



Houston Academy

8th Grade Textbooks

2026-2027

Students in grades 5-8 are expected to purchase required textbooks. Some classes use online books and have classroom copies of the textbook. Students will be billed for online textbook subscriptions at the beginning of the school year. Please refer to the comments regarding whether a textbook purchase is required.

Subject	Course	Title of Book	ISBN/Order # (Comments)
ELA	ELA 8	<ul style="list-style-type: none">• The Call of the Wild by Jack London• Before the Ever After by Jacqueline Woodson• To Kill a Mockingbird by Harper Lee • IXL	<ul style="list-style-type: none">• 9781613823491• 9780399545436• 9780060935467 Students must purchase these novels Subscription will be billed in the fall
Math	Algebra 1	<ul style="list-style-type: none">• Algebra ©2018 by McGraw-Hill Companies • IXL	<ul style="list-style-type: none">• 978007-9039897 (Email Mrs. Ziglar for info on how to get a book) <ul style="list-style-type: none">• IXL Subscription will be billed in the fall
Science	Physical Science	I Science Physical Science by McGraw-Hill	<ul style="list-style-type: none">• 9780076773053 Students will have a copy at school. If you would like to have one at home, you may purchase one if you would like one at home
Social Studies	World History 1	No Textbook	
Foreign Language	Spanish 1B	Descubre 1 Lengua y Cultura del Mundo Hispánico, Published by	<ul style="list-style-type: none">• 9781543331202 Students will have a copy of the

		Vista Higher Learning (Hardbook and Online)	<p>book in class, you may purchase one if you would like one at home</p> <p>Students will be billed for the online book</p> <p>Students used this book for Spanish 1A</p>
	Latin 1B	Latin for the New Millennium Level 1	<ul style="list-style-type: none"> ● 9780865168077 <p>Students used this book for Latin 1A.</p>
	French 1B	T'es branché Level 1	<ul style="list-style-type: none"> ● 978-0-82195-852-0



Houston Academy

Middle School (grades 5-8)

Supply list 2026-27

Advisory Supplies: *to be given to the student advisor*

- 2 large containers of Colox Desinfectant Wipes
- 2 Rolls of paper towels
- 1 container of hand sanitizer
- 3 boxes of Kleenex tissues

Student Supplies: *These are the supplies that all students in grades 5-8 should have to start the school year.*

- Earbuds are to be kept in the student's backpack
- 2-3 packs of No. 2 Pencils (if not mechanical, a hand sharpener)
- 1-2 packs of blue or black pens
- 1 pack of Paper Mate Flair pens (different colors)
- 1 pack of 12 colored pencils
- 1 pack of highlighter, multiple colors (preferably blue, yellow, pink & orange)
- 1 pencil pouch
- 1 pack of thin dry-erase markers
- 3 packs of lined index cards
- 3 packs of Post-its
- 1 pack of Post-it flags
- 3-4 packs of college-ruled loose-leaf paper
- 1 pack of clear sheet protectors
- 1 pair of scissors
- 5 X 1-inch 3-ring binders (1 for each class) or 1 X 3-inch binder

Specific Class Supplies: *These are added supplies specifically for the following classes.*

5th Grade:

- 1 3- Subject Notebook (math)
- 3 Packs of loose-leaf graph paper (math)
- 1 Pack of loose-leaf lined paper (math)
- 1 plastic Folder (math)
- 1 Pack of erasable colored pencils (math)
- 1 box of Ziploc baggies (Science)
 - Girls - gallon size
 - Boys- Quart size
- 1 pack of 12 Elmer's Gluesticks

6th grade:

- 1 3- Subject Notebook (math)
- 3 Packs of loose-leaf graph paper (math)
- 1 Pack of loose-leaf lined paper (math)
- 1 plastic Folder (math)
- 1 Pack of erasable colored pencils (math)
- 1 box of Ziploc baggies (Science)
 - Girls - gallon size
 - Boys- Quart size
- 1 pack of 12 Elmer's Gluesticks

7th grade:

- 1 pack of vinyl gloves (**girls only**) (science)
- 1 bottle of corn syrup (**girls only**) (science)
- 1 pack of straws (**boys only**) (science)
- Cheesecloth (**boys only**) (science)
- 1 dollar store stopwatch (science)
- ½ inch - 1" binder with at least 5 pockets/folders for maps (folder examples: <https://a.co/d/0gqIFFZ0>) (Geography)
- 1 box of colored pencils for the class set (in addition to personal supplies)(Geography)
- 6 bottles of school glue or glue sticks (Geography)
- 1 small pack of highlighters for the class set (in addition to personal supplies)
- 2 Disappearing glue sticks (English)

8th grade:

- 1 box of straws (**girls only**) (science)
- 1 Dollar Store calculator (**boys only**) (science)
- 1 folder with pockets (science)
- 2 Disappearing glue sticks (English)

French Students:

- 1 Pack blue erasable Frixion Pens (10 min)
- 1 Pack red erasable Frixion Pens (4 min)
- 1 Pack of 12 thick, black dry-erase markers
- 1 Mars plastic eraser

Math Summer Review Assignment for Rising 8th Grade 2026-2027

- Each student will have a Delta Math assignment to complete over the summer. It may be found on <https://www.deltamath.com> . If you are a returning student, you have an account, and may contact Mrs. Ziglar at ziglark@houstonacademy.com for your login information.
- The on-line assignments will be available to current students from 6/1/25 through 8/13/26.
- A notebook, journal, or binder should be used to hold all work and rework if needed. It will be turned in on the first day of school for the first grade of the quarter (a 20 point homework grade). There will also be an option to upload the work. <https://youtu.be/Ydp6t-HkCSM?si=WcHRSE8N8zep7qXY>
- The first assessment of the quarter will be based on the information/topics that were contained in the Summer Review Assignment.
- The assignment's work should be done **in pencil**, shown **on lined work paper**, **numbered** and **neatly written**. Copy each problem, and work it out. Credit will not be given if only the answer is given. If a problem cannot be "worked out", tell in a complete sentence how you "solved the problem".
- The material is review material from what was covered in 7th grade at Houston Academy.
- The on-line Delta Math work will contain examples, explanations, and **several attempts** so a 100% is expected.
- CALCULATORS are NOT permitted.
- Upon completion, the Honor Code and student signature should be included at the end of the work, to ensure that the student's work is their own. "My signature affirms my honor."

Middle School English Summer Reading Assignment (Grade 8)

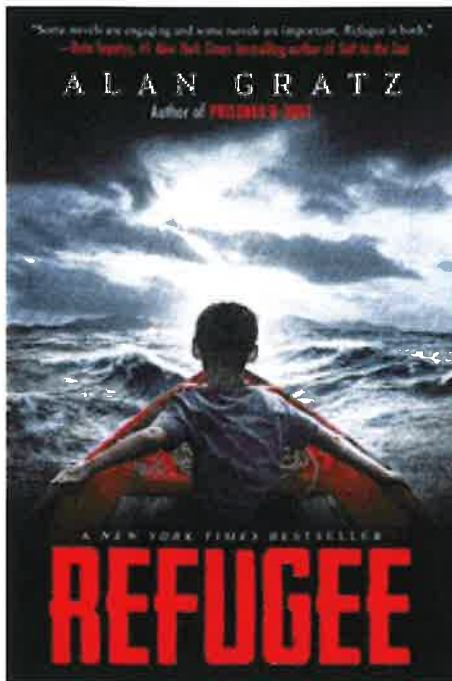
All students enrolled in 8th grade English in the fall must read the required text selection below. After reading, students should complete **one** of the Summer Reading Project Choice assignments **and** generate a list of thought-provoking questions about the novel for class discussion.

Required Book

Refugee
by Alan Gratz

ISBN-10 : 9780545880831

ISBN-13 : 978-0545880831



Josef is a Jewish boy living in 1930s Nazi Germany. With the threat of concentration camps looming, he and his family board a ship bound for the other side of the world. Isabel is a Cuban girl in 1994. With riots and unrest plaguing her country, she and her family set out on a raft, hoping to find safety in America. Mahmoud is a Syrian boy in 2015. With his homeland torn apart by violence and destruction, he and his family begin a long trek toward Europe. All three kids go on harrowing journeys in search of refuge. All will face unimaginable dangers -- from drownings to bombings to betrayals. But there is always the hope of tomorrow. And although Josef, Isabel, and Mahmoud are separated by continents and decades, shocking connections will tie their stories together in the end. This action-packed novel tackles topics both timely and timeless: courage, survival, and the quest for home. - Amazon.com

I hope you have an enjoyable summer and find time to relax, read, and reflect! Please contact me via email with any questions.

See you in August,
Mrs. David
davids@houstonacademy.com

Refugee Summer Reading Project Choices

Directions: After reading the novel *Refugee*, **choose ONE** of the following writing activities to complete. The assignment should be printed and turned in on the first day of school and will be graded for completion.

<i>Critical Thinking</i>	<i>Creative Writing</i>	<i>Analysis</i>
<p>Research Project Research a current refugee crisis that is happening in the world today. Pretend you are a reporter writing an article for a school newspaper or blog. Write an article explaining the important events surrounding this crisis. You may simply inform about the events to bring awareness to the situation, or you may take a position and write an opinion piece to discuss what you think should be done or offer a call to action. Be careful to paraphrase (<u>not plagiarize</u>) your sources!</p> <ul style="list-style-type: none"> <input type="checkbox"/> The article has a headline that captures the reader's attention <input type="checkbox"/> The lead sentence ("hook") grabs the reader's attention and introduces the reader to the topic <input type="checkbox"/> The article adequately addresses the 5 W's (Who, What, When, Where and Why/How) to provide a clear summary of the topic <input type="checkbox"/> Demonstrates command of the conventions of standard English grammar and usage <input type="checkbox"/> Sources of information used in research appear on a separate works cited page <input type="checkbox"/> Word Count: 250-500 	<p>Alternate Ending Create a new ending to <i>Refugee</i> by writing an additional chapter. The tone and attitude of the characters must be consistent with the characters in the book, in addition to the setting details. Furthermore, the ending should be written in the same style as the author, but you may write from the point of view of another character.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Establish a problem, situation, or setting. <input type="checkbox"/> Use events and transitions to create a smooth progression of experiences. <input type="checkbox"/> Use dialogue, thoughts, reflection, pacing and description to develop your narrative. <input type="checkbox"/> Use precise words, telling details and sensory language to create a vivid picture of events, setting, and characters. <input type="checkbox"/> Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved. <input type="checkbox"/> Use correct pronouns to establish point of view <input type="checkbox"/> Demonstrates command of the conventions of standard English grammar and usage <input type="checkbox"/> Word Count: 500-1,000 	<p>Literary Analysis Essay In this novel you've read about characters who have experienced difficult situations and learned valuable lessons. Identify a theme topic, also called a motif (ex. love, trust) and decide what the characters learned about that topic. Determine a theme (the message) that the author wants readers to understand (ex. trust is essential in relationships, love conquers all). Then analyze how at least two of the characters have experiences that reveal this theme and how the author develops the theme over the course of the novel.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Thesis is clearly stated, specific and relevant to the task. <input type="checkbox"/> Demonstrates a logical and clear organizational structure <input type="checkbox"/> Includes strongest, most relevant text evidence to support thesis and overall analysis of the text <input type="checkbox"/> Explanations draw connections between thesis and evidence <input type="checkbox"/> Demonstrates command of the conventions of standard English grammar and usage <input type="checkbox"/> Word Count: 350-750

Student-Generated Questions:

After reading the novel, generate a list of **FIVE** thought-provoking questions that you would like to have answered. They can be about the novel itself or how the novel compares/connects to life in 2022.

Examples:

- What do you think would have happened if _____?
- Why do you think _____ reacted to _____ the way they did?
- Why do you think the author chose _____?
- How did you feel when _____?
- What do you think you would have done if you were faced with _____?
- What can we learn from the novel about _____?
- How does _____ compare with _____ today?

Non-Examples

- Questions that elicit one-word responses (i.e. “yes” or “no”)
- Questions about specific details in the text (i.e. what color shoes was the character wearing?)
- Questions that are too abstract or not related to the text (i.e. what if there were no gravity?)

1. _____

2. _____

3. _____

4. _____

5. _____

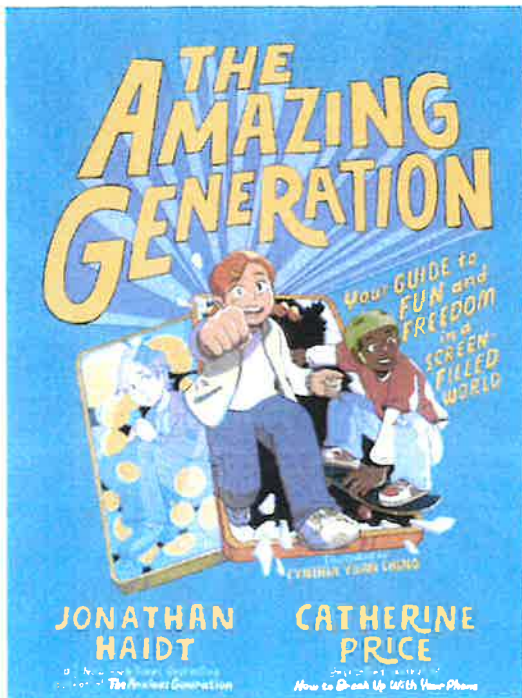
Middle School-Wide Summer Reading Assignment (Grades 5-8)

Required Book

The Amazing Generation

by Jonathan Haidt and Catherine Price

ISBN-13 : 979-821711191



Jonathan Haidt's blockbuster book, *The Anxious Generation*, has sparked a global conversation about the effects of smartphones and social media on young people's development, and has inspired millions of parents, teachers, and leaders to take action. Now, Haidt and Catherine Price, author of the bestselling *How to Break Up with Your Phone*, have teamed up to create a new book that speaks directly to kids. Their goal? To empower young people to stand up for themselves by choosing a life not dominated by screens and social media.

Whether or not kids already have smartphones or social media accounts, this engaging guide is packed with surprising facts, a graphic novel, interactive challenges, secrets that tech leaders don't want kids to know, and real-life anecdotes from young adults who regret getting smartphones at a young age and want to help the next generation avoid making the same mistakes.

In "The Amazing Generation," by Catherine Price and Let Grow Co-Founder Jonathan Haidt, kids read about the alternative to a life online: A life of fun, friendship, and freedom in the real world

But this isn't just a book about what not to do. It's a bold, optimistic, and practical guide to growing into your most authentic, confident, and adventurous self. Readers won't just discover how to avoid becoming the next Anxious Generation. They'll learn how to become amazing. - Amazon.com

- Middle School students who read and complete the accompanying assignment will be invited to an ice-cream social when we return to school in August!
- Parents are encouraged to read *The Anxious Generation* and complete the Parent-Student Reflection Worksheet with their child(ren). Visit letgrow.org for more parent resources!

Name: _____

Grade: _____

The Amazing Generation

By Jonathan Haidt & Catherine Price

Your Guide to Fun and Freedom in a Screen-Filled World

Purpose

As you read *The Amazing Generation*, you will:

- Understand how technology impacts your brain, attention, and relationships
- Reflect on your own habits and choices
- Practice building real-world fun, independence, and balance

Reflection Before Reading:

1. What is one **positive** way technology has influenced your life?

2. What is one **negative** way technology has influenced your life?

Part One: The Tech Wizards Rise - and Their Lies

3. How did the tech wizards lie?

4. Do you spend most of your time in **defend mode** or **discover mode**? How can you tell?

5. Choose one "Try This!" from Part 1. Describe it and the result.

Name: _____

Grade: _____

Part Two: Secrets of the Tech Wizards

1. What surprised or shocked you?

2. What did you learn or find interesting?

3. What was something you already knew?

4. What is one thing you want to try/do/change after reading Part Two?

5. How has your view of technology or the Tech Wizards changed?

6. Choose one "Try This!" from Part Two. Describe it and the result.

7. What is one question you still have?

Name: _____

Grade: _____

Part Three: How to Be a Rebel

1. What does it mean to be a rebel in the context of this book?

2. When do you feel most connected to other people? Why do you think that is?

3. Are some forms of technology better than others? Give an example of one that can be helpful and one that can be harmful.

4. How can you establish healthy habits for screens? Give at least three examples.

5. Choose one "Try This!" from Part Three. Describe it and the result.

6. What is one thing you want to try/do/change after reading Part Three?

7. What is one question you still have?

Name: _____

Grade: _____

Conclusion: How to Fill Your Life with Real Friendship, Freedom and Fun

Student Reflection

1. What is the biggest lesson you've learned from this book?

2. How can you personally balance technology and real-world experiences?

3. Choose one "Try This!" from the Conclusion. Describe it and the result.

Self-Assessment

Estimated daily screen time (not including schoolwork): _____ hours/minutes

Top 3 most-used apps/screen-time activities:

1. _____
2. _____
3. _____

How do you usually feel after extended screen time?

Energized Tired Distracted Anxious Calm Other: _____

How do you usually feel after playing outside or being in nature?

Energized Tired Distracted Anxious Calm Other: _____

What might you be missing out on because of screen time?

Name: _____

Grade: _____

Action Steps

Try "The Let Grow Experience."

Step 1: What is a new, real-world thing you'd like to try on your own?

Step 2: Make a simple plan. What will you do? How will you handle any surprises?

Step 3: Do it (without your parents)! How did it go? How did you feel afterward?

Try "Ways to Have Fun Without a Phone" Choose 10 ideas from Page 210-211.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

THE **LET GROW** SUMMER EXPERIENCE



Activity Ideas

GO OUTSIDE

- Climb a tree.
- Ride your bike. (Bonus: No hands!)
- Race remote control cars.
- Frisbee! Tag! Frisbee Tag!
- Get kids to come out and play.
- Have a picnic.
- Fly a kite.
- Rollerblade.
- Skateboard.
- Nerf battle!
- Hopscotch.
- Geocache!
- Jump rope.
- Go fishing.
- Watch the sun rise or set.
- Stargaze.
- Skip rocks.
- Dig a hole.
- Hike a local trail.

AND STAY OUTSIDE

- Football!
- Baseball!
- Four square!
- Jump rope!
- Soccer!
- Some game you make up using a ball, Frisbee, balloon or stick.
- Some game involving chalk.
- Play catch with a friend (human or dog).

- Balance on something hard to balance on.
- Pick up trash in the neighborhood.
- Go fishing!
- Walk a mile.
- Walk FIVE miles!.

HEAD TO THE KITCHEN

- Make yourself a snack.
- Find a new recipe and try it on your own.
- Make cookies.
- Boil water and make pasta.
- Make breakfast for your family.
- Make dinner for your family.
- Smoothies! Made by you!
- Ice pops! A classic!
- Plan a backyard BBQ and cook it!

STAY COOL

- Run through the sprinklers at home! At a park! Anywhere water is gushing!
- Water balloon fight!
- Walk in the rain.
- Play in the mud.
- Make your own air conditioner (Hint: ice and a fan?)
- Do the grocery shopping. (Enjoy the air conditioning!)

- Invent a recipe for something cold.
- Go to the movies with friends.
- Sleep under the stars.
- Eat some meals outside.

GET AROUND

- Run an errand.
- Ride your bike someplace. Or no place.
- Walk to a friend's.
- Visit a neighbor.
- Cross a street.
- Take a bus, train or ferry.
- Go to the library. Sign up for a library card.
- Make a scavenger hunt.
- Get a present for a friend or relative.
- Find or make a hideaway.
- Flashlight tag.
- More flashlight tag.

LEVEL UP

- Make your own haircut or dentist appointment.
- Put air in a bike tire.
- Fix a bike chain.
- Mow the lawn.
- Make a shopping list and shop.
- Stay home alone.
- Take cousins or siblings someplace.
- Also bring them home.

THE **LET GROW** SUMMER EXPERIENCE



Activity Ideas

ANIMAL TIME

- Walk the dog. (And scoop if you must.) (You must!)
- Pet sit for a neighbor or friend.
- Go to the pet store.
- Look for bugs.
- Catch one! (Maybe now it's a pet?)
- Take on the pet chores in your house.
- Go bird watching in the park.
- Feed the birds.
- Teach your pet a new trick.
- Discover a new species. (Good luck!)

HELP OUT

- Tutor a kid in something.
- Babysit a sibling.
- Babysit a non-sibling.
- Help out a neighbor.
- Teach someone younger how to do something.
- Clean out your room and donate something.
- Write and mail a letter or thank-you card.
- Hang art in your window for people to see.

GET GROWING

- Plant flowers that are good for butterflies.
- Grow something you can eat.
- Create your own container or fairy garden.
- Weed your garden.
- Water it too!

MAKE IT

- Make a fort (outside!).
- Make a bird feeder (then watch the show!).
- Sew something.
- Build an obstacle course.
- Make art outside.
- Build something you can use.
- Make a sidewalk mural with chalk.
- Make up a dance or gymnastics routine. Teach it to a friend.
- Paint rocks and leave them in your neighborhood for people to find.
- Write and illustrate a story or comic book.
- Take something apart.
- Put it back together.
- Make something that has wheels.
- Repair something.
- Make (and bury) a time capsule.

GO BIG

- Paint a room.
- Camp outside.
- Find a part-time gig.
- Have a no TV or electronics day.
- Volunteer.
- Organize a yard sale.
- Go someplace you don't fit in...and stay there a while.
- Learn to play the ukulele. (Outside!)
- Put on a talent show for friends, neighbors, relatives or anyone willing to watch.

MY IDEAS

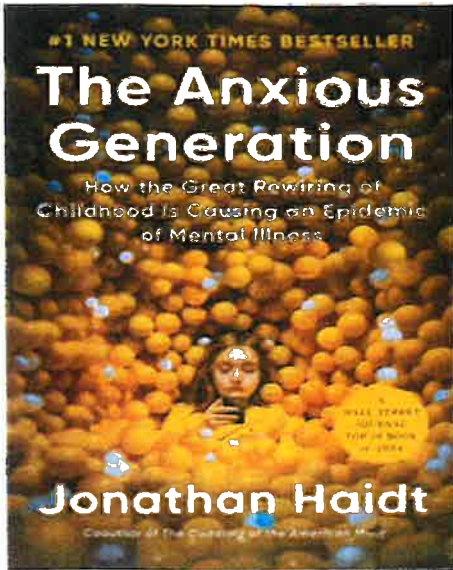
- _____
- _____
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Middle School-Wide Summer Reading Parent Assignment
Required Book

The Anxious Generation

by Jonathan Haidt

ISBN-13: 979-821711191



Named one of the best books of the year by The Wall Street Journal, The New York Times Book Review, The Washington Post, Time, The Economist, New York Post, and Town & Country One of Barack Obama's Favorite Books of the Year Named finalist for the PEN Literary Awards

"With tenacity and candor, Haidt lays out the consequences that have come with allowing kids to drift further into the virtual world . . . While also offering suggestions and solutions that could help protect a new generation of kids." —Time

After more than a decade of stability or improvement, the mental health of adolescents plunged in the early 2010s. Rates of depression, anxiety, self-harm, and suicide rose sharply, more than doubling on many measures. Why? In *The Anxious Generation*, social psychologist Jonathan Haidt (pronounced "height") lays out the facts about the epidemic of teen mental illness that hit many countries at the same time.

He then investigates the nature of childhood, including why children need play and independent exploration to mature into competent, thriving adults. Haidt shows how the "play-based childhood" began to decline in the 1980s, and how it was finally wiped out by the arrival of the "phone-based childhood" in the early 2010s. He presents more than a dozen mechanisms by which this "great rewiring of childhood" has interfered with children's social and neurological development, covering everything from sleep deprivation to attention fragmentation, addiction, loneliness, social contagion, social comparison, and perfectionism. He explains why social media damages girls more than boys and why boys have been withdrawing from the real world into the virtual world, with disastrous consequences for themselves, their families, and their societies.

Most important, Haidt issues a clear call to action. He diagnoses the "collective action problems" that trap us, and then proposes four simple rules that might set us free. He describes steps that parents, teachers, schools, tech companies, and governments can take to end the epidemic of mental illness and restore a more humane childhood.

Haidt has spent his career speaking truth backed by data in the most difficult landscapes—communities polarized by politics and religion, campuses battling culture wars, and now the public health emergency faced by Gen Z. We cannot afford to ignore his findings about protecting our children—and ourselves—from the psychological damage of a phone-based life.

Source: Amazon.com

Name: _____

Grade: _____

Part One – Parent-Student Reflection Worksheet

Theme: Understanding the Digital Shift

Discussion Prompts:

- Parent: Share how technology was different when you were a teen.
- Student: Share how technology is part of your daily routine now.
- Together: Compare and contrast the two experiences.

Joint Reflection Questions:

1. What benefits does technology bring to your family?

2. What challenges has it created?

3. What is one way you can support each other in using tech wisely?

Parent Signature: _____

Date: _____

Name: _____

Grade: _____

Part Two – Parent-Student Reflection Worksheet

Theme: Social Media & Mental Health

Discussion Prompts:

- Parent: Share how peer pressure looked when you were young.
- Student: Explain how social media influences self-image today.
- Together: Talk about similarities and differences.

Joint Reflection Questions:

1. How can social media affect mental health?

2. How can the family encourage healthy self-esteem offline?

3. What is one family activity you could do together instead of screen time?

Parent Signature: _____

Date: _____

Name: _____

Grade: _____

Part Three – Parent/Student Reflection Worksheet

Theme: Habits, Sleep & Balance

Discussion Prompts:

- Parent: Share your biggest challenges balancing screens, work and home life.
- Student: Share your biggest challenges balancing screens, schoolwork, and social life.
- Together: Compare challenges with screen use and strategies that help maintain balance.

Joint Reflection Questions:

1. What habits make your daily routine healthier?

2. How can the family support better sleep for everyone?

3. What healthy boundaries could you set together for technology use?

Parent Signature: _____

Date: _____

Name: _____

Grade: _____

Part Four – Parent-Student Reflection Worksheet

Theme: Hope & Moving Forward

Discussion Prompts:

- Parent: Share hopes for how together you can improve family and community life.
- Student: Share hopes for how living more in the “real world” and less in the “digital world” can improve your future.
- Together: Identify ways to keep each other accountable.

Joint Reflection Questions:

1. How can your family encourage more face-to-face connection?

2. What role should parents play in modeling intentional tech use?

3. How can your family maintain balance rather than eliminating technology completely?

Parent Signature: _____

Date: _____

Summer 2026

Summer Assignment for World History I

To prepare you for your study of World History, all students are required to complete this summer assignment. **All answers must be written in complete sentences using your very best writing skills.** Please write in pen or type your answers. **DO NOT WRITE THE ANSWERS ON THIS DOCUMENT, AS THERE IS NOT SUFFICIENT ROOM FOR COMPLETE AND THOROUGH RESPONSES HERE.** Answer as specifically as you can by **using the facts that you have learned from your reading**, and answer each question completely because some questions have more than one part. This should be YOUR work only! This assignment is due on the first day of school, August 13, 2026. Happy reading and listening!

If you have any questions, please contact either Mrs. Cromer (cromern@houstonacademy.com) or Dr. Janney (janneyv@houstonacademy.com).

Iceman Mystery:

1. Read the article (Scanned) from National Geographic regarding Otzi and a very old murder mystery.
2. Where and when was Otzi found?
3. How did scientists determine where Otzi had lived?
4. Select two of his belongings and explain purpose.
5. What about his belongings suggest he was an experienced traveler?
6. What information was used to determine his diet?
7. Describe his diet.
8. How did scientists determine Otzi's cause of death?
9. Compare the theories of Vigl, Loy, and Leitner. Whose theory seems the most substantiated to you? Explain your reasoning.
10. Why do you think Otzi considered to be "particularly valuable" remain when compared to other prehistoric remains?

Olorgesailie: Life and Times of the Handaxe Makers

1. Read the article from the Smithsonian: National Museum of Natural History regarding a prehistoric site in East Africa:

<http://humanorigins.si.edu/research/olorgesailie-kenya>

2. When did humans live in the Olorgesailie region of southern Kenya?
3. What are 'faunal remains'? And what do they tell us about the region?
4. What do the layers of sediment show us about the region?
5. What makes Olorgesailie a unique prehistoric site?
6. How many human fossils have been unearthed at the site? If so, when was the discovery made? What was the date of the human fossil?
7. How is the age of sediments figured out at Olorgesailie? Be as specific as possible to describe the process.
8. Why has only 1 hominin specimen been found?
9. How did the presence of a volcanic outcrop impact human use of the region?
10. What did researchers find at Hyena Hill and the Elephant Butchery Site?

11. Given that there were 16 major environmental changes between 1.2 million and 400,000 years ago, how did the changes impact humans? What about the other mammalian species?

The hidden history found in your teeth:

1. Listen to the speech (TEDTalk) by Carolyn Freiwald found here and answer the questions below:

https://www.ted.com/talks/carolyn_freiwald_the_hidden_history_found_in_your_teeth

2. Why do people migrate/move to new places?
3. How does the shape of the back of one's incisors indicate one's ancestral origin? (Be specific – what does each shape indicate)
4. What can we learn from the pulp cavity inside the teeth? How?
5. What can we learn from tooth enamel?
6. What does Freiwald mean when she says, "You are what you eat?"
7. What can we learn from the first molar?
8. What can we learn from the wisdom teeth?
9. Every depiction of Mayan ruler Kinich Kakmo, the founder of a dynasty that ruled Copan (in modern-day Honduras) for 400 years, shows him in foreign clothing/garb from central Mexico. This led archaeologists to think he might have been a foreign king. Is that true? How do we know?
10. In Xunantunich, a Maya city in modern Belize, the largest tomb held the remains of a ruler adorned with jade. What do the teeth and bones of this ruler tell us?
11. What did the remains of people buried in the city La Isabela, one of the earliest settlements in the New World during the Age of Exploration?

In the tombs of Saqqara, new discoveries are rewriting ancient Egypt's history

1. This article explores the recent archaeological work being done around Egypt. Please read the article at this site:

<https://www.washingtonpost.com/world/2021/04/22/tombs-saqqara-new-discoveries-are-rewriting-ancient-egypts-history/>

2. Who was King Teti?
3. What is believed to be the reason two of the mummies recently discovered have golden tongues?
4. What other items were found with the 100 ornately painted wooden coffins?
5. Besides Teti's wife, how else could Queen Neit have been related to Teti, and what would its significance be?
6. What was written on the 15-foot-long papyrus found in the coffins?
7. What evidence of trade with Egypt was found, and what countries were they from?

Congratulations! You have finished the summer reading for your World History I course. Be prepared to hand in your answers to these questions on the first day of school. These articles and the podcast will be focused on and discussed during the school year.

Iceman Mystery

Scientists have poked, prodded, and x-rayed the 5,000-year-old mummy found in the Alps. They now think he was murdered.

By Stephen S. Hall

Update (September, 2007): Researchers report that head trauma along with uncontrolled bleeding ultimately killed the Iceman. [Read more.](#)

It was late spring or early summer, when a modest tree called the hop hornbeam unfurls bright yellow clusters of flowers in the steep valleys that run north into the mountains now known as the Italian Alps. The man hurried through a forest he knew well, wincing from the pain in his injured right hand and pausing occasionally to listen for sounds that he was being pursued. As he fled up the slope, the yellow pollen of the hornbeam blossoms fell like an invisible rain, salting the water and food he consumed when he stopped to rest. Five thousand years later, the Neolithic hunter we call the Iceman would still bear traces of this ancient dusting inside his body—a microscopic record of the time of year it was when he passed through this forest and into the nearby mountains, where fate would finally catch up with him.

Since hikers discovered his mummified corpse in 1991 in a rocky hollow high in the Ötztal Alps on Italy's border with Austria, scientists have used ever more sophisticated tools and intellectual cunning to reconstruct the life and times of the Iceman (or "Ötzi"), the oldest intact member of the human family. We know that he was a small, sinewy, and, for his times, rather elderly man in his mid-40s. Judging from the precious, copper-bladed ax found with him, we suspect that he was a person of considerable social significance. He set off on his journey wearing three layers of garments and sturdy shoes with bearskin soles. He was well equipped with a flint-tipped dagger, a little fire-starting kit, and a birchbark container holding embers wrapped in maple leaves. Yet he also headed into a harsh wilderness curiously under-armed: The arrows in his deerskin quiver were only half finished, as if he had recently fired all his munitions and was in the process of hastily replenishing them. And he was traveling with a long, roughly shaped stalk of yew—an unfinished longbow, yet to be notched and strung. Why?

When it comes to the Iceman, there has never been a shortage of questions, or theories to answer them. During the 16 years that scientists have poked, prodded, incised, and x-rayed his body, they have dressed him up in speculations that have not worn nearly as well as his rustic garments. At one time or another, he has been mistakenly described as a lost shepherd, a shaman, a victim of ritual sacrifice, and even a vegan. But all these theories fade in the face of the most startling new fact scientists have learned about the Iceman. Although we still don't know exactly what happened up there on that alpine ridge, we now know that he was murdered, and died very quickly, in the rocky hollow where his body was found.

"Even five years ago, the story was that he fled up there and walked around in the snow and probably died of exposure," said Klaus Oeggl, an archaeobotanist at the University of Innsbruck. "Now it's all changed. It's more like a paleo crime scene."

The object of all this intense scientific attention is a freeze-dried slab of human jerky, which since 1998 has resided in a refrigerated, high-tech chamber in the South Tyrol Museum of Archaeology in Bolzano, Italy. The temptation to conduct fresh experiments on the body rises with every new twist of technology, each revealing uncannily precise details about his life. Using a sophisticated analysis of isotopes in one of the Iceman's teeth, for example, scientists led by Wolfgang Muller (now at the Royal Holloway, University of London) have shown that he probably grew up in the Valle Isarco, an extensive north-south valley that includes the modern-day town of Bressanone. Isotope levels in his bones, meanwhile, match those in the soil and water of two alpine valleys farther west, the Val Senales and the Val Venosta. Muller's team has also analyzed microscopic chips of mica recovered from the Iceman's intestines, which were probably ingested accidentally in food made from stone-ground grain; geologic ages of the mica best match a small area limited to the lower Val Venosta. The Iceman probably set off on his final journey from this very area, near where the modern-day Adige and Senales Rivers meet.

We also know that he was not in good health when he headed up into the mountains. The one surviving fingernail recovered from his remains suggests that he suffered three episodes of significant disease during the last six months of life, the last bout only two months prior to his death. Doctors inspecting the contents of his intestines have found eggs of the whipworm parasite, so he may well have suffered from stomach distress. But he was not too sick to eat. In 2002, Franco Rollo and colleagues at the University of Camerino in Italy analyzed tiny amounts of food residue from the mummy's intestines. A day or two before his death, the Iceman had eaten a piece of wild goat and some plant food. The same analysis revealed that his very last meal was red deer and some cereals. The archaeobotanist Klaus Oeggl has concluded from bran-like food residues that the Iceman's diet also included the primitive form of wheat known as einkorn as well as barley, found on his garments, indicating that the Neolithic settlements south of the Alps where he lived cultivated these grains. Oeggl has even found that the small size of the wheat fragments in the gut, along with tiny flecks of charcoal, suggest that the grains were ground and then baked as primitive bread in open fires.

Archaeobotanists have used equally clever analyses of pollen and plant fragments to plot the Iceman's last movements. James Dickson of the University of Glasgow has identified no less than 80 distinct species of mosses and liverworts in, on, or near the Iceman's body. The most prominent moss, *Neckera complanata*, still grows at several sites in the valleys to the south, in some cases quite near known prehistoric sites. According to Dickson, a clot of stems found in the Iceman's possession suggests he was probably using the moss to wrap food, although other ancient peoples used similar mosses as toilet paper.

Taken together, the evidence strongly indicates that the Iceman's last journey began in the low-altitude deciduous forests to the south, in the springtime when the hop hornbeams were in bloom. But it may not have been a straight hike into the mountains. Oeggl has also found traces of pine pollen in the Iceman's digestive tract, both above and below the hornbeam pollen. This suggests that he may have climbed to a higher altitude where pine trees grow in mixed coniferous forests, then descended to the lower altitude of the hop hornbeams, and finally ascended again into the pine forests in his last day or two. Why? No one knows. But perhaps he wanted to avoid the steep, thickly wooded gorge of the lower Val Senales—especially if he was in a hurry.

When he reached a mountain pass now known as Tisenjoch, he likely paused to rest. He had completed a vertical climb of 6,500 feet (2,000 meters) from the valley below, and to the north faced a desolate, glacier-riven landscape. Perhaps the rocky hollow where he found himself offered some shelter from the wind. We do not know if his enemies caught up with him at that spot, or were waiting there in ambush for him to arrive. What we do know is that he never left that hollow alive.

In June 2001, Paul Gostner, director of the Department of Radiology at the Central Hospital in Bolzano, brought a portable x-ray machine to the Iceman's chamber. His intent was to prepare for a routine analysis of some broken ribs. The following day he dropped by the office of Eduard Egarter Vigl, director of the Institute of Pathology at the hospital and principal caretaker of the mummy, to report that the rib fractures were old and of limited interest.

"But I've found another thing that I can't explain," he said. "There is this strange extraneous object in the left shoulder." When he compared his recent x-rays (and CT scans taken three months earlier) of the Iceman's torso with earlier films taken by scientists in Innsbruck, Gostner managed to detect what his Austrian colleagues had missed: a dense triangular shadow smaller than a quarter and lodged beneath the Iceman's left shoulder blade. It turned out to be a stone arrowhead. This "casual discovery," as Egarter Vigl put it, instantly turned an inexplicable death more than 5,000 years ago into archaeology's most fascinating cold case.

The forensic evidence became even more intriguing in 2005, shortly after the hospital in Bolzano acquired a new high-resolution multi-slice CT scanning machine. Gostner, Egarter Vigl, Patrizia Pernter, a physician in the Department of Radiology, and Frank Rühli, a doctor and senior lecturer in anatomy at the University of Zürich, decided to take a closer look at the body with the new CT machine. In August 2005, doctors placed the Iceman on a

custom-built foam mattress, covered him with an insulated blanket and heaps of ice, and rushed him by ambulance (with a police escort) on the ten-minute ride from the museum to the hospital. There, with the kind of urgency usually reserved for humans in critical condition, they whisked the mummy into the scanning suite and quickly took a series of scans. "You had to do it before he thawed," Rühli noted, "so you had to hurry."

The results were astonishing. The sharpened piece of stone, probably flint, had made a half-inch gash in the Iceman's left subclavian artery. This is the main circulatory pipeline carrying fresh oxygenated blood from the pumping chamber of the heart to the left arm. Such a serious tear in a major thoracic artery would almost certainly lead to uncontrolled bleeding and rapid death. "This is a lethal wound," Rühli says. "It was pretty quick. With this kind of bleeding, you don't go walking uphill for hours."

This new medical evidence suggests that an attacker, positioned behind and below his victim, fired a single arrow that struck the Iceman's left shoulder blade—precisely the area at which prehistoric hunters aimed to bring down game with one shot. The arrow went clean through the bone and pierced the artery. Blood instantly began to gush out, filling the space between the shoulder blade and the ribs. In his few remaining minutes of life, the Iceman became a textbook case of what is now known as hemorrhagic shock. His heart started to race. Sweat drenched his garments, even at an altitude two miles (three kilometers) above sea level. He felt increasingly faint because not enough oxygen was reaching his brain. In a matter of a few minutes, the Iceman collapsed, lost consciousness, and bled out.

Then, in a fantastically fortunate cascade of circumstance, the brutal weather of the Ötztal Alps conspired with chance to perform one of the greatest embalming jobs in the history of human remains. The frigid glacial environment eventually tucked him in like a cold, wet blanket, immobilizing and preserving his body in snow, ice, and glacial meltwater. The little ravine protected his lifeless form from the bone-grinding action of the Niederjoch Glacier, which passed just a few feet overhead for the next 5,300 years.

Who killed the Iceman, and why? Was this a Neolithic version of highwaymen ambushing a hunter and snatching his catch? Or was he stalked and killed by a person, or persons, who knew him? Experts now believe that the mystery may hinge on a bizarre detail of the crime scene. The shaft of the fatal arrow was nowhere to be found. Someone must have pulled it out, leaving behind the stone arrowhead lodged in his body.

"I believe—in fact, I am convinced—that the person who shot the Iceman with the arrow is the same person who pulled it out," says Egarter Vigl. In an article that appeared this May in the German archaeology magazine *Germania*, Egarter Vigl and his colleagues noted that telltale markings in the construction of prehistoric arrows could be used to identify the archer much in the way that modern-day ballistics can link a bullet to a gun. They argue that the Iceman's killer yanked out the arrow shaft precisely to cover his tracks. For similar motives, Egarter Vigl reasons, the attacker did not run off with any of the precious artifacts that remained at the scene, especially

the distinct copper-bladed ax; the appearance of such a remarkable object in the possession of a villager would automatically implicate its owner in the crime.

Other, more controversial research has suggested that this final mortal blow may have been preceded by fierce, hand-to-hand combat. The late Tom Loy, a molecular archaeologist at the University of Queensland in Australia, claimed in 2003 that human blood from no less than four separate individuals had been identified on the Iceman's garments and weapons. But Loy's research has been aired only in media accounts, and skeptics in the academic community say the claims are impossible to assess until they are published in the scientific literature.

Nonetheless, the idea that the Iceman was attacked by more than one person complements the "theory of the crime" proposed by Walter Leitner, an archaeologist at the University of Innsbruck who is an expert in both archery and Stone Age culture. He believes the bloody mountaintop confrontation was the denouement of a political dispute that began down in the valley, where rivals within the Iceman's own tribe tried to assassinate him. A microscopic analysis of the Iceman's hand wound, and the fact that it had begun to close and heal, suggests that it occurred well before the final mortal blow. "So there must have been some fight, some kind of battle, at least one day—and perhaps even two or three days—earlier," said Egarter Vigl. "The time had come where his opponents had become stronger," Leitner speculates, "but he didn't recognize that his reign was coming to an end and was holding on to his position." Leitner says that after the fight in the village, "It looks as if the Iceman was planning to flee and that his trip was brought to an end by his opponents."

The previous, erroneous theories about the Iceman's demise remind us that much of the current speculation, while plausible, must stand up in the face of continuing research. Above all, this tale of an enigmatic and bloody death atop a desolate alpine ridge is a story about remarkable scientific insight brought to bear on the skimpiest of clues—a fingernail here, a milligram of food residue there, a few grains of pollen—in order to reconstruct a riveting scene of Neolithic noir. Although not a single grunt or cry has passed through the Iceman's mummified lips in more than 5,000 years, the ongoing investigation continues to tell us new and startling things about life—and death—in the Stone Age.

