academic High School 2024-25
11th Grade American Government (Chopko)
Summer Assignment

Welcome to American Government 11, one of three social studies courses required for graduation. This assignment will give you a head start on the material you will need to know for many class assignments and for the Ohio EOY Assessment in the spring. You may type out your assignment or write it out neatly on loose-leaf paper. This assignment will be the first grade for the first nine-week and is due on the first day of school.

The 27 Amendments to the US Constitution. Our framework for government, the Constitution, has had 27 changes, or Amendments, since it was ratified in 1787. The first 10 of those Amendments were included at that time and are better known as the Bill of Rights. Use the internet to look up and read the 27 Amendments to complete this assignment.

Your assignment: Write out each of the 27 Amendments **in your own words**. Some are longer and contain several parts, but do your best to explain what each Amendment either protects or changes. Any copy-pasted answers will not be accepted for credit.

Fort Hayes Arts & Academic High School 2024-25

AP American Government and Politics (Chopko jchopko9844@columbus.k12.oh.us)

Summer Assignment

Welcome to Advanced Placement Government and Politics! The following assignment will begin your preparation for success in our class and on the AP Exam, which will be administered in May 2022. You may type or write neatly on loose-leaf notebook paper. This assignment will be the first grade for the first quarter. Please email me with any questions. Have a great summer!

The AP Exam requires that you are responsible for understanding *14 historic Supreme Court cases*. The Supreme Court is the highest court in our government and is the final word on important decisions that may affect the lives of millions of people.

Use the website oyez.org to complete a summary in your own words explaining the final rulings of the following Supreme Court cases:

Marbury v. Madison 1803

McCullough v. Maryland 1819

Schenck v. United States 1919

Brown v. Board of Education 1954

Baker v. Carr 1961

Engel v. Vitale 1962

Gideon v. Wainwright 1963

Tinker v. Des Moines Board of Education 1969

New York Times v. United States 1971

Wisconsin v. Yoder 1972

Shaw v. Reno 1993

United States v. Lopez 1995

Citizens United v. Federal Election Commission 2010

McDonald v. Chicago 2010

EXERCISE
2.1

THEME 1 | Lesson 2: The Economic Way of Thinking

NAME: _____ CLASS PERIOD: _____

A Mystery of Two Families

Part 1. The Mystery

The Robinson and Murray families are alike in several ways. They earn the same family income, live in the same neighborhood, are similar in age, and have two children each. Yet the Robinsons are much wealthier than the Murrays. Why is this?

The Robinsons spend time managing their money, and they spend less money than they earn. Mr. and Mrs. Robinson have saved \$250,000, which makes for a good start on their retirement fund. They also have established savings plans to help their children with college expenses. And the Robinsons are working to improve their capacity for future income. Mr. Robinson is taking evening courses to complete an advanced degree, and Mrs. Robinson is taking weekend seminars offered at no cost by her employer. Both are hoping for promotions at work.

The Murrays are always worried about money. While their house is worth the same amount of money as the Robinsons' house, the Murrays have a larger mortgage to pay off, so they pay more in interest than the Robinsons do. They drive newer cars than the Robinsons drive, and their credit-card balances keep increasing every month. They say they do not have enough time or money to improve their education. Although they could sell their house for more than they owe on their mortgage, they have no other savings. They hope their children will get scholarships to pay for college.

In short, the Robinsons are wealthier than the Murrays because they spend less than they earn and as a result they have more assets (for example, they have large balances in their savings accounts) and fewer liabilities (the Murrays have larger mortgage-interest payments, larger credit-card balances, larger auto loans, etc.). And the gap is likely to grow as time goes on, since the Robinsons are investing in their capacity for earning by improving their education, while the Murrays are not.

Part 2. An Approach to Solving the Mystery

For a better understanding of why the Robinsons are wealthier than the Murrays, despite the similarities between the two families, let's apply some basic points of economic reasoning. Our approach to economic reasoning, summarized in The Handy Dandy Guide, is based on six main ideas.

The Handy Dandy Guide

1. People choose.

This may seem obvious, but think for a minute about how many people say, in one situation or another, that they "have no choice." In fact, we ALWAYS have a choice—though sometimes, of course, the choices can be very difficult. The Robinsons choose to spend a few hours every week managing their money. They choose to set financial goals, to have a plan for their spending, to keep track of their expenses, and to adjust their spending if they go "over budget." Their goal is to save 10

percent of their income each month. They study ways to invest their savings, comparing rates of return and risks on different savings plans or other investments. The Murrays choose not to spend time managing their money. They don't communicate much about money within the family, making most spending decisions independently. And they choose not to set spending limits. They use their two credit cards frequently; without the credit cards they would find it very difficult to manage their day-to-day purchases. They do work hard at their jobs. When they are not working they enjoy relaxing or going out to dinner.

2. All choices involve costs.

Choices come with costs. Some costs are dollar costs. If you choose to buy a computer, you must pay the purchase price. But there is another kind of cost that also attaches to choices. It is called opportunity cost. For any choice you make, your opportunity cost is your next-best option: the next-best choice you could have made but did not make. For someone who buys a computer, the opportunity cost is the next-best use she could have made of the money spent on the computer. For someone who goes to a movie, the opportunity cost is the next-best use he could have made of the time and money he spent to go to the movie.

For the Robinsons, the opportunity cost of managing their money and furthering their education is having less time to relax, less time to go out to dinner, and so on. For the Murrays, the opportunity cost of relaxing and going out to dinner is that they are not managing their money or furthering their education.

Making good choices involves comparing the benefits and costs of decisions. The Robinsons are wealthier and will continue to grow wealthier than the Murrays because of the choices they make.

3. People respond to incentives in predictable ways.

An incentive is a benefit or cost that influences a person's decision. One powerful incentive is money. Money is important because of the goods and services we can buy with it. It is also important because having money opens up the range of choices and opportunities people face. People work to earn money, but they also work to accomplish their goals and to have satisfying careers. By managing your money carefully, you can gain full benefits from your hard work, and you can position yourself, financially, to accomplish other goals.

People earn money by working for it, but it is also possible to earn money by making deposits in savings accounts and earning interest on those savings. The prospect of earning interest creates an incentive to save. It also creates an incentive for lenders; lenders earn money from the interest payments borrowers make as they pay off their loans.

One incentive encouraging the Robinsons to save is that, with savings, they will have more goods and services available to them in the future. They will also be able to achieve other goals, including helping others; and more choices will be open to them than they otherwise could have had. It is possible to think in the same way about the incentive for getting a good education. To get a good education, it is necessary to spend time, effort, and perhaps money on your studies; but the incentive for doing so is that,

with a good education, you will be able to earn more income in the future, understand more about the world, and have more control over your life.

4. People create economic systems that influence choices and incentives.

The American economic system relies on markets, choices, and incentives. Americans are free to start a business, get an education, choose an occupation, and buy or not buy an incredible variety of goods and services. Americans may save or not save; they may rent an apartment or buy a house; they may buy a new car, a used car, or no car; and they may use credit cards or debit cards or pay cash for things they buy. Each one of these decisions comes with an opportunity cost. Every choice we make affects other opportunities, sometimes more than we realize. For example, the Murrays have chosen to buy newer and more expensive cars than the cars the Robinsons have bought. As a result, the Murrays also pay more for insurance, taxes, maintenance, etc. All of the expenses related to the more expensive cars add up to more money that they can't use to save for other goals, such as retirement. The Robinsons keep their cars for quite a while, and when they do replace their cars, they buy used. As a result, they keep their costs for cars and car-related expenses (insurance and taxes) down, and they therefore have more money available to save for retirement and even some fun family goals such as a vacation.

5. People gain when they trade voluntarily.

"Voluntarily" refers to doing something because you want to, not because

someone forced you. Neither the Robinsons nor the Murrays are forced to buy goods and services. They are not forced to work for their employers (when you work, you trade your time and labor for money that you can use to buy goods and services). They do these things because the benefits are greater than the costs. Of course things can go wrong when people trade. If you don't gather sound information and trade carefully, you may find you don't benefit as much from the trade as you expected. The key is to determine whether the benefits will be greater than the costs. The Murrays might ask, for example, whether buying expensive cars today is a greater benefit to them than making contributions to a retirement fund and a college fund for their children.

6. People's choices have consequences for the future.

If you watch television and read newspaper and magazine advertisements, you might suppose that everyone lives for today. Most people, however, also live for tomorrow. Otherwise, why would we conserve, save, and invest? Life is not a lottery. People are affected from time to time by good luck and bad luck, but overall they shape their futures by the decisions they make—the good decisions and the bad ones. The Robinsons have acquired a measure of wealth because they save more and spend less than they earn. The Robinsons communicate within the family about their goals and spending, and this helps them to make good choices for their family. Even though the Murrays work hard, they spend as much as they earn—or more—and so they have almost no savings. They don't communicate with one another about their money; they don't

EXERCISE
2.2

NAME: _____ CLASS PERIOD: _____

The Boring School Mystery

Most high school students believe school is boring. Yet most students graduate from high school. Why do students stay in school if school is so boring? Can the Handy Dandy Guide provide the answer to this mystery?

There are many reasons to stay in school and many reasons to drop out. For each of the following reasons, put an "S" for "stay in school" or a "D" for "drop out of school." Then use the Handy Dandy Guide to explain why more people stay in school than drop out.

1. _____ High school dropouts can get a job and thus provide more financial help for their families than their friends in high school can.
2. _____ High school graduates will have higher incomes in the future than the incomes of high school dropouts.
3. _____ High school graduates are able to go on to college.
4. _____ High school students must follow school rules, which limit freedom.
5. _____ High school dropouts can work full-time and have a better car, clothes, and social life than their friends in high school.
6. _____ Parents are happy when their children graduate from high school.
7. _____ School activities, such as sports and music, are fun for many students.
8. _____ Increased knowledge opens up increased choices and opportunities.

Questions:

- a. What is the cost of staying in school?

- b. What is the cost of dropping out of school?

- c. What incentives encourage people to stay in school?

- d. How does the American economic system encourage people to graduate from high school?

- e. Is going to high school voluntary, or are young people required to go to high school?

- f. Why do some students choose to drop out of school?

- g. Why do most students choose to stay in high school and graduate?

- h. What are the future consequences of a decision to drop out of school or stay in school?

Fort Hayes Arts & Academic High School 2024-25
12th Grade African American History/American Humanities (Merry)
Summer Assignment

24-25 Summer Homework

Senior Social Studies

Dr. Merry

This assignment is for incoming 12th Grade students who are enrolled in **Dr. Merry's** courses: **African American Studies** OR **American Humanities (History of American Popular Music)**

THIS ASSIGNMENT IS DUE THE FIRST DAY OF SCHOOL
Google Classroom join code for digital assignment: p45r3d4

First listen to the following podcast:

"We Are in the Future" from *This American Life* - <https://www.thisamericanlife.org/623/we-are-in-the-future-2017>

Then read **ONE** of the following articles:

"What is Afrofuturism, and how can it change the world?" by Sadof Alexander - <https://www.one.org/us/blog/afrofuturism-change-the-world/>

"How Afrofuturism Can Help the World Mend" by C. Brandon Ogbunu - <https://www.wired.com/story/how-afrofuturism-can-help-the-world-mend/>

Next explore Afrofuturism through the creative arts. Choose **ONE** of the following artists/films/musicians/authors to view/listen to/read/explore from one of the categories below.

Visual Art:

Ellen Gallagher- <https://gagosian.com/artists/ellen-gallagher/>

Jean-Michel Basquiat- <https://www.basquiat.com/>

David Alabo- <https://www.davidalabo.com/art>

Manzel Bowman- <https://manzel.biz/>

Lina Iris Viktor- <https://www.linaviktor.com/>



This site collects many modern Afrofuturist artists: <https://pointzeroworld.com/2020/09/07/afrofuturist-visual-artists-shaking-today-art-world/>

Film:

The Brother from Another Planet

The Last Angel of History

Sankofa

The Sin Seer

Black Panther

Wakanda Forever

They Charge for the Sun

Supa Modo

Brown Girl Begins

Kindred (series on Hulu)



Wikipedia has a pretty good film list: https://en.wikipedia.org/wiki/List_of_Afrofuturist_films

Music: Check out this article with videos from the Grammys: <https://www.grammy.com/news/10-artists-who-define-afrofuturism-in-music-sun-ra-shabazz-palaces-janelle-monae-eryka-badu-grace-jones-flying-lotus>

Sun Ra

- *Jazz In Silhouette*
- *Lanquidity*
- *Sleeping Beauty*
- *Cosmic Tones for Mental Therapy*
- *Space is the Place*
- *The Magic City*

Parliament/Funkadelic:

- *Maggot Brain*
- *Mothership Connection*
- *The Clones of Dr. Funkenstein*
- *Funkentelechy vs. the Placebo Syndrome*
- *One Nation Under a Groove*



Erykah Badu

- *Baduizm*
- *Mama's Gun*
- *Didn't Cha Know*
- *Worldwide Underground*
- *New Amerykah pt. 1 & 2*

Janelle Monáe:

Cindi Mayweather album trilogy:

- *Metropolis: The Chase Suite* (EP-serves as an intro to the trilogy)
- *The Archandroid*
- *Electric Lady*
- *Dirty Computer*

Shabazz Palaces

- *Black Up*
- *Lese Majesty*
- *Quazarz: Born on a Gangster Star*
- *Quazarz vs. The Jealous Machines*
- *The Don of Diamond Dreams*

Literature:

Kindred by Octavia Butler

Parable of the Sower by Octavia Butler (book one of a two part series- the other is *Parable of the Talents*) there is also a graphic novel version

Brown Girl in the Ring by Nalo Hopkinson

Children of Blood and Bone by Tomi Adeyemi (book one of the *Legacy of Orisha* series)

The Deep by Rivers Solomons (based on the song *The Deep* by Clipping and the work of the music duo Drexciya-check out their albums *Neptune's Lair*, *Harnessed the Storm*, and *Grava 4*)

Binti by Nnedi Okorafor (book one of a trilogy)

Electric Arches by Eve Ewing

The Memory Librarian: And Other Stories of Dirty Computer by Janelle Monáe

The Gilded Ones by Namina Forna

Electric Arches by Eve Ewing

Black Panther or *Shuri* (collected trade paperbacks) from Marvel Comics

Also check out this list from the New York Public Library:

<https://www.nypl.org/blog/2021/02/24/afrofuturism-fiction-recommendations>



Finally answer the following reflection questions, again this is due the **first day** of school:

1. Using **YOUR** own words, define Afrofuturism:

2. What is the **purpose** of Afrofuturism? Do you think it achieves this purpose? Why or why not?

3. Which **creative art** did you select (visual art, film, music, or literature)? How does your selection **represent** (fit the definition of) Afrofuturism? Provide **evidence** from the work to support your argument:

4. Do you think Afrofuturism can contribute to **social justice** (can Afrofuturism change the world)? Why or why not? Provide **evidence** from the readings and art you explored to support your argument:

5. Thinking about **BE FORT HAYES- Be Engaged Focused Organized Resourceful Teachable Yearlong Engaged Scholarly.**

How do you think learning about Afrofuturism will help prepare you for your senior year at **Fort Hayes**?

Name:

Date:

Due: First Day of School



The Importance of Arts in a Teenager's Life



Directions: The Arts Department at Fort Hayes Arts and Academic High School would like you to consider the impact of arts on your life. As you engage in the arts at our school, it is our hope that you can find out a little more about who you are through these avenues and opportunities. Please answer the following reflection questions. On the second page, read the passage and answer the writing prompt.

Reflection Questions:

How does engaging in artistic activities make you feel? Describe your experience with the arts.

Think of a time when art, music, dance, or theatre helped you cope with a difficult situation and write at least a paragraph to describe this situation. A paragraph is at least five to eight sentences.

Think about a piece of art, music, or literature that has had a significant impact on you. How did it make you feel and why? What was the piece?

How can engaging in artistic activities help teenagers develop important life skills such as creativity, problem-solving, and communication?

Key Vocabulary

Creative Outlet: a way to express oneself through art or other creative activities

Emotional Resilience: the ability to adapt to and cope with challenges and setbacks

Artistic Expression: conveying emotions and thoughts through visual arts, music, or other creative forms

Cognitive Development: the growth of thinking, problem-solving, and decision-making skills

Art has always played a significant role in human society, serving as a means of expression, communication, and cultural preservation. For teenagers, engaging in artistic activities can have a profound impact on their emotional well-being, cognitive development, and overall growth as individuals.

Art provides teenagers with a creative outlet to express their thoughts, emotions, and experiences. Whether through singing, dancing, drawing, writing, or music, artistic expression allows teenagers to communicate in ways that words often cannot. This form of self-expression can be particularly beneficial during times of stress or emotional turmoil, helping teenagers process their feelings and experiences in a healthy manner.

In addition to serving as a means of emotional expression, engaging in the arts can also foster emotional resilience in teenagers. By exploring different art forms and challenging themselves creatively, teenagers learn to adapt to new situations, manage stress, and develop coping mechanisms for life's challenges. Art can be a source of comfort and solace, providing teenagers with a safe space to explore their emotions and find inner peace.

Furthermore, participation in the arts has been linked to enhanced cognitive development in teenagers. Studies have shown that engaging in artistic activities can improve critical thinking skills, problem-solving abilities, and overall academic performance. By stimulating creativity and innovation, the arts nurture teenagers' intellectual growth and encourage them to think outside the box.

Overall, incorporating arts into a teenager's life is crucial for their holistic development. Artistic expression not only promotes emotional well-being and cognitive growth but also encourages self-discovery, cultural appreciation, and empathy towards others. By embracing the arts, teenagers can cultivate a sense of identity, purpose, and connection to the world around them.

Writing Prompt: Choose ONE of the prompts below and write at least a paragraph to respond. A paragraph is at least five to eight sentences. Be thoughtful and intentional in your writing. You may use the back or a separate paper stapled to this one.

- **If you could be the best in the world at something, what would it be and why?**
- **Break up your life (up to this point) into three chapters and give each chapter a title with a brief overview of that chapter.**
- **Is there one of the arts that you just do not understand? Which one and why?**

Summer Reading Overview

First, read a good book!

Be sure to take good notes.

①



One-Pager Directions

A one-pager is a way to visually share key ideas and information from what you have learned. When you create a one-pager, you are trying to use both visual symbols and important words to clearly and concisely share your most important takeaways with someone else.

For this one-pager, you will use a Google Slide OR a blank piece of paper.

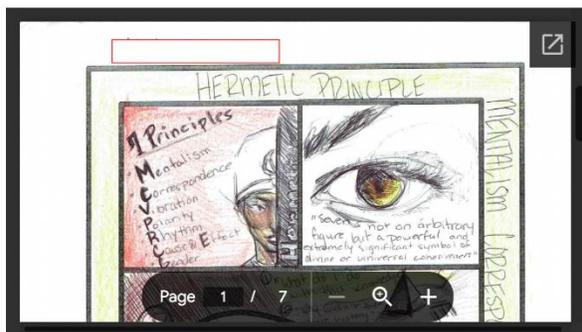
Here's what it **MUST INCLUDE**:

1. Be sure to include your name, the title of the book, and the author somewhere on your one-pager.
2. A border which somehow represents the **key theme topics** from what you have read. You could also write a theme statement around the border, instead.
3. An image in the upper left hand corner with a quotation. This image should somehow represent what you consider to be the most important **symbol** in the text so far.

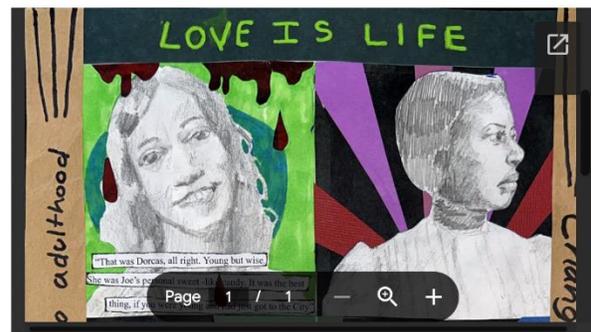
4. Images and/or words in the upper right hand corner that represent the key **characters** from the text and perhaps how they are changing.
5. Images and quotations in the lower left hand corner that show the **author's style** of writing, and the power of the language that is used.
6. Images and/or words in the bottom right hand corner that show connections between the **themes** and ideas in the writing and what is going on in the world today.
7. A TOTAL of **three important quotations** from the text with correct citation (incorporated in a box, or added to the margins). ***
8. Words and/or images that show the significance of the **setting** in some way

You may also add other symbols, drawings, and words that represent the reading as you wish.

Be creative and have fun!



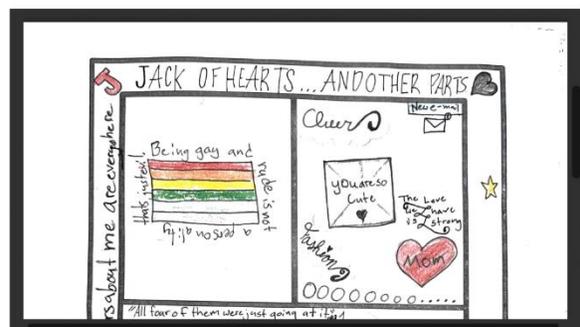
One-Pager Examples



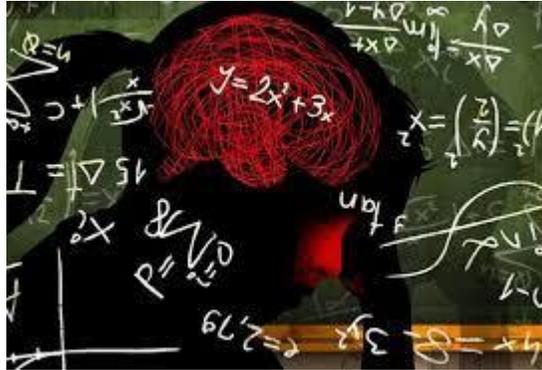
More One-Pager Examples



Even MORE One-Pager Examples



And One More One-Pager Examples



Directions

Part 1 Complete "Do You Have Math Anxiety?" A Self Test. Record your score for each question and then total your score.

Part 2 Write a half page personal reflection of the self test activity.

Part 3 Read the attached article, [Developing Math Confidence](#) .

Part 4 Reflect and respond to one of the math myths and misconception as described on pages 5 - 7. Your response must be handwritten. We will not accept digital responses. The assignment is due your first day of your math class.

Do You Have Math Anxiety?

A Self Test

Rate your answers from 1 to 5; add them up and check your score below.

(1) =Disagree, (5) = Agree.

1. I cringe when I have to go to math class. 1 2 3 4 5
2. I am uneasy about going to the board in a math class. 1 2 3 4 5
3. I am afraid to ask questions in math class. 1 2 3 4 5
4. I am always worried about being called on in math class 1 2 3 4 5
5. I understand math now, but I worry that it's going to get really difficult soon. 1 2 3 4 5
6. I tend to zone out in math class. 1 2 3 4 5
7. I fear math tests more than any other kind. 1 2 3 4 5
8. I don't know how to study for math tests 1 2 3 4 5
9. It's clear to me in math class, but when I go home it's like I was never there. 1 2 3 4 5
10. I'm afraid I won't be able to keep up with the rest of the class. 1 2 3 4 5

Check Your Score:

- 40-50 Sure thing, you have math anxiety. Check my 10 hints on how to reduce math anxiety.
- 30-39 No doubt! You're still fearful about math.
- 20-29 On the fence!.
- 10-19 Wow! Loose as a goose!

Math anxiety is an emotional reaction to mathematics based on a past unpleasant experience which harms future learning. A good experience learning mathematics can overcome these past feelings and success and future achievement in math can be attained.

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Developing Math Confidence

Math Anxiety: You are not alone

Anxiety about performing well in math or math-based science courses is a common experience for many college students. Research has indicated that approximately 30% of college students struggle with math anxiety, and that this issue has consistently ranked among the top 20 concerns for college students

People develop anxiety around math and math-related sciences for a number of reasons

1. Receiving messages that you are not good at math, or that math is a hard and intimidating subject that can only be mastered by certain students.
2. Societal views about math that suggest that it is harder than other subjects and that competence in math should be valued more than competence in other disciplines
3. Internal and external pressures to excel in math-based fields.

Math Anxiety: What does it look like?

Performance problems

Often people experience math anxiety while participating in math activities such as exams. Some people find themselves "blanking out" on math tests, even though they understand the material, can do the homework, and have prepared well for the exam. It can be very frustrating to feel prepared only to receive a low score on an exam. People with math anxiety typically do well in their other courses. However, math and math-based science courses seem to be more difficult.

Avoidance

People who struggle with math anxiety often find themselves avoiding math-related activities. The following behaviors often increase math anxiety because the person does not feel prepared to complete the tasks:

- skipping class
- not reading one's math textbook
- postponing enrollment in math classes until the last possible semester
- choosing a major based on avoiding math
- studying math only right before an assignment is due or just prior to an exam

Myths about Math

There are several myths about math that are often associated with the development of math anxiety. Research has shown that none are true, but many people believe them and may struggle with math anxiety.

Men are better at math than women

This is a stereotype that is often reinforced by society, including by teachers, parents, and guidance counselors

There is a "best" or "correct" way to complete math problems

There are many ways to get to a correct answer in a math problem. Think about the many different ways people figure out a tip for a restaurant bill, or how much they will save on a sale item.

You have to have a "mathematical mind" to understand math

People are not born with different types of brains. People, do however, have different ways of learning. Myths such as this one discourage people from finding the learning tools that work best for them, and cause people to give up

"I don't have problems in other classes, why don't I do well in How can I develop math confidence?"

Remember that some amount of anxiety is helpful to keep u

p-2

Both math avoidance and poor performance on math tests can create more anxiety about math. A cycle of anxiety and avoidance can occur, which only increases the problem.

on learning math.

motivated and energized about something. However, if your anxiety is so great that it is interfering with your ability to do well in class, there are some steps you can take:

1. Do math every day

Just like with a foreign language, if you don't use math frequently, you'll have a harder time becoming fluent. Do some math every day (Yes, including weekends), even if it's only 15-30 minutes. Try to avoid stacking all of your math activities on one or two days.

2. Scheduling

Build positive time management skills by making and sticking to a reasonable schedule. Your schedule should include time for studying, as well as social and personal activities. There are many ways to make a schedule; find what works best for you.

3. Prepare adequately

Make sure you're going to every class and regularly reading your math textbook. Use your TAs and academic resources on campus. For larger projects, start early rather than waiting until the last minute.

4. Identify and eliminate negative self-talk

Become aware of your internal dialogue. Start replacing negative self-talk with more affirming and rational self-talk. This may feel funny at first, but it will start feeling natural the more you practice.

Get enough sleep. Eat well-balanced, regular meals. Participate in a regular exercise program. Learn effective ways to relax and manage stress and anxiety. Poor self-care leads to poor performance in all areas, including math.

6. Seek help

Find a study buddy or study group. If you feel you need additional assistance, seek out a tutor or counselor. The Counseling Center offers a group to help students gain math confidence. Don't let fear of asking for help keep you from reaching your goals.

5. Practice good self-care

psychological barriers to doing well in math and math-based courses. By attending all of the sessions and following the suggestions of the group leaders, you could expect to gain the following:

- Replace negative self-talk with more positive, confident self-talk
 - Better time management skills
 - Improved study habits
 - Stress management and relaxation techniques
 - Creative suggestions for overcoming blocks
 - Learn about resources on campus for improving your math skills
 - Support from group leaders and others experiencing similar struggles

If you are interested in finding out more about the Math Confidence group, please stop by the Counseling Center or call our office.

Brochure Author: Christina Carroll, Ph.D.

Series Editor: Jaquelyn Liss Resnick, Ph.D.

Published by: University of Florida Counseling Center 301 Peabody Hall, Gainesville FL 32611 (352) 392-1575 02m3

The Math Confidence Group

The Counseling Center offers a group specifically designed for people who struggle with math confidence. This group has helped numerous students over 20 years to become more confident in their math abilities. The group is not a tutoring program or a math class. We help students overcome their

Coping With Math Anxiety

"Coping with Math Anxiety," by B. Sidney Smith, reprinted by permission of the author from Math Academy Online/Platonic Realms, 2006. Copyright © 1997-2006 Math Academy Online/Platonic Realms.

Multiplication is vexation,
Division is just as bad.
The Rule of Three perplexes me,
And Practice drives me mad.
— Old Rhyme

What is Math Anxiety?

A famous stage actress was once asked if she had ever suffered from stage-fright, and if so how she had gotten over it. She laughed at the interviewer's naive assumption that, since she was an accomplished actress now, she must not feel that kind of She assured him that she had always had stage fright, and that she had never gotten over it. Instead, she had learned to walk on stage and perform — in spite of it.

Like stage fright, math anxiety can be a disabling condition, causing humiliation, resentment, and even panic. Consider these testimonials from a questionnaire we have given to students in the past several years:

When I look at a math problem, my mind goes completely blank. I feel stupid, and I can't remember how to do even the simplest things

I've hated math ever since I was nine years old, when my father grounded me for a week because I couldn't learn my multiplication tables.

In math there's always one right answer, and if you can't find it you've failed. That makes me crazy.

Math exams terrify me. My palms get sweaty, I breathe too fast, and often I can't even make my eyes focus on the paper. It's worse if I look around, because I'd see everybody else working, and know that I'm the only one who can't do it.

I've never been successful in any math class I've ever taken. I never understand what the teacher is saying, so my mind just wanders.

Some people can do math — not me!

What all of these students are expressing is math anxiety, a feeling of intense frustration or helplessness about one's ability to do math. What they did not realize is that their feelings about math are common to all of us to some degree. Even the best mathematicians, like the actress mentioned above, are prone to anxiety — even about the very thing they do best and love most.

In this essay we will take a constructive look at math **anxiety**, its causes, its effects, and at how you as a student can learn to manage this anxiety so that it no longer hinders your study of mathematics. Lastly, we will examine special strategies for studying mathematics, doing homework, and taking exams

Let us begin by examining some social attitudes towards mathematics that are especially relevant.

Social Causes and Educational Context

Imagine that you are at a dinner party, seated with many people at a large table. In the course of conversation the person sitting across from you laughingly remarks "of course, I'm illiterate . . ." What would you say? Would you laugh along with him or her and confess that you never really learned to read either? Would you expect other people at the table to do so?

Now imagine the same scene, only this time the guest across from you says, "of course, I've never been any good at math.

. . ." What happens this time? Naturally, you can expect other people at the table to chime in cheerfully with their own claims to having "never been good at math" — the implicit message being that no ordinary person ever is

The fact is that mathematics has a tarnished reputation in our society. It is commonly accepted that math is difficult, obscure, and of interest only to "certain _____"

people," i.e., nerds and geeks — Poor teaching leads to the not a flattering characterization. I-he consequence in many English-speaking countries, and especially in the United States, is that the study of math carries with it a stigma, and people who are talented at math or profess the enjoyment of it are often treated as though they are not quite - H.J.S Smith

normal. Alarming, many school teachers — even those whose job it is to teach mathematics — communicate this attitude to their students directly or indirectly, so that young people are invariably exposed to an anti-math bias at an impressionable age.

It comes as a surprise to many people to learn that this attitude is not shared by other societies. In Russian or German culture, for example, mathematics is viewed as an essential part of literacy, and an educated person would be chagrined to confess ignorance of basic mathematics (It is no accident that both of these countries enjoy a centuries-long tradition of leadership in mathematics)

Our jaundiced attitude towards mathematics has been greatly exacerbated by the way in which it has been taught since early in this century. For nearly seven decades, teaching methods have been based on a behaviorist model of learning, a paradigm which emphasizes long creative struggle to learning-by-rote; that is, memorization and repetition. In mathematics, this magnificent edifice meant that a particular type of problem-solving was presented, together with a technique of solution, and these were where mathematics is practiced until sufficiently mastered. The student was then hustled along to the next type of problem, with its technique of solution, and so on. The ideas which lay behind these techniques were treated as a sideshow, or most often omitted altogether. -J.D. Phillips

Someone once described this method
The mind is not a vessel to

of teaching mathematics as inviting be filled. It is a fire to be kindled to the most wonderful kindled.

restaurant in the world — and then — Plutarch forcing them to eat the menu! Little wonder that the learning of mathematics seems to most people a dull and unrewarding enterprise, when the very meat of the subject is boiled down to the gristle before it is served.

This horror story of mathematics education may yet have a happy ending. Reform efforts in the teaching of mathematics have been under way for several years, and many — if not all — teachers of mathematics have conscientiously set about replacing the behaviorist paradigm with methods based on constructivist or other progressive models of learning. As yet, however, there remains no widely accepted teaching methodology for implementing these reform efforts, and it may well be that another generation will pass before all students in the primary and secondary grades are empowered to discover the range and beauty of mathematical ideas, free of the stigmas engendered by social and educational bias.

finally, young women continue to face an additional barrier to success in mathematics. Remarkably, even at the start of the 21st century, school-age girls are still discouraged by parents, peers and teachers with the admonition that mathematics "just isn't something girls do." Before we became teachers, we would have assumed that such attitudes died out a generation ago, but now we know better. Countless of our female students have told how friends, family members, and even their junior and senior high school instructors impressed upon them the undesirability of pursuing the study of mathematics. My own wife (a mathematician) recalls approaching her junior high school geometry teacher after class with a question about what the class was studying. He actually patted her on the head, and explained that she "didn't need to know about that stuff" (And, needless to say, he didn't answer her question.) Rank sexism such as this is only part of the problem. For all adolescents, but especially for girls, there is concern about how one is viewed by members of the opposite sex — and being a "geek" is not seen as the best strategy. Peer pressure is the mortar in that wall. And parents, often even without knowing it, can facilitate this anxiety and help to discourage their daughters from maintaining an open mind and a natural curiosity towards the study of science and math.

Together these social and educational factors lay the groundwork for many widely believed myths and misconceptions about the study of mathematics. To an examination of these we now turn.

Math Myths and Misconceptions

A host of common but erroneous ideas about mathematics are available to the student who suffers math anxiety. These have the effect of justifying or rationalizing the fear and frustration he or she feels, and when these myths are challenged a student may feel defensive. This is quite natural. However, it must be recognized that loathing of mathematics is an emotional response, and the first step in overcoming it is to appraise one's opinions about math in a spirit of detachment. Consider the five most prevalent math myths, and see what you make of them:

Myth #1: Aptitude for math is inborn.

This belief is the most natural in the world. After all, some people just are more talented at some things (music and athletics come to mind) and to some degree it seems that these talents must be inborn. Indeed, as in any other field of human endeavor, mathematics has had its share of prodigies. Karl Gauss helped his father with bookkeeping as a small child.

and the Indian mathematician Ramanujan discovered deep results in mathematics with little formal training. It is easy for students to believe that doing math requires a math brain, one in particular which they have not got.

But consider: to generalize from "three spoons, three rocks, three flowers" — to the number "three" — is an extraordinary feat of **abstraction**, yet every one of us accomplished this when we were mere toddlers! Mathematics is indeed inborn, but it is inborn in all of us. It is a human trait, shared by the entire race. Reasoning with abstract ideas is the province of every child, every woman, every man. Having a special genetic makeup is no more necessary for success in this activity than being Mozart is necessary to humming a tune.

Ask your math teacher or professor if he or she became a mathematician in consequence of having a special brain. (Be sure to keep a straight face when you do this.) Almost certainly, after the laughter has subsided, it will turn out that a parent or teacher was responsible for helping your instructor discover the beauty in mathematics and the rewards it holds for the student — and decidedly not a special brain. (If you ask my wife, on the other hand, she will tell you it was orneriness; she got sick of being told she couldn't do it.)

Myth #2: To be good at math you have to be good at calculating.

Some people count on their fingers. Invariably, they feel somewhat ashamed about it, and try to do it furtively. But this is ridiculous. Why shouldn't you count on your fingers? What else is a Chinese abacus but a sophisticated version of counting on your fingers? Yet people accomplished at using the abacus can out-perform anyone who calculates figures mentally.

Modern mathematics is a science of ideas, not an exercise in calculation. It is a standing joke that mathematicians can't do arithmetic reliably, and I often admonish my students to check my calculations on the chalkboard because I'm sure to get them wrong if they don't. There is a serious message in this: being a wiz at figures is not the mark of success in mathematics.

This bears emphasis: a pocket calculator has no knowledge, no insight, no understanding — yet it is better at addition and subtraction than any human ever be. And who would prefer being a pocket calculator to being human?

This myth is largely due to the methods of teaching discussed above, which emphasize finding solutions by rote. Indeed, many people suppose that a professional mathematician's research involves something like doing long division to more and more decimal places, an image that makes

mathematicians smile sadly. New mathematical ideas the object of research — are precisely that. Ideas. And ideas are something we can all relate to. That's what makes us people to begin with.

Myth #3: Math requires logic, not creativity.

_____ The grain of truth in this myth is that, Logic is the anatomy of of course, math does require l^c. But thought what does this mean? It means that — John Locke we want things to make sense. We _____ don't want our equations to assert that 1 is equal to 2.

This is no different from any other field of human endeavor, in which we want our results and propositions to be meaningful — and they can't be meaningful if they do not jive with the principles of logic that are common to all mankind. Mathematics is somewhat unique in that it has elevated ordinary logic almost to the level of an artform, but this is because logic itself is a kind of structure — an idea — and mathematics is concerned with precisely that sort of thing.

But it is simply a mistake to suppose that logic is what mathematics is about, or that being a mathematician means being uncreative or unintuitive, for exactly the opposite is the case. The great mathematicians, indeed, are poets in their soul.

How can we best illustrate this? Consider the ancient Greeks such as Pythagoras, who first brought mathematics to the level of an abstract study of ideas.

_____ They noticed something truly as- The moving power of mathetounding: that the musical tones matics is not reasoning but most pleasing to the ear are imagination. those achieved by dividing a plucked string into ratios of in- — Augustus De Morgan

_____ tegers. For instance, the musical interval of a "fifth" is achieved by plucking a taut string whilst pressing the finger against it at a distance exactly four-fifths along its total length. From such insights, the Pythagoreans developed an elaborate and beautiful theory of the nature of physical reality. one based on number. And to them we owe an immense debt, for to whom does not music bring joy? Yet no one could argue that music is a cold, unfeeling enterprise of mere logic and calculation. If you remain unconvinced, take a stroll through the Mathematical Art of M.C. Escher. Here is the creative legacy of an artist with no advanced fraining in math, but whose works consciously celebrate mathematical ideas, in a way that slips them across the

transom of our self-conscious anxiety, presenting them afresh to our wondering eyes

Myth #4: In math, what's important is getting the right answer.

If you are building a bridge, getting the right answer counts for a lot, no doubt. Nobody wants a bridge that tumbles down during rush hour because someone forgot to carry the 2 in the

IDs place! But are you building bridges, or studying mathematics? Even if you are studying math so that you can build bridges, what matters right now is understanding the concepts that allow bridges to hang magically in the air — not whether you always remember to carry the 2.

That you be methodical and complete in your work is important to your math instructor, and it should be important to you as well. This is just a matter of doing what you are doing as well as you can do it — good mental and moral hygiene for any activity. But if any instructor has given you the notion that "the right answer" is what counts most, put it out of your head at once. Nobody overly fussy about how his or her bootlace is tied will ever stroll at ease through Platonic Realms.

Myth #5: Men are naturally better than women at mathematical thinking.

If there is even a ghost of a remnant of a suspicion in your mind about gender making a whit's difference in students' mathematics aptitude, slay the beast at once. Special vigilance is required when it comes to this myth, because it can find insidious ways to affect one's attitude without ever drawing attention to itself. For instance, I've had female students confide to me that — although of course they do not believe in a gender gap when it comes to ability — still it seems to them a little unfeminine to be good at math. There is no basis for such a belief, and in fact a sociological study several years ago found that female mathematicians are, on average, slightly more feminine than their non-mathematician counterparts.

Sadly, the legacy of generations of gender bias, like our legacy of racial bias, continues to shade many people's outlooks, often without their even being aware of it. It is every student's.

parent's, and educator's duty to be on the lookout for this error of thought, and to combat it with reason and understanding wherever and however it may surface.

Across the centuries, from Hypatia to Amalie Nöther to thousands of contemporary women in school and university math departments around the globe, female mathematicians have been and remain full partners in creating the rich tapestry of mathematics. For outstanding web sites with information about historical and contemporary women in mathematics, check the subject index in the "biography" section of the Math Links Library.

Taking Possession of Math Anxiety

Even though all of us suffer from math anxiety to some degree — just as anyone feels at least a little nervous when speaking to an audience for some of us it is a serious problem, a burden that interferes with our lives, preventing us from achieving our goals. The first step, and the one without which

no further progress is possible, is to recognize that math anxiety is an emotional response. (In fact, severe math anxiety is a learned emotional response.) As with any strong emotional reaction, there are constructive and unconstructive ways to manage math anxiety. Unconstructive (and even damaging) ways include rationalization, suppression, and denial.

By "rationalization," we mean finding reasons why it is okay and perhaps even inevitable — and therefore justified — for you to have this reaction. The myths discussed above are examples of rationalizations and while they may make you feel better (or at least less bad) about having math anxiety, they will do nothing to lessen it or to help you get it under control. Therefore, rationalization is unconstructive.

By "suppression" is meant having awareness of the anxiety — but trying very, very hard not to feel it. I have found that this is very commonly attempted by students, and it is usually accompanied by some pretty severe self-criticism. Students feel that they shouldn't feel this anxiety, that it's a weakness which they should overcome by brute force if necessary. When this effort doesn't succeed (as invariably it doesn't) the self-criticism becomes ever harsher, leading to a deep sense of frustration and often a severe loss of self-esteem — particularly if the stakes for a student are high, as

when his or her career or personal goals are riding on a successful outcome in a math class, or when parental disapproval is a factor. Consequently, suppression of math anxiety is not only unconstructive, but can actually be damaging.

finally, there is denial. People using this approach probably aren't likely to see this essay, much less read it, for they carefully construct their lives so as to avoid all mathematics as much as possible. They choose college majors, and later ca-

reers, that don't require any math, and let the bank or their spouse balance the checkbook. This approach has the advantage that feelings of frustration and anxiety about math are mostly avoided. However, their lives are drastically constrained, for in our society fewer than 25% of all careers are, so-to-speak, "math-free," and thus their choices of personal and professional goals are severely limited. (Most of these math-free incidentally, are low-status and low-pay.)

People in denial about mathematics miss out on something else too. for the student of mathematics learns to see aspects of Universe is a grand book the structure and beauty of our which cannot be read until one world that can be seen in no first learns to comprehend the other way, and to which the "in- language and become familiar numerate" necessarily remain with the characters in which it forever blind. It would be a lot is composed. It is written in the like never hearing music, or language of mathematics never seeing colors. (I under- - Galileo stand that some people have these disabilities — but they didn't choose to have them.) Okay, so what is the constructive way to manage math anxiety? I call it "taking possession." It involves making as conscious as possible the sources of math anxiety in one' own life, accepting those feelings without self-criticism, and then learning strategies for disarming math anxiety's influence on one's future study of mathematics. (These strategies are explored in depth in the next section.)

Begin by understanding that your feelings of math anxiety are not uncommon, and that they definitely do not indicate that there is anything wrong with you or inferior about your ability to learn math. For some this can be hard to accept. but it is worth trying to accept — since after all it happens to be frue. This can be made easier by exploring your own "math-history." Think back across your career as a math student, and identify those experiences which have contributed most

to your feelings of frustration about math. For some this will be a memory of a humiliating experience in school, such as being made to stand at the blackboard and embarrassed in front of one's peers. For others it may involve interaction with a parent. Whatever the principle episodes are, recall them as vividly as you are able to. Then, write them down. This is important. After you have written the episode on a sheet(s) of paper, write down your reaction to the episode, both at the time and how it makes you feel to recall it now. (Do this for each episode if there is more than one.)

After you have completed this exercise, take a fresh sheet of paper and try to sum up in a few words what your feelings about math are at this point in your life, together with the reason or reasons you wish to succeed at math. This too is important. Not until after we lay out for ourselves in a conscious and deliberate way what our feelings and desires are towards mathematics, will it become possible to take possession of our feelings of math anxiety and become free to implement sstrategies for coping with those feelings.

At this point it can be enormously helpful to share your memories, feelings, and goals with others. In a math class I teach for arts majors, I hand out a questionnaire early in the semester asking students to do exactly what is described above. After they have spent about twenty minutes writing down their recollections and goals, I lead them in a classroom discussion on math anxiety. This process of dialogue and sharing — though it may seem just a bit on the goopy side — invariably brings out of each student his or her own barriers to math, often helping these students become completely conscious of these barriers for the first time. Just as important, it helps all my students understand that the negative experiences they have had, and their reactions to them, are shared one way or another by almost everyone else in the room.

If you do not have the opportunity to engage in a group discussion in a classroom setting. find friends or relatives whom you trust to respect your feelings, and induce them to talk about their own experiences of math anxiety and to listen to yours.

Once you have taken possession of your math anxiety in this way, you will be ready to implement the strategies outlined below.

Strategies for Studying Mathematics

Mathematics, as a field of study, has features that set it apart from almost any other scholastic discipline. On the one hand, correctly manipulating the notation to calculate solutions is a skill, and as with any skill mastery is achieved through practice. On the other hand, such skills are really only the surface of **ematics**, for they are only

The value of a problem is not so **Consequently,** **the**
 contemplation **and**
 comprehension of mathe-
 much coming up with the an- matical ideas must be our ulti-
 mately goal. Ideally, these two
 tempted ideas it forces on the aspects of studying
 mathematics
 would be solver. should be woven together at
 - LN. Herstein every point, complementing
 and
 marginally useful without an understanding of the
 concepts which underlie them.

enhancing one another, and in
 this respect studying mathematics is much more like
 studying, say, music or painting than it is like studying
 history or biology.

In view of mathematics' unique character, the successful student must devise a special set of for accomplishing his or her goals, including strategies for lecture taking, homework, and exams. We will examine each of these in turn. Keep in mind that these strategies are suggestions, not laws handed down from the mountain. Each student must find for him or herself the best way to implement these ideas fitting them to his or her own unique learning styles As the Greek said, know thyself!

Taking Lectures

Math teachers are a mixed bag. no question, and it's easy to criticize. especially when the criticism is justified. If your own math teacher really connects with you, really helps you understand, terrific — and be sure to let him or her know. But if not, there are a couple of things you want to keep in mind.

To begin with, think what the teacher's job entails. first, a textbook must be chosen. a syllabus prepared, and the material being taught (which your teacher may or may not have worked with in some time) completely mastered. This is before you ever step into class on that first day.

Second, for every lecture the teacher gives, there is at least an hour's preparation, writing down lecture notes, thinking about how best to present the material. and so on. This is on top of the time spent grading student work — which itself can be done only after the instructor works the exercises for him or herself. Finally, think about the anxiety you feel about speaking to an audience, and about your own math and then imagine what a math teacher must do: manage both kinds of anxiety simultaneously. It would be wonderful if every instructor were a brilliant lecturer. But even the least brilliant deserves consideration for the difficulty of the job.

The second thing to keep in mind is that getting the most out of a lecture is your job. Many students suppose that writing furiously to get down everything the instructor puts on the board is the best they can do. Unfortunately, you cannot both write the details and focus on the ideas at the same time. Consequently, you will have to find a balance. Particularly if the instructor is lecturing from a set text, it may be that almost everything he or she puts on the board is in the text, so in effect it's written down for you already. In this case, make some note of the instructor's ideas and commentary and methods,

but make understanding the lecture your primary focus. One of the best things you can do to enhance the value of a lecture is to review the relevant parts of the textbook before the lecture. Then your notes, instead of becoming yet another copy of information you paid for when you bought the book, can be an adjunct set of insights and commentary that will help you when it comes time to study on your own.

finally, remember that your success is your instructor's success too. He or she wants you to achieve your goals. So develop a rapport with the instructor, letting him or her know when you are feeling lost and requesting help. Don't wait until after the lecture — raise your hand or your voice the minute the instructor begins to discuss an idea or procedure that you are unable to follow. Use any help labs or office hours that are available. If you are determined to succeed and your instructor knows it, then he or she will be just as determined to help you.

Self study and homework

There you are, just you and the textbook and maybe some lecture notes, alone in the glare of your desk lamp. It's a tense moment. Like most students, you turn to the exercises and see what happens. Pretty soon you are slogging away, turning frequently to the solutions in the back of the book to check whether you have a clue. If you're lucky, it goes mostly smoothly, and you mark the problems that won't come right so that you can ask about them in class. If you're not so lucky, you get bogged down, stuck on this problem or that, while the hours slide by like agonized glaciers, and you miss your favorite TV show, and you think of all the homework for your other classes

that you haven't got to yet, and you begin to visualize burning your textbook . . . except that the stupid thing cost you 80 bucks....

Let's start over.

There you are, just you and the textbook and maybe some lecture notes, alone in the glare of your desk lamp. Relax. What are you here for? For whom are you doing this homework? Your teacher? Your parents? No, homework is for you, and you alone. It is your opportunity to learn, and to begin to gain mastery — and that is what you are here for. Not a grade — knowledge. Presumably, your instructor has just lectured the material, but have you read the material in the textbook yourself yet? You haven't? Then do so. Reading the textbook is something practically no student does, yet it can make a world of difference in how difficult the material seems to you. When

reading a textbook, remember that it is not a novel, nor indeed like any other kind of book. Written math is dense. Each paragraph — sometimes even each line — contains deep ideas, which may require a novel way of thinking to understand. It may take you 20 minutes or longer just to absorb and understand a single page. That is normal. Read it with blank paper available and a pencil in your hand. Work through the examples yourself, until you thoroughly understand each step. Writing things down is far more effective than high-lighting or underlining. Read the footnotes. After you have done these things, then you are ready to look at the exercises (NB: If you are reading a college-level text, it may be helpful to familiarize yourself with the Latin terms and Greek letters commonly used in mathematics.)

Many instructors (but not all) encourage their students to work together on homework problems. Modern learning theories emphasize the value of doing this, and I find that students who collaborate can develop a synergy among themselves which supports their learning, helping them to learn more, more quickly, and more lastingly. Find out how your instructor feels about this, and if it is permitted find others in class who are interested in

studying together. You will still want to put in plenty of for self-study, but a couple of hours a week spent studying with others may be very valuable to you.

Working problems

Most problem sets are designed so that the first few problems are rote, and look just like the examples in the book. Gradually, they begin to stretch you a bit, testing your comprehension and your ability to synthesize ideas. Take them one at a time. If you get completely stuck on one, skip it for now. But come back to it. Give yourself a rest, for your subconscious mind will gradually formulate ideas about how to work the exercise, and it will present these

notions to your conscious mind when it is ready.

As an experienced math instructor, it is my sad duty to report that about a third of the students in any given class, on any given assignment, will look the exercises over, and conclude that they don't know how to do it. They then tell themselves, "I can't do something I don't understand," and close the book. Consequence: no homework gets done.

About another look the exercises over, decide that they pretty much get it, and tell themselves "I don't need to do the homework, because I already understand it," and close the book. Consequence: no homework gets done.

I keep the subject constantly before me and wait till the first pretty Now turn much to already the hard got exercises it, great. dawnings open little by little into

the fidl light (whether they were assigned or not), and test how thorough your — Sir Isaac Newton understanding really is. If

you are unable to do them with ease, then you need to go back to the more routine exercises and work on your skills. On the other hand, if you feel you cannot do the homework because you don't understand it, then go back in the textbook to where you do understand, and work forward from there. Pick the easiest exercises, and work at them. Compare them to the examples. Work through the examples doing the exercises the same way the examples were done. In short, work at it. You will learn mathematics this way — and in no other way.

Story problems

Everybody complains about story problems, sometimes even the instructor. One is tempted to feel that math is hard enough without some sadist turning it into wordy, dense, hard-to-understand story problems. But again, ask yourself: "Why am I

studying math? Is it so that I'll always know how to factor a

quadratic equation?" Hardly. The study of math is meant to give you power over the real world. And the real world does n't present you with textbook equations, it presents you with story problems. Your boss doesn't tell you to solve for x , he tells you, "We need a new supplier for flapdoodles. Bob's Flapdoodle Emporium wholesales them at \$129 per gross, but charges \$1.25 per ton per mile for shipping. Sally's Flapdoodle Express wholesales them at \$143 per gross, but ships at a flat rate of \$85 per ton. figure out how each of these will impact our marginal cost, and report to me this afternoon."

The real world. Personally, I love story problems because if you can work a story problem, you know you really understand the math. It helps to have a strategy, so you might want to check out the Solving Story Problems article in the PRIB, E sometime soon.

Taking exams

For many students, this is the very crucible of math anxiety. Math exams represent a do-or-die challenge that can inflame all one's doubts and frustrations. It is frankly not possible to eliminate all the anxiety you may feel about exams. but here are some techniques and strategies that will dramatically improve your test-taking experience.

1. Don't cram. The brain is in many ways just like a muscle. It must be exercised regularly to be strong, and if you place too much stress on it then it won't function at its peak until it has had time to rest and recover. You wouldn't prepare for a big race by staying up and running all night. Instead, you would probably do a light work-out, permit yourself some recreation such as seeing a movie or reading a book, and turn-in early. The same principle applies here. If you have been studying regularly, you already know what you need to know, and if you have put off studying until now it is too late to do much about it. There is nothing you will gain in the few hours before the exam, desperately trying to absorb the material, that will make up for not being fresh and alert at exam time.
2. On exam day, have breakfast. The brain consumes a surprisingly large number of calories, and if you haven't made available the nutrients it needs it will not work at full capacity. Get up early enough so that you can eat a proper meal (but not a huge one) at least two hours before the exam. This will ensure that your stomach has finished with the meal

before your brain makes a demand on the blood supply.

3. When you get the exam, look it over thoroughly. Read each question, noting whether it has several parts and its overall weight in the exam. Begin working only after you have read every question. This way you will always have a sense of the exam as a whole. (Remember to look on the backs of pages.) If there are some questions that you feel you know immediately how to do, then do these first. (Some students have told me they save the easiest last because they are sure they can do them. This is a mistake. Save the hardest ones for last.)
4. It is extremely common to get the exam, look at the questions, and feel that you can't work a single problem. Panic sets in. You see everyone else working and become certain you are doomed. Some students will sit for an hour in this condition, ashamed to turn in a blank exam and leave early, but unable to calm down and begin thinking about the questions. This initial panic is so common (believe it or not, most of the other students taking the exam are having the same experience), that it's just as well to assume ahead of time that this is what is going to happen. This gives you the same advantage as when the dentist alerts you that "this may hurt a little." Since you've been warned, there is far less tendency to have an uncontrollable panic reaction when it happens.

So say to yourself, "Well, I may as well relax because I expected this." Take a deep breath, let it out slowly. Do this a couple of times. Look for the question on the exam that most resembles what you know how to do, and begin poking it and prodding it and thinking about it to see what it is made of. Don't bother about the other students in the room — they've got their own problems. Before long your brain (remember, it's a muscle) will begin to unclench a bit, and some things will occur to you. You're on your way.
5. Math exams are usually timed — but remember, it's not a race! You don't want to dally, but don't rush yourself either. Work efficiently, being methodical and complete in your solutions. Box, circle, or underline your answers where

appropriate. If you don't take time to make your work neat and ordered, then not only will the grader have trouble understanding what you've done, but you can actually confuse yourself— with disastrous results. If you get stuck on a problem, don't entangle yourself with it to the detriment of your overall score. After a few minutes, move on to the rest of the exam and come back to this one if you have time. And regardless of whether you have answered every question, give yourself at least two or three minutes at the end of the exam period to review your answers. The "oops" mistakes you find this way will surprise you, and fixing them is worth more to your score than trying to bang out something for that last, troublesome question.

6. In math, having the right answer is nice — but it does n't pay the bills. **SHOW YOUR WORK.**
7. Finally, place things in perspective. Fear of the exam will make it seem like a much bigger deal than it really is, so remind yourself what it does not represent.

When you get the exam back, don't bury it or burn it or treat it like it doesn't exist — use it. Discover your mistakes and

It is not a test of your overall intelligence, of your worth as a person, or of your prospects for success in life. Your future happiness will not be determined by it. It is only a math test— it tests nothing about you except whether you understand certain concepts and possess the skills to implement them. You can't demonstrate your understanding and skills to their best advantage if you panic through making more of it than it is.

un_ derstand them thoroughly. After all, if you don't learn from your mistakes, you are likely to make them again.

Afterword

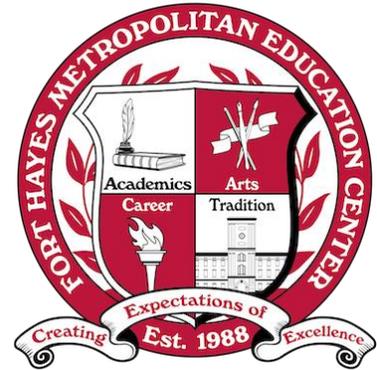
Math anxiety affects all of us at one time or another, but for all of us it is a barrier we can overcome. In this article we have examined the social and educational roots of math anxiety, some common math myths associated with it, and several techniques and strategies for it. Other things could be said, and other strategies are available which may help you with your own struggle with math. Talk to your instructor and to other students. With determination and a positive outlook — and a little help — you will accomplish things you once thought impossible.

The harmony of the world is made manifest in Form and Number, and the heart and soul and all the poetry of Natural Philosophy are embodied in the concept of mathematical beauty.

— D 'Arcy Wentworth

Name _____

Directions: Create your own personal “PE Summer Journey” of how you stayed active over the summer. Below are suggestions you can do in order to complete the assignment. **Choose one of the suggestions below.**



- **Choice 1 – Fitness Log/Reflection:** List out all the activities you participate in during the summer. **Fitness Log on next page if you choose this option.**
 - Each log will be kept for about 6 weeks which equals to about 2 entries per week for a total of 12 for the whole summer.
 - Each activity must be a minimum of 30 minutes in length.
 - You may only use one activity a day for a journal entry. For example, you played football in PE class and then after school you went to soccer practice. You may only use one of those activities to put on your fitness log.
- **Choice 2 - PE Art:** Take pictures of your summer activity events. Use the pictures to create a collage or album.

Additional Daily Recommendations:

- 5 servings fruits and vegetables
- Less than 2 hours screen time
- 1 hour daily physical activity
- 0 sugary drinks and snacks

Have A Fun, Safe, and Active Summer!

Fort Hayes High School
 Physical Education 1&2
 Mr. Rice
 PE Summer Journey - Summer Assignment – 25 Points

Summer Fitness Log

*To find your heart rate: Locate your heart rate either on your wrist (palm up on the side closest to the thumb or on the side of your neck) using your pointer and middle finger. Count the number of beats for 15 seconds and then multiply that number by 4 and that will give you your heart rate for 1 minute.

Low Intensity, 115-134

Medium Intensity, 135-159

High Intensity, 160+

	Date	Time		Description of Activity	Heart Rate			What intensity level are you at?
		Start	Finish		Start	During	End	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

* Example activities: running, strength training, biking, swimming, cutting the grass, walking the dog, dancing, going to a sport practice, cleaning the house, etc...

- Tell how the activities/exercises that you listed above helped you maintain or improve on the areas measured in the fitnessgram test (upper body strength, flexibility, abdominal strength, cardiovascular endurance and body mass index).
- Tell what area(s) you feel you did not improve on and what do you need to do to make those improvements?

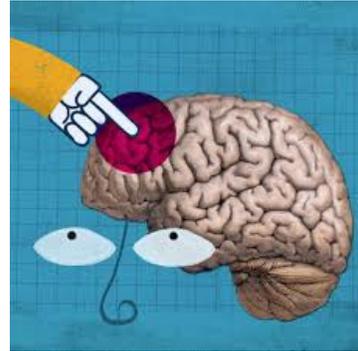
2024

Fort Hayes Arts & Academic High School Summer Assignment for Science

Watch:

 Why the teenage brain has an evolutionary advantage

<https://youtu.be/P629TojpvDU?si=FYDJVaQFnHfhpAAZ>



Then respond in complete sentences to the following writing prompts:
Please use lined paper. Please number your answers and skip a line between each.

1. Hormones - what is their role in the body?
2. Neuroscientists - what do they study?
3. At what age is the brain fully developed?
4. What are the functions of:
the prefrontal cortex?
the limbic system?
the striatum?
5. What effect does dopamine have on the body, and under what circumstances is it released?
6. How are teenage brains better than adult brains?
7. What is the down side to (your answer to the last question)?
8. Describe three positive, healthy, non-dangerous risks you might take this school year.

DUE THE FIRST DAY OF SCHOOL FOR YOUR SCIENCE CLASS

World Languages Summer Assignment 2024

Instructions for Cultural Awareness Assignment

The World Language Department is encouraging cultural diversity and current event knowledge by asking you to stay informed about the Olympics happening this summer. Please complete the provided sheet with any information you discover about the Olympics during the summer break.

During the first week of school, there will be an open note assessment based on this information. You will be allowed to refer to your answers from this document to help you complete the assessment.

1. Where was the first modern day Olympics?
2. When do the Olympics start and end this summer?
3. Where is it being held?
4. How many events are there?
5. What is the mascot for the Olympics this year?
6. What are the new sports / events added to the Olympics this year?
7. What are the five colors of the Olympic rings?
8. Which country has the most summer Olympic medals prior to the 2024 Olympics?
9. How much money does a US athlete receive for a gold medal? Silver? Bronze?
10. What song is played during the medal ceremony?

As you watch the Olympics, choose 5 athletes you liked watching and fill out the chart below.

Athlete	Country	Sport	Medals

At the end of the Olympics, fill out the chart with the number of medals won by the following countries.

Country	Bronze	Silver	Gold
USA			
France			
Italy			
Spain			
Japan			
Mexico			
Canada			
Brazil			
Australia			
Germany			