

Curriculum/Technology Committee

February 1, 2021

Welcome and Updates

- ▶ Jen Farthing, Director of Curriculum



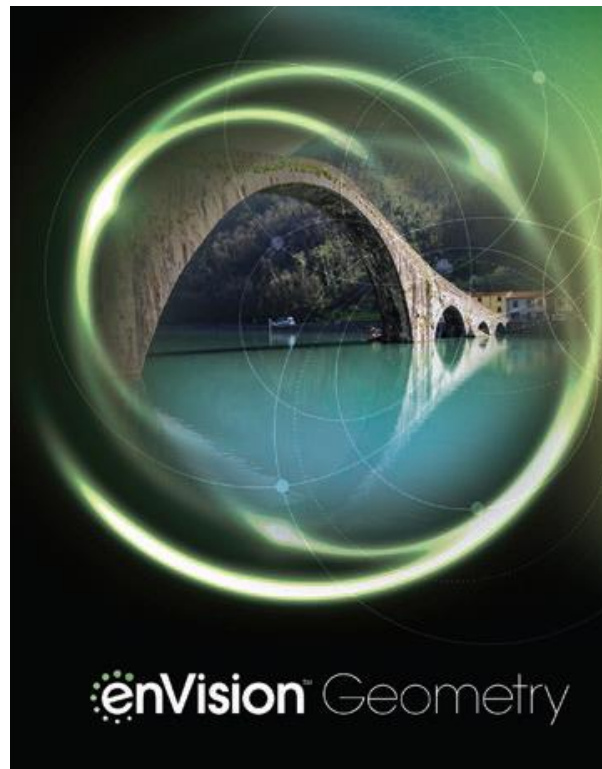
Textbook for Algebra 1

- ▶ *Envision AGA Ohio Common Core Algebra 1*
ISBN: 978-1-418-33709-4



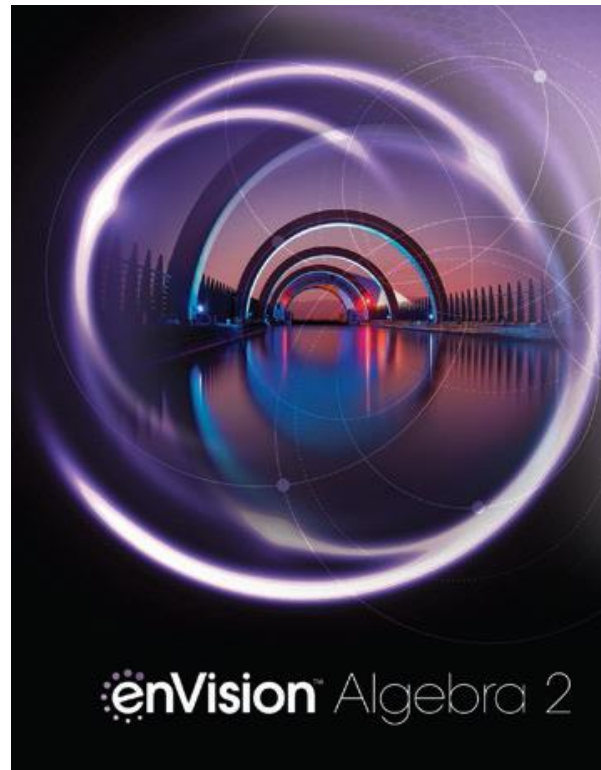
Textbook for Geometry

- ▶ *Envision AGA Ohio Common Core Geometry*
ISBN: 978-1-418-33711-7

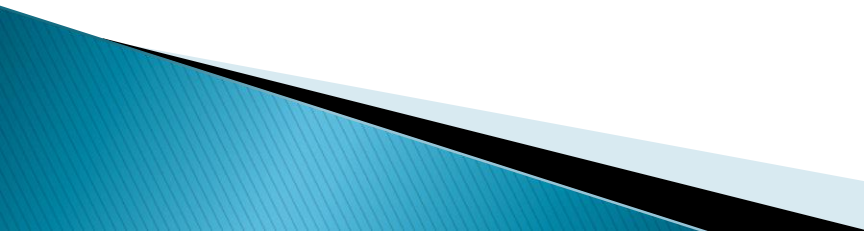


Textbook for Algebra 2

- ▶ *Envision AGA Ohio Common Core Algebra 2*
ISBN: 978-1-418-33710-0



Reason we Selected the Envision AGA Series

- ▶ 1) The ready-to-go interactive activities powered by Desmos are embedded at point of use. These highly visual interactives foster conceptual understanding and bring mathematical concepts to life.
 - ▶ 2) Mathematical Modeling in 3 Acts use reality-based mathematics instruction, making mathematics relevant for students while developing their conceptual understanding.
- 

Act One



The Hook:

Students watch a video that prompts them to ask questions—in this case, “How many shoes can he pack?” Rather than being given all information up front, students actively define the word problem they are going to solve. **Act One** provides an entry point for every student, no matter their level of mathematical proficiency.

Act Two



The Model:

Students model with mathematics. Here, students figure out how they can determine how many pairs of shoes can be packed while remaining within the suitcase weight limit. Students apply the mathematical concepts learned in the chapter and select the appropriate tools to solve the problem they defined in **Act One**. This is closer to the work of STEM professionals—it's both more challenging, and more fun.

Act Three



The Solution:

Students watch a video where the answer to the problem is revealed. In **Act Three**, students root for their conjectures and analyze their results. This act of analyzing and justifying solutions embodies the spirit of the Standards for Mathematical Practice.

Pose the Sequel

Be Precise: Use **Question 15** to present a similar problem situation involving inequalities. You can assign to early finishers or as homework so students can test the usefulness of their models.

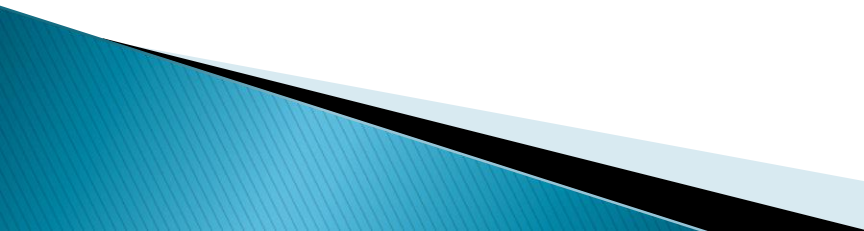
Q: A different airline has a weight limit of 40 pounds for a checked bag. Explain how the answer would change for this airline.

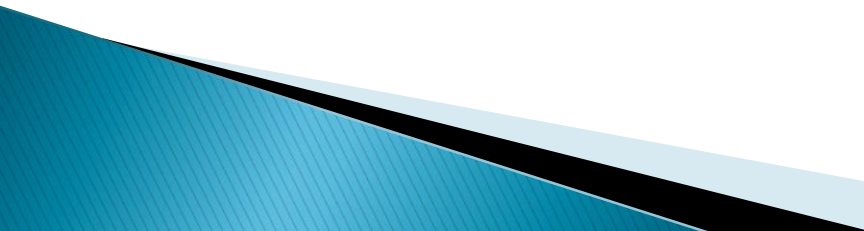
Using their models and the answer in the video, look for student solutions around 13 or 14 pairs of shoes.

Q: If the weight limit were 100 pounds, would your answer be twice the answer in the video? [No; Sample answer: Twice as many pairs of shoes wouldn't fit in the suitcase.]

Sequel:

Students can extend their learning with a **Sequel** problem. The **Sequel** is a reimagined word problem related to the original problem, which requires students to model with mathematics.

- ▶ 3) The robust Online Practice powered by MathXL for School uses powerful learning aids to provide guidance to students as they work through embedded, auto-graded homework. Every lesson has additional assignments for differentiating learning.
 - ▶ 4) Habits of Mind questions require students to develop the thought process and skills used by proficient mathematical thinkers.
 - ▶ 5) enVisionSTEM Projects provide opportunities for students to explore situations that address real social, economic, and environmental issues, fostering mathematical connections across topics.
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- ▶ 6) A single learning management system, Savvas Realize, provides everything needed for planning, teaching, and assessing – and allows complete customization of the program at every level.
 - ▶ 7) The program features a wealth of easily customizable print and digital resources that teachers can use for planning intervention and to support English Language Learners.
 - ▶ 8) enVision A|G|A provides an assessment suite of ready-to-use diagnostic, formative, and summative assessments – or build your own test.
- 

- ▶ 9) Daily Instruction made easy! Goal is always to develop a growth mindset. Trying new and challenging things to help us grow. Taking risks and making mistakes are an important part of the learning process. enVision A|G|A provides support to facilitate mathematical discourse and productive struggle so students develop a growth mindset.

Step 1 Explore

Problem-Based Lesson Launch



Step 2 Understand & Apply

Series of Examples



- Students work independently, then come together in small groups to discuss strategies and extend thinking.
- Focus on process, not answers
- 3 Types: “*Model & Discuss*,” “*Critique & Explain*,” and “*Explore & Reason*”
- Print OR Digital – PBL can be found in the print SE. Or, teachers can assign PBL online via SavvasRealize.com.
- REMINDERS – Reference TE for support; set expectations; give students time to experience productive struggle; foster communication

- Series of visual examples that promote understanding
- Types of Examples: *Conceptual Understanding, Skill, Application, & Proof (in Geometry only)*
- Print OR Digital – Every print example has a digital counterpart
- Examples are followed by a quick formative assessment called, “**Try It!**”
- REMINDERS – TE offers robust probing questions designed to scaffold student learning; **Habits of Mind** questions solidify students’ understanding



Step 3
Practice & Problem Solving
Independent Work



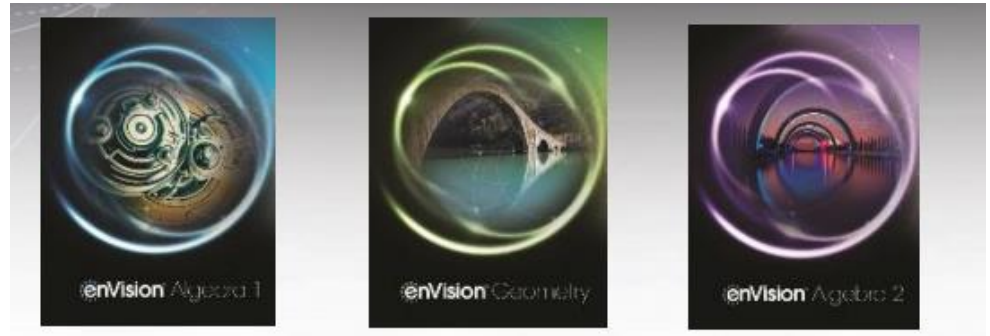
Step 4
Assess & Differentiate
*Lesson Quiz &
Differentiation Library*

- Students embark on a series of carefully sequenced and crafted exercises to apply what they just learned and to practice towards mastery.
- Intentionally sequenced into four parts: **Understand, Practice, Apply, and Assessment Practice**
- Print OR Digital – Can be completed in the print SE. Alternatively, teachers can offer students digital personalized practice on SavvasRealize.com (via **MathXL for School Practice & Problem Solving** or **MathXL for School Mixed Review**)

- Administer the print or digital Lesson Quiz as a quick formative assessment to help determine differentiation needs.
- Based on the results of the Lesson Quiz, assign students appropriate differentiation activity.
- Print OR Digital
- **REMINDERS** – See TE to preview the suite of differentiation resources that will address the needs of ALL students (Intervention, On-Level, & Advanced)

- ▶ 10.) This series has some of the highest ratings.

We considered Glencoe, HMH, and others, and enVision felt the most complete!



“ALL GREEN” rating by *EdReports!*

Highest-Level Rating:

✓ **MEETS EXPECTATIONS**

✓ Algebra 1, Geometry, Algebra 2

- ✓ Gateway 1: FOCUS & COHERENCE
- ✓ Gateway 2: RIGOR & MATHEMATICAL PRACTICES
- ✓ Gateway 3: USABILITY

Benefits of the New Math Textbooks in the 2021 /22 Geometry Classroom

- ▶ 1) Increased DIGITAL resources (print still available)
 - Interactive Student Edition (Depth of Knowledge)
 - Virtual Nerd Videos
 - MathXL (through Savvas Realize)
 - Online Assessments
- ▶ 2) Increased Performance–Based Opportunities
 - enVision STEM Project
 - Mathematical Modeling in 3 Acts
 - Performance Assessments (Forms A and B)
- ▶ 3) Increased Uniformity across the Geometry Professional Learning Community
 - Wealth of Quality Resources (editable)
- ▶ 4) More Time for Teachers to “Facilitate” instead of “Lecture”
 - Resources allow for students to work at their own pace

Standards Analysis – Math Academic Coaching Benefits



Class mastery by standard

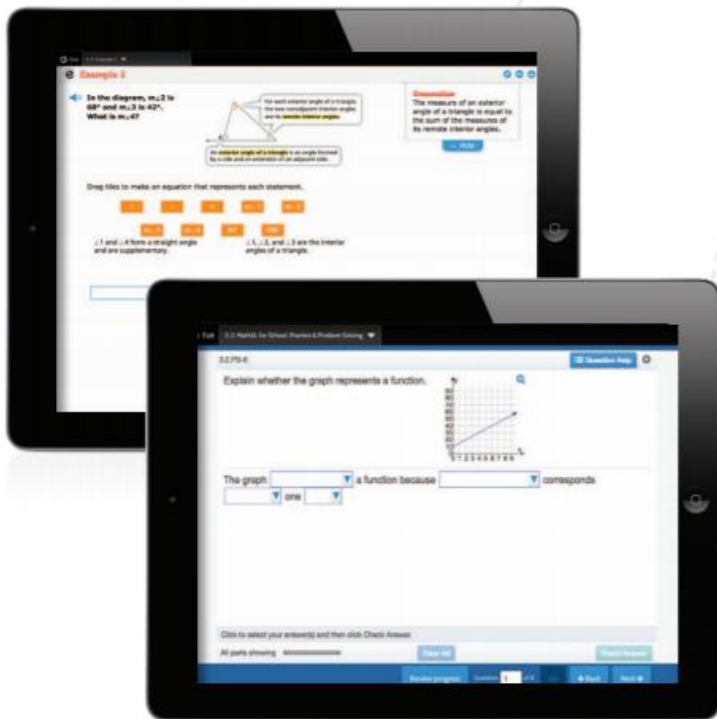
Showing 1-5 of 43 standards [Sort Proficiency Score Low to High](#)

[Help me interpret this data](#) [Export data](#)

Mastery for this class (% of students mastered)		80%	60%	40%	–	–
Name ▾	% Mastered ⇅	3.OA.2 ⇅ Standard Info	3.OA.3 ⇅ Standard Info	3.OA.1 ⇅ Standard Info	MP.8 ⇅ Standard Info	MP.7 ⇅ Standard Info
student, ohio1	67%	7/7	6/7	2/3	–	–
student, ohio2	100%	7/7	6/7	3/3	–	–
student, ohio3	33%	5/7	4/7	1/3	–	–
student, ohio4	33%	4/7	5/7	1/3	–	–

Academic Coaching Benefits

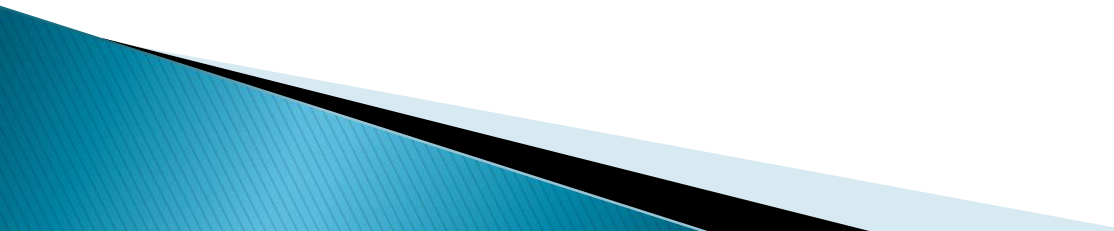
Digital Intervention Instruction example



Adaptive RTI

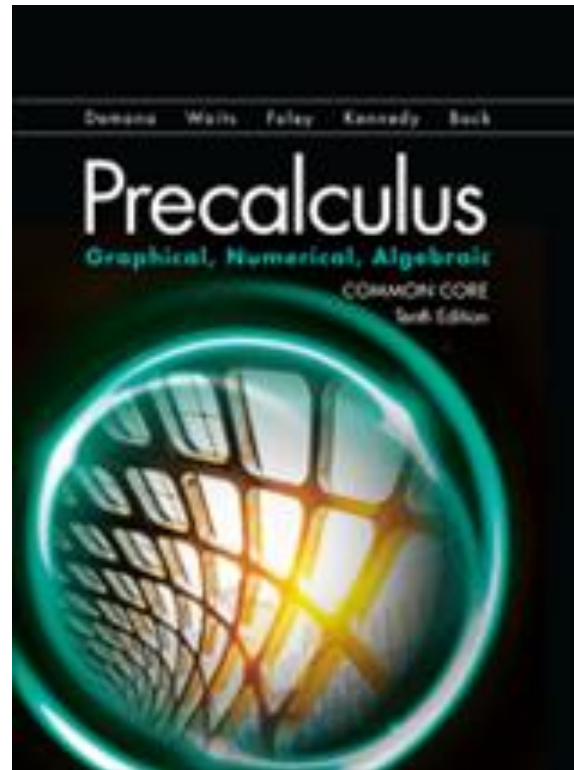
- **Lesson Quizzes** provide a quick way to determine the need for intervention.
- **Auto-assigned Lesson Differentiated Options** include Remediation, Additional Practice, or Enrichment.
- **Adaptive Practice** in every lesson supports struggling students with prerequisite skills not yet mastered and moves advanced students through the skill more efficiently.
- **Individualized Study Plans** provide a personalized learning pathway based on the results of each Topic Readiness Assessment.

Quotes from Math teachers:

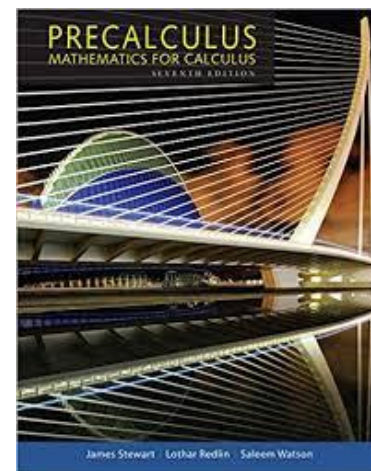
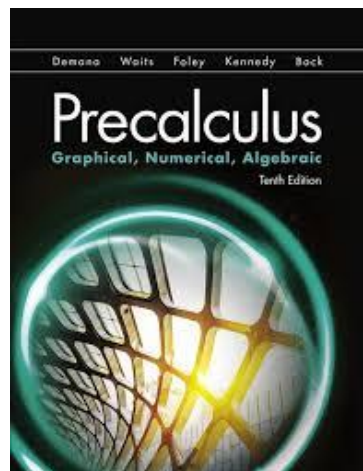
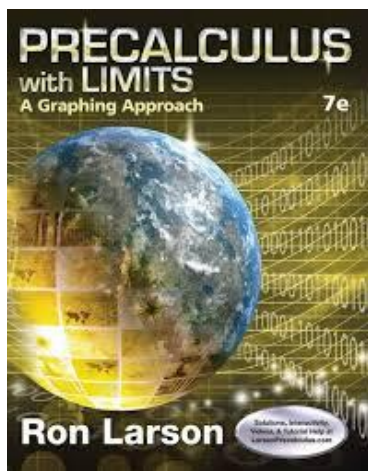
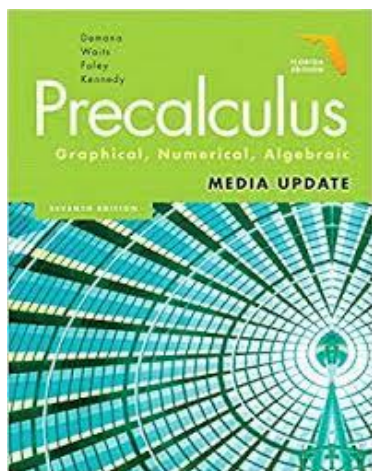
- ▶ “I like the assessment features and how differentiation/remediation is just a click away. I think if the teachers truly dive in and use the resources we will see success and less 'reteaching' topics that have been taught in previous years.”
 - ▶ “All of the tools and reteaching and reports that go with it; even the cute little videos”
- 

Textbook for Precalculus

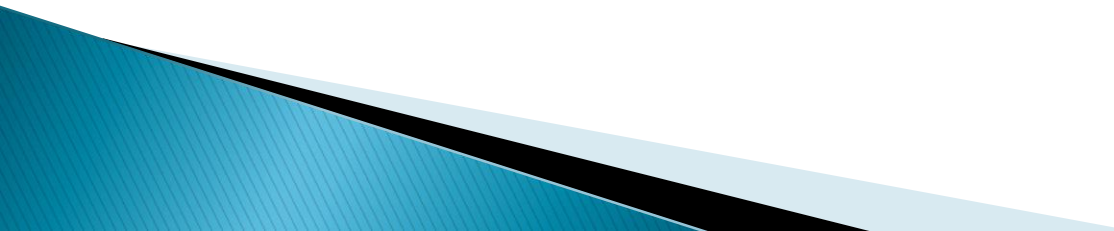
- ▶ *Precalculus: Graphical, Numerical Algebra for Precalculus* ISBN: 978-0-134-78202-7

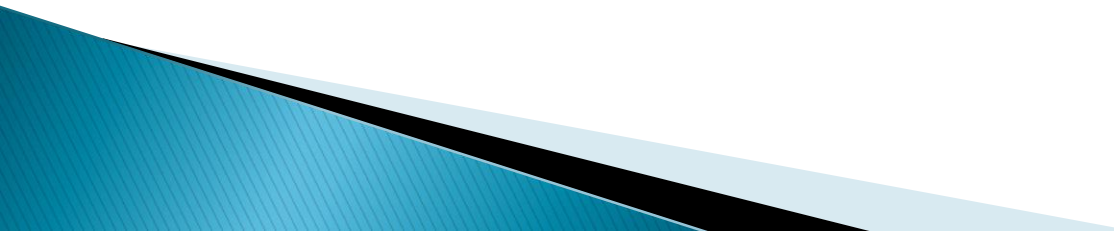


- ▶ We examined over 10 different Pre-calculus books from all different publishers and authors:



Why we chose Savvas:

- ▶ It made sense to continue the series by selecting the Pre-calculus textbook that parallels with the A|G|A series.
 - ▶ It also uses MathXL to give awesome online support.
 - ▶ Units connect directly with Calculus for the future of these students!
- 

- ▶ The Ohio Math Standards for a 4th year math course are all covered in this book.
 - ▶ The standards are full of topics that have a + sign, meaning optional for Algebra 2 or Geometry (these topics are not on state tests). But what I love is that these topics are all in this book for a 4th year math class!
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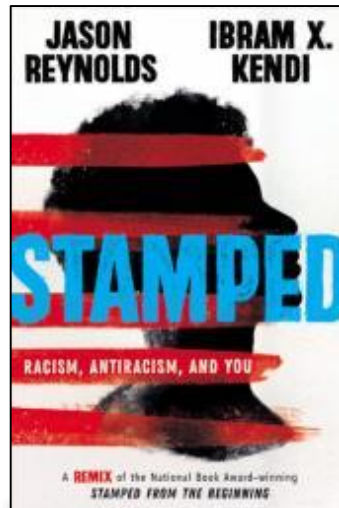
Textbook for Math Grades 7–8

- ▶ *Reveal Math* ISBN: 978-1-418-33710-0

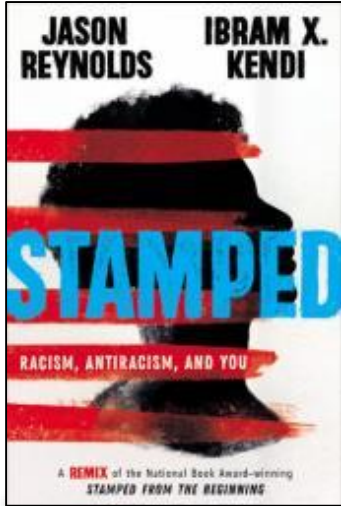


English 10

- ▶ Jen Farthing, on behalf of Megan Holzheimer, English Teacher at Twinsburg High School



Stamped: Racism, Anti-Racism, and You by Jason Reynolds and Ibram X. Kendi (2020) Book Proposal



Overview: The construct of race has always been used to gain and keep power, to create dynamics that separate and silence. This remarkable reimagining of Dr. Ibram X. Kendi's National Book Award-winning *Stamped from the Beginning* reveals the history of racist ideas in America, and inspires hope for an antiracist future. It takes you on a race journey from then to now, shows you why we feel how we feel, and why the poison of racism lingers. It also proves that while racist ideas have always been easy to fabricate and distribute, they can also be discredited. Source: Goodreads.org

Scholastic Grade Level Recommendation:

Grades 7-12

Common Sense Media Recommendation:

Grades 7+

Merit and Unit Goals:


- Genre: nonfiction (continue to support need of informational texts)
- Provides a diverse perspective of United States history that is frequently ignored in textbooks/literature books
- Information supports the historical context we share with students in American literature so they have a better understanding of the time period in which our authors are/were writing
- Supports department and district goals of incorporating more inclusive voices into our curriculum

Social Justice in Literature

- ▶ **Jen Farthing, on behalf of Megan Holzheimer, English Teacher, Twinsburg High School**



Course Introduction

- ▶ Offered to juniors or seniors as an English elective course
 - ▶ Establish classroom guidelines and expectations for safe and supportive dialog
 - ▶ Reflect on implicit bias (Teaching Tolerance tool)
 - ▶ Understand and unpack the 4 I's of oppression activity
 - ▶ Review Social Justice Standards (from Teaching Tolerance)
 - ▶ View Chimamanda Ngozi Adichie's TED Talk "Danger of a Single Story", discuss implications, draw connections
- 

Exploration of Black Voices in Literature

- ▶ **Danee Pinckney, English Teacher, Twinsburg High School**

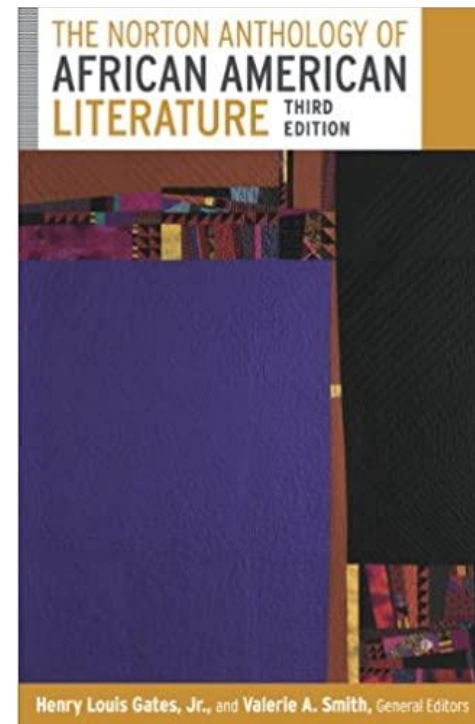
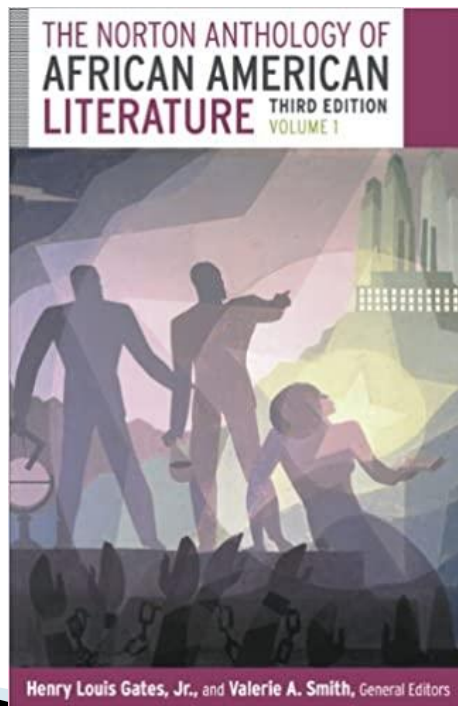


Course Description

This is an elective literature course examining the history and culture of African Americans in the United States beginning with early African literary tradition and onward through the modern African-American experience in an interdisciplinary design. The course addresses the literary and artistic contributions of early Africans and African-Americans to American culture. Students will recognize the range and variety of the writing of African-Americans throughout history and into contemporary literature and will be able to identify the ways that this literature responds to historical and social events. Through close consideration of verbal and literary modes, including, but not limited to: African retentions, oral traditions, signifying, folklore, and music, the course will explore the creation of the unique African American literary voice, and how it has affected both African Americans' understandings of themselves, as well as the ways in which they have historically been understood in the American popular imagination. In an effort to critically map the genealogies of this tradition we will be interrogating not only the historical and political contexts of the works, but also the ways in which issues of gender, sexuality, and class specifically inform the works. Critical thinking, reading, writing, and oral presentation skills are emphasized. *(Open to 11-12 grade students)*

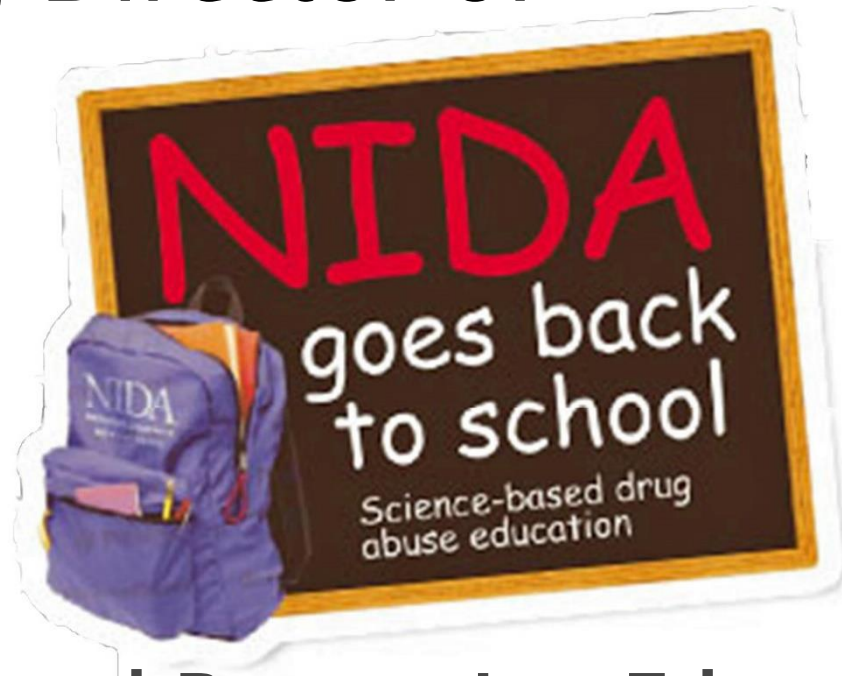
Textbook for Exploration of Black Voices in Literature

- ▶ *The Norton Anthology of African American Literature* Third Edition ISBN: 978-0-393-91155-8



Brain Power!

- ▶ **Jen Farthing, Director of Curriculum**



Classroom-based Prevention Education
Universal Population K-12
Ohio Schools



State Certified Prevention Agency
501 (C) (3) nonprofit
Ohio-Certified Prevention Specialist
(OCPS)

Drug and Alcohol Abuse in the United States

The United States contains only 5% of the world's population, but we account for about 60% of illegal drug consumption worldwide.



Opiate Crisis

Pill for Every Ill

1990s Pain as the 5th Vital Sign



2017 Ohio Costs



Opioid problem
\$8.8 B*



K-12 education
\$8.2 B

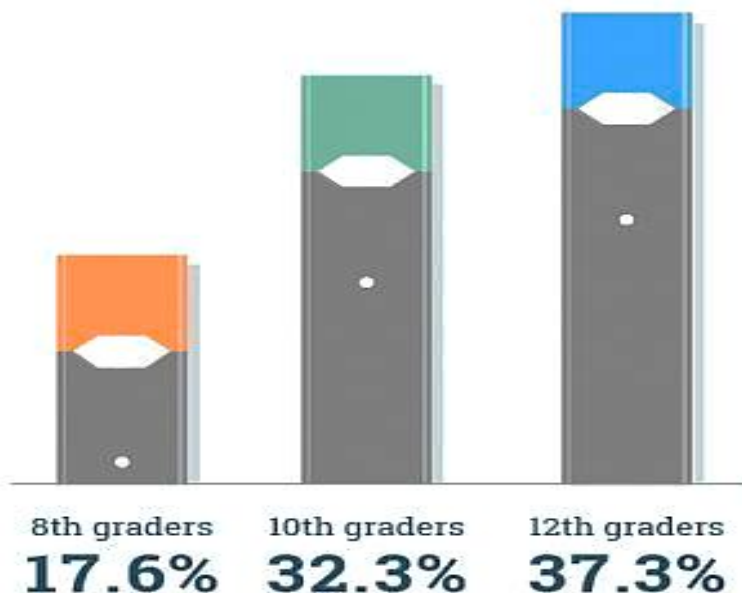
*Include treatment, prosecution, incarceration, lost productivity

Source: Ohio State University 2018

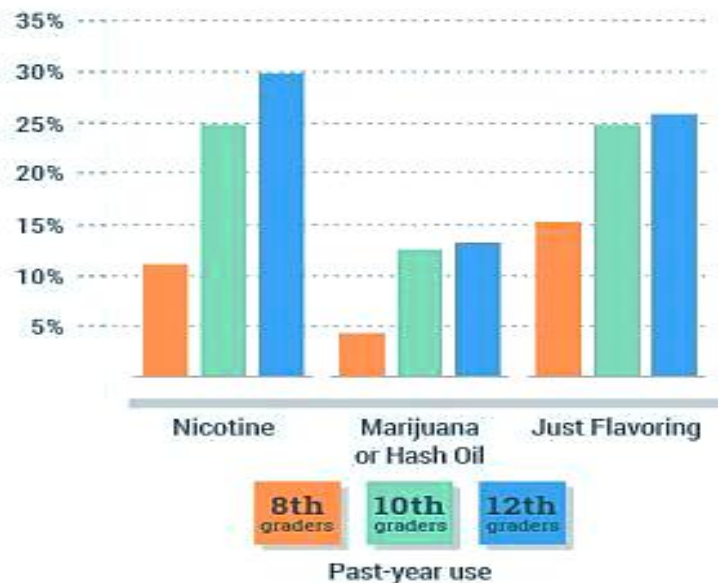
TEENS USING VAPING DEVICES IN RECORD NUMBERS

2017

PAST-YEAR VAPING



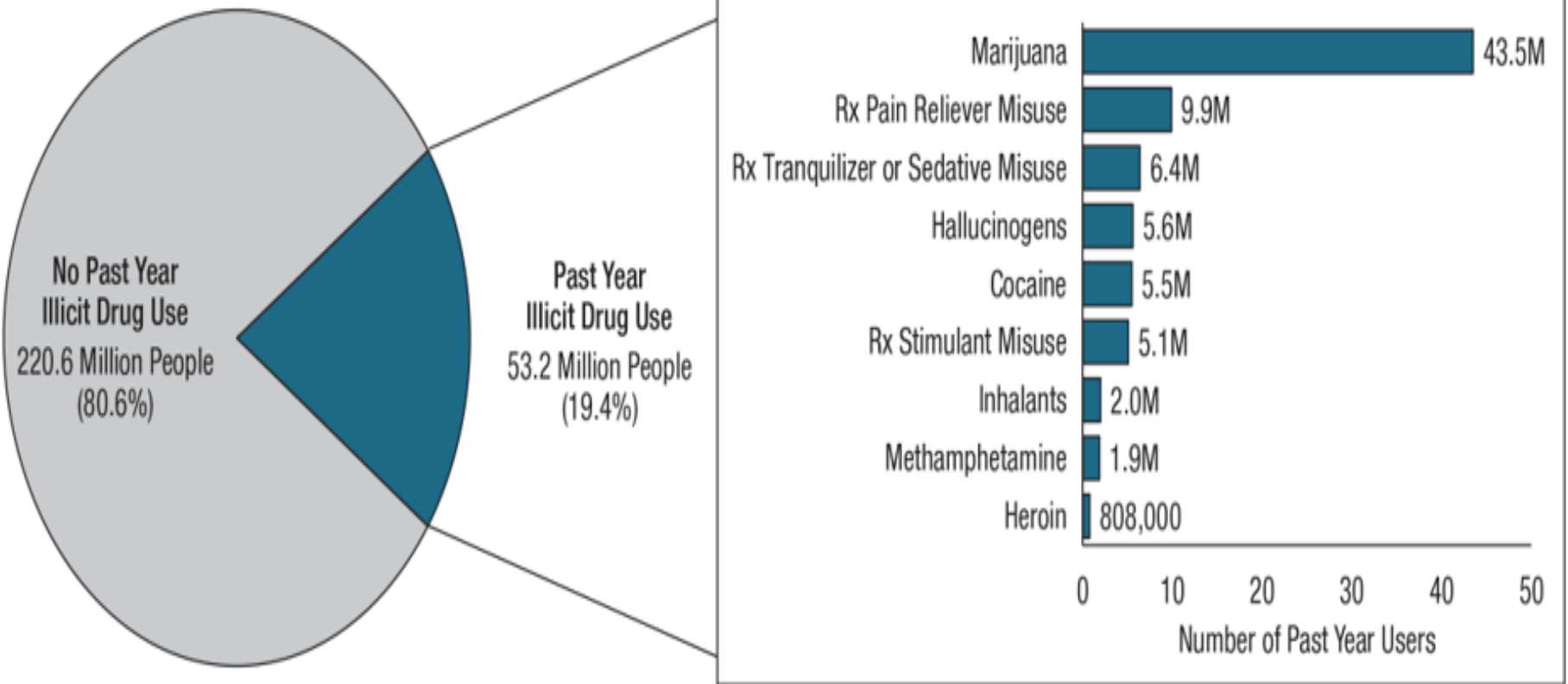
WHAT DO TEENS SAY THEY ARE VAPING?



NEARLY 2 IN 5 STUDENTS IN 12TH GRADE REPORT PAST-YEAR VAPING, RAISING CONCERNS ABOUT THE IMPACT ON BRAIN HEALTH AND POTENTIAL FOR ADDICTION.



Past Year Illicit Drug Use among People Aged 12 or Older: 2018



Rx = prescription.

Note: The estimated numbers of past year users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past year.

SAMHSA
Substance Abuse and Mental Health
Services Administration

Results from the 2018 National Survey on Drug Use and Health:

What works in Prevention?



Key Strategies

1. Information Dissemination
2. Prevention Education
3. Alternative Strategies
4. Community-based Process
5. Problem I.D. and Referral
6. Environmental Strategies

PREVENTION EDUCATION

Preventing Drug Abuse
in
Adolescents and Young Adults



In School

If possible, school-based prevention programs **should be integrated into the school's academic program...***

*Preventing Drug Abuse among Children and Adolescents
U.S. Dept. of Health and Human Services,
National Institutes of Health

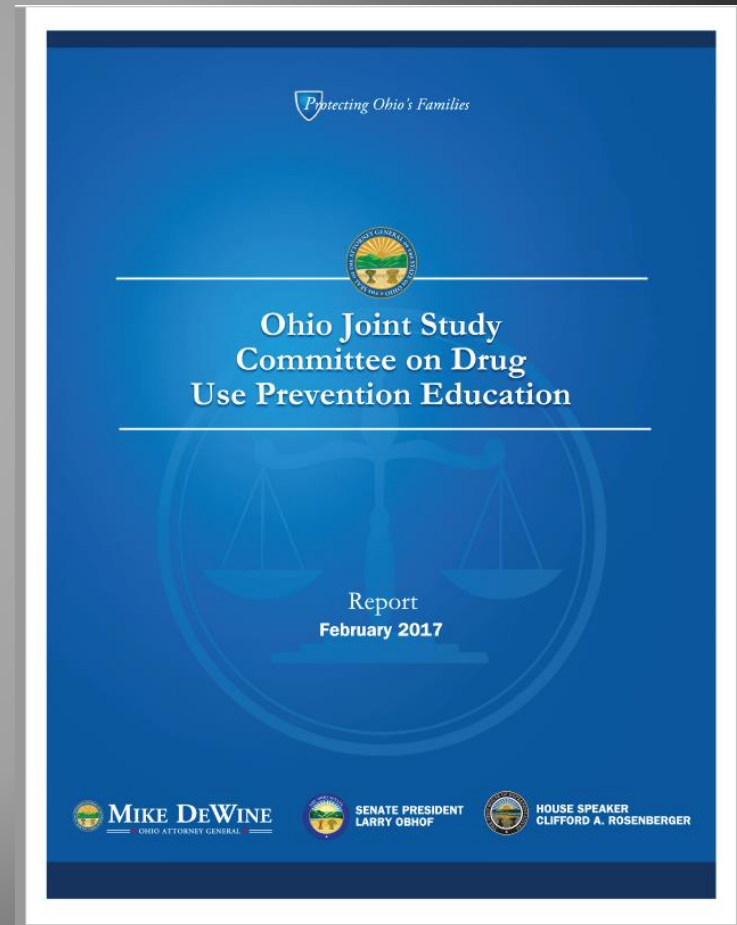
Brain Power

by the National Institute on Drug Abuse



Why Brain Power / The Brain?

1. Sustainability
2. Cost Effective
3. Created by NIDA
4. Suggested program in 2017 Ohio Joint Study Committee on Drug Use Prevention Education



Brain Power Curriculum

Brain Power by the National Institute on Drug Abuse

An interactive school program for Grades K-12



- Science-based drug abuse prevention education
- Lessons on addiction and how drugs affect the body
- Classroom instruction based on the Theory of Reasoned Action
- Incorporates “Media Literacy,” a promising practice for prevention

Aligns to National Science and Health Standards

Unifying Concepts and Processes

Levels K-4

How Mission Is Aligned

Systems, order, and organization

The mission explains the key concept that the brain is part of a larger system—the human body—and that both systems work together to make all human behavior possible.

Standards for Science and Technology

Levels

How Mission is Aligned

Characteristics of organisms

This mission introduces students to the concept that all organisms have basic needs. One need of humans is to have a brain to perform many key functions of living.

Grades 4–6 Program Concepts

NIDA's Brain Power - Grade Levels 4-5

Module	Concepts
1	Drugs in Society (Legal & illegal, drugs in the media, why drugs are such a problem for society)
2	Your Amazing Brain (Parts & Function of Brain, and their part in larger system-the human body)
3	Neurotransmission (Neurons, Receptors- difficult concept, looking for basic understanding)
4	Stimulants: Nicotine, Caffeine, Cocaine, Amphetamine (Effects on brain, nervous system and body)
5	Alcohol, Marijuana and Inhalants (Effects on the brain, nervous system and body)
6	What is addiction? Compulsive Use, Tolerance, Withdrawal (Addiction & drug abuse in U.S. society)

NIDA's Brain Power - Grade Level 6

Module	Concepts
1	The Brain & Nervous System (Brain parts & function, Neurotransmission)
2	Legal Doesn't Mean Harmless (Nicotine & Alcohol –Negative effects on human body, why it's illegal for children and teens)

4

5

6

CLASSROOM-BASED PREVENTION EDUCATION

Effective programs are:

- ❑ Age appropriate
- ❑ Occur at every stage of development
- ❑ Continuous
- ❑ Science-based
- ❑ Theory of Reasoned Action



Supplemental Lessons online



National Institute
on Drug Abuse for Teens
Advancing Addiction Science

[Teens](#)

[Teachers](#)

[Parents](#)

[Drugs & Health Blog](#)

[National Drug & Alcohol Facts Week®](#)



Have a drug problem—
need help?

[Teachers](#) / [Lesson Plans](#) / E-Cigarettes: A Dangerous Trend

Lesson Plans

E-Cigarettes: A Dangerous Trend

PRINT

Created by:

Scholastic and the National Institute on Drug Abuse

Teens now use e-cigarettes more than any other nicotine-containing product. In this lesson, students gain a scientific understanding of the known hazards and potential risks of electronic cigarettes, which contain the same addictive nicotine found in cigarettes. Includes an adapted version for grades 4-6 reading level.

What's In the Lesson Plan:

- Student article
- Student work sheet
- Vocabulary lists
- Writing prompts
- Reading suggestions

Grade Level(s):

6-12

Time / Duration:

- 1 class period

Materials:

- Printer/copier for student handouts

Alignment with National Standards:

- Common Core State Standards
- Next Generation Science Standards Practices
- National Science Education Standards

[See All Lessons](#)



Teacher's Guide and Student Worksheet

[View](#) | [Download](#)

Student Article

[View](#) | [Download](#)






and Extras

National Institutes of Health

Researchers | Medical & Health Professionals | Patients & Families | [Parents & Teachers](#) | Students & Young Adults

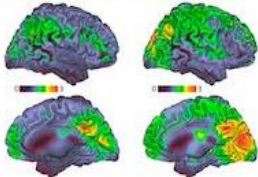
NIDA NATIONAL INSTITUTE ON DRUG ABUSE
The Science of Drug Abuse & Addiction

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Researchers



Funding Opportunities

Funding Priorities

Research Training and Career Development

Research Resources

Data Harmonization Projects

Public-Private Partnerships

[View More](#)

News

NIDA announces 2012

Researcher eNIDA

NIH Analysis of Reorg Responses

Former NIDA grantee wins Nobel Prize

NIDA Launches Online Family Checkup

New Opioids and Pain Management CMEs

ONDCP & NIDA partner to develop innovative interactive CMEs [More](#)

Latest Science

Potential Pain Medication Targets Peripheral Nerves


Animal Research Advances Effort to Develop Vaccines Against Cocaine, Heroin Abuse

Prenatal Cocaine Exposure Increases Monkeys' Impulsivity Into Adulthood

[View More](#)

Data and Statistics


One baby per hour is born suffering from opiate withdrawal in the U.S.



[See the infographic](#)

[Get More Stats](#)

NIDA Director



Biography

Messages from the Director

Reports

[View Director's Page](#)

NIDA AIDS Research Program

National Drug Abuse Treatment Clinical Trials Network

Intramural Research Program

International

<http://www.drugabuse.gov>

Adjourn

- See you at our next regularly scheduled meeting on April 12, 2021

