



Mantua Elementary presents

ADVANCED ACADEMIC PROGRAMS

SPRING 2020



Welcome to Mantua!

We are a “Basic” school that is
*Powered by **Technology**, Enriched Through the **Arts***

We focus on:

- ❖ *Mindfulness & Breathing*
- ❖ *Movement*
- ❖ *Academic Conversations*



Philosophy

“What educators and psychologists recognize as giftedness in children is really **potential** giftedness, which denotes **promise** rather than **fulfillment** and **probabilities** rather than **certainties** about future accomplishments.

How high these probabilities are in any given case depends much on **the match** between a **child’s budding talents** and the kinds of **nurturance** provided.”

~Dr. Harry Passow, 1985

What are advanced academic services?



FCPS is committed to providing challenging learning experiences for all learners that build on individual strengths and optimize academic potential. In order to meet the needs and develop the potential of advanced learners, FCPS provides a **continuum of advanced academic services.**

Continuum of Advanced Academic Services

Elementary School	Middle School	High School
Young Scholars All Levels K-12		
Critical and Creative Thinking Strategies Grades K-6 Level I	IBMYP Selected Schools Grades 6-10	
Differentiated Lessons in Areas of Academic Strength Grades K-6 Level II	Honors Courses in Areas of Academic Strength / Interest Grades 7-8	Honors Courses Advanced Placement International Baccalaureate Dual Enrollment Thomas Jefferson High School for Science and Technology
Part-Time Advanced Academic Program Grades 3-6 Level III		
Full-Time Advanced Academic Program Grades 3-8 Level IV		



Adapted from the *Integrated Continuum of Special Services* by Sally Reis and *Levels of Service* by Donald Treffinger.

A student receiving
Advanced Academic services
needs a learning environment that...



- *fosters continuous **intellectual growth**
- *stimulates the **imagination**
- *promotes **inquiry**
- *encourages **risk-taking**
- *nurtures their **unique social-emotional needs**
- *is not just “more work”

The Level IV Program

Mathematics is accelerated by one grade level

Provides mastery, enrichment, and extension of core curriculum

Differentiated in depth, breadth, and pace of instruction

A strong emphasis on critical and creative thinking, and problem-solving

Differentiated curriculum and instruction in English, Social Studies, Mathematics, and Science

Ongoing opportunities for reflection and self-assessment

2020 – 2021
29 Center schools
and
66 Local Level IV schools

What are Local Level IV Services at MANTUA?

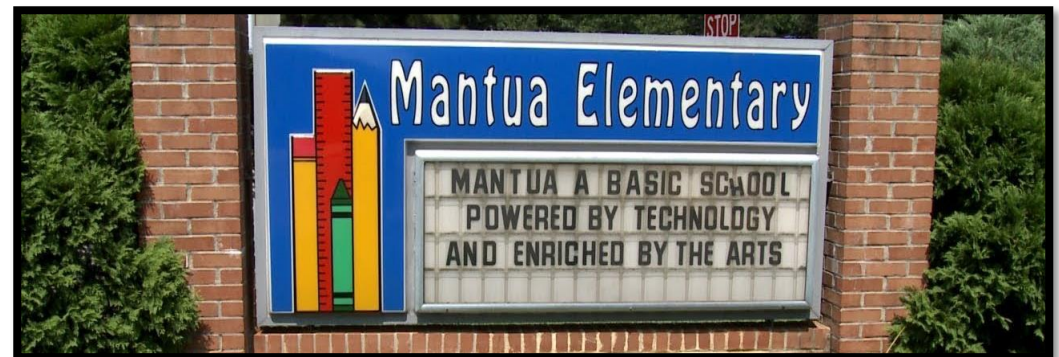


Full-time center curriculum at the local school

Center eligible students may stay at their local school and receive Level IV services.

Flexible grouping is used to add students with specific areas of academic strength.

Teachers implement the Level IV center curriculum framework that is extended and enriched to provide depth and complexity in the four core subject areas.



Comparison of Local Level IV (LLIV) and Center

	Local Level IV	Center
Curriculum & Resources	Materials from the AAP Curriculum Framework	Materials from the AAP Curriculum Framework
Learning Objectives	AAP POS Alignments	AAP POS Alignments
Teacher Qualification	<ul style="list-style-type: none"> Teachers have 5 years to earn their endorsement in AAP Teachers have opportunities to attend full-day trainings AAP teachers plan with other AAP teachers 	<ul style="list-style-type: none"> Teachers have 5 years to earn their endorsement in AAP Teachers have opportunities to attend full-day trainings AAP teachers plan with other AAP teachers
Class Make-up	<ul style="list-style-type: none"> Only students from the local school may attend All center eligible students may attend the LLIV program. Schools may add additional students to the LLIV program in their area(s) of academic strength. 	<ul style="list-style-type: none"> Students from multiple schools attend All students have been found center eligible



Curriculum



“Learning opportunities for gifted learners must consist of a continuum of differentiated curricular options, instructional approaches, and resource materials.”

~National Association for Gifted Children Standard

Intelligence is not how much you know or how fast you learn but how you behave when you don't know the answer.

So . . . if we want to develop children who think critically, we must present curricular problems, challenges, discrepancies or dilemmas for which the answers are not easily accessible.



How is the AAP Curriculum Different?



Concept-Based Instruction

- “Big Ideas”
e.g. change,
systems,
conflict



Problem-Based Learning

- Real world
- Structured and controlled by teacher but student-driven

reason
listen
THINK

Students Working as Experts in the Field

- Evidence to support reasoning
- Research
- Scientific reasoning



Problem Solving and Competitions

- Mathematics problem-solving competitions
- Science investigations

Level IV:
Connecting It
All Together

Extensions of
the POS

Progress
Report
Connections

Curriculum
Framework
for AAP

Parent
Resources

POS: Program of Studies

AAP Level IV Curriculum Guides

All Level IV
teachers have
access to the
guides

Social Emotional
Needs of
Advanced Learners

Fostering a
positive classroom

Curriculum
Framework

Critical and
Creative Thinking

Assessments for
Growth

POS grade-level
and AAP
extensions

Concept-based
development

Language Arts

Math

Science

Social Studies



Extension of the Core Curriculum

- For 3rd- 6th grades
- Aligned with progress report standards
- Connected to AAP curriculum resources



Language Arts

Listens and speaks for specific purposes

3rd Grade POS

Listen attentively by making eye contact, facing the speaker, etc.

Ask, respond to questions from teachers, other group members

Explain what has been learned

AAP 3rd Grade Extensions

- ~~Participate in group discussions~~ as a listener and a speaker in seminars
- Ask clarifying questions and take notes when listening to a speaker
- Develop listening/oral communication skills
- Participate in group discussions as a listener and a speaker in seminars
- Understand and encapsulate the speaker's main points
- Articulate understanding of a reading to a partner.

Curriculum Frameworks

Curriculum and Resources to Support the Differentiated Framework Advanced Academic Programs (Levels II, III, and IV) Grade 3	
Professional development for use of these resources is provided throughout the year by the Advanced Academics Program Office.	
Mathematics	
Essential	Where to Order or Access
Project MP Mentoring Mathematical Minds (Units: MoLi Stone, Awesome Algebra, Measurement, Digging for Data) incorporated into the Level IV Teaching Guide – A Companion Piece to the Elementary Mathematics Pacing Guide	ES Advanced Academic Programs 24/7 site www.kendallhunt.com
Parallel Curriculum units and lessons (units: Math Course, Puzzle Patterns)	ES Advanced Academic Programs 24/7 site
Critical and Creative Thinking – Model Lessons	ES Advanced Academic Programs 24/7 site
Hands-on Equations and Verbal Problems	www.boranson.com
Supplemental	Where to Order or Access
Great Expectation Problems	ES Advanced Academic Programs 24/7 site
William and Mary Units: Spatial Reasoning and Beyond Base Ten	http://www.prufrock.com/productdetails.dm?PC=752 http://www.prufrock.com/productdetails.dm?PC=755 http://www.prufrock.com/productdetails.dm?PC=531
Challenge Math	www.wrightgroup.com
Puddle Questions Assessing Mathematical Thinking	www.wrightgroup.com
Groundworks Series (available for 5 strands)	www.wrightgroup.com
Roads to Reasoning*	www.wrightgroup.com
Geometer's Sketchpad	www.dynamicee.com/etv.com
Techniques of Problem Solving (TOPS)	www.pearsonschool.com
Measured for Life Accompany Publishing Play	www.accompanypublishing.com/measuredforlife.html
Competitions/Challenges	Where to Order or Access
Continental Math League	www.continentalmathematicsleague.com/cml.html
Math Olympiads	www.moems.org
Virginia Mathematics League	www.mathleague.com/contests.htm
Games to Promote Strategic Thinking	Where to Order or Access
Chess	Resources on ES Advanced Academic Programs 24/7
SET Game	www.setgame.com
Krypto Game	http://mphgames.com
Challenge 24 Games	www.math24.com
Fundamentals*	www.wrightgroup.com

Curriculum and Resources to Support the Differentiated Framework Advanced Academic Programs (Levels II, III, and IV) Grade 3	
Professional development for use of these resources is provided throughout the year by the Advanced Academics Program Office.	
Social Studies	
Essential	Where to Order or Access
William and Mary Social Studies units on China and Egypt	www.kendallhunt.com
Document Based Questions – Mini-Qs in World History	http://dbqproject.com/
Parallel Curriculum units and lessons (units on Civilizations, Exploration, Using Primary Source Documents, Rome, Greece, Economics)	ES Advanced Academic Programs 24/7 site
Critical and Creative Thinking – Model Lessons	ES Advanced Academic Programs 24/7 site
Resources for Research	Where to Order or Access
Simulations	www.todaysteacher.com/Simulations.htm
Web Inquiries/Quests	www.webquest.org
Library of Congress Teaching with Primary Sources	http://tpsna.org/index.php
Language Arts	
Essential	Where to Order or Access
William and Mary Language Arts Units	http://www.kendallhunt.com
William and Mary Navigator Novel Guides	http://cfee.wm.edu/curr_language.htm#navigator
Building Language	www.rfwp.com/series33.htm#14
Jacob's Ladder Levels I-III	http://www.prufrock.com/searchproducts.dm
Writing Workshop for Advanced Learners	ES Advanced Academic Programs 24/7 site
Socratic Seminar Guides	ES Advanced Academic Programs 24/7 site
Touchpebbles Teacher's Guide A and/or B	http://www.touchstones.org/
The Great Debate Guide	ES Advanced Academic Programs 24/7 site
Critical and Creative Thinking – Model Lessons	ES Advanced Academic Programs 24/7 site
Parallel Curriculum units and lessons (unit: biographies)	ES Advanced Academic Programs 24/7 site
Discussion and Research	Where to Order or Access
<i>This is Only a Test</i> Accompany Publishing play	www.accompanypublishing.com/thisisonlyatest.html
Junior Great Books	www.greatbooks.org/index.php?id=gb2006
Renzulli Learning	www.renzullilearning.org
Philosophers Club	www.philosopher.org www.mtholyoke.edu/omc/kidspil/stories.html
Word Study Resources	Where to Order or Access
<i>Word Journeys</i> by Kathy Ganske	www.amazon.com
Latin: Classical Studies Unit*	ES Advanced Academic Programs 24/7 site

Curriculum and Resources to Support the Differentiated Framework Advanced Academic Programs (Levels II, III, and IV) Grade 3	
Professional development for use of these resources is provided throughout the year by the Advanced Academics Program Office.	
Science	
Essential	Where to Order or Access
William and Mary Problems-Based Learning units (Where's the Beach, What a Find)	www.kendallhunt.com/index.cfm?PID=2198;PG=250
Project Clarion units (Dig It, Invention to Invent, What's the Matter)	ES Advanced Academic Programs 24/7 site
Parallel Curriculum units and lessons (Rock Stars, Butterflies, Simple/Compound Machines, Cycles)	ES Advanced Academic Programs 24/7 site
Science Investigation and Research	Where to Order or Access
Puddle Questions for Science	www.wrightgroup.com
Critical and Creative Thinking – Model Lessons	ES Advanced Academic Programs 24/7 site
Experimental Design and Research	ES Advanced Academic Programs 24/7 site
CPO Science Connections	ES Advanced Academic Programs 24/7 site
Simulations	www.interact-simulations.com
Web Inquiries/Quests and web resources	www.webquest.org
Renzulli Learning	www.renzullilearning.org
Engineering's Elementary	http://www.mos.org/eie/
Children as Builders Engineering Project*	ES Advanced Academic Programs 24/7 site
Science Team Competitions	Where to Order or Access
ExploraVision	www.exploravision.org/teacher-resources
Science Olympiad	http://soinc.org/
Odyssey of the Mind	http://www.odysseyofthemind.com/



Language Arts- Essential Curriculum



William and Mary Language Arts

- 3rd: *Journeys and Destinations* and/or *Explore, Discover, Reveal*
- 4th: *Literary Reflections* or *Patterns of Change*
- 5th: *Autobiographies and Perspectives*
- 6th: *Persuasion*



Michael Clay Thompson- Vocabulary and Grammar

- 3rd: *Building Language & Grammar Island*
- 4th: *Caesar's English I & Grammar Town*
- 5th: *Caesar's English II & Grammar Voyage*
- 6th: *The Vocabulary of Literature & The Grammar of Literature*



Jacob's Ladder (Non-Fiction and Fiction)

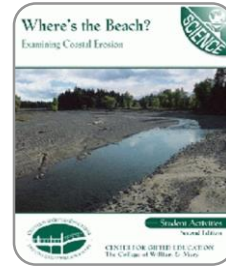
Reading Above

The Great Debate

Socratic Seminar



Science- Essential Curriculum



William and Mary Science

- *3rd: Where's the Beach?*
- *4th: Electricity City*
- *5th: Something Fishy*
- *6th: Nuclear Energy Friend or Foe*



Project Clarion- 3rd Grade

- *Dig It*
- *Invitation to Invent*
- *What's the Matter*

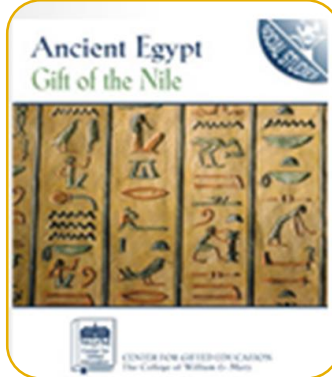


JASON Project

- *4th- Monster Storms & Infinite Potential*
- *5th- Tectonic Fury, World of Waves*
- *6th- Monster Storms & Infinite Potential*

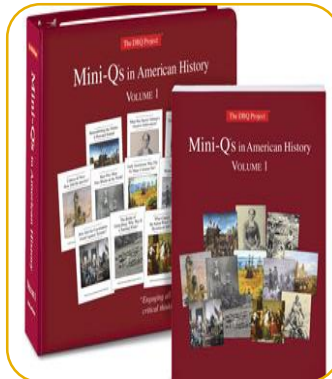
Social Studies- Essential Curriculum

William and Mary Social Studies Units



- **3rd:** *Ancient Egypt; Ancient China*
- **4th:** *Building a New System: Colonial America 1607-1763; The World Turned Upside Down: The American Revolution*
- **6th:** *A House Divided? The Civil War: Its Causes and Effects; The Road to the White House: Electing the American President*

The Dig- A simulation of the Archeological Reconstruction of a Vanished Civilization (5th Grade)

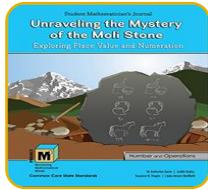


Document Based Questions

- **3rd & 5th:** *Mini-Q in World History 1*
- **4th & 6th:** *Mini-Q in U.S. History 1*

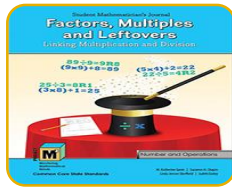
Mathematics- Essential Curriculum

3rd Grade



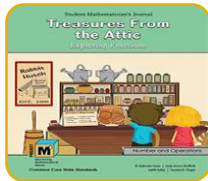
- Unraveling the Mystery of the MoLi Stone: Place Value & Numeration
- How Big is Big?: Understanding & Using Large Numbers
- Awesome Algebra: Looking for Patterns & Generalizations
- Digging for Data: Collecting, Displaying and Analyzing Data
- In Search of the Yeti: Measuring Up, Down and All Around

4th Grade



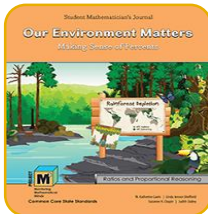
- Factors, Multiples & Leftovers: Linking Multiplication and Division
- The Tenth Street Pet Sanctuary: Understanding and Using Decimals
- At the Mall with Algebra: Working with Variables and Equations
- Getting Into Shapes: Exploring Relationships Among 2-D and 3-D Shapes

5th Grade



- Treasures from the Attic: Exploring Fractions
- Record Makers and Breakers: Analyzing Graphs, Tables and Equations

6th Grade



- Our Environment Matters: Making Sense of Percents
- Designer Boxes: Exploring Volume and Surface Area
- What are Your Chances? Probability in Action

$$T = 2\pi \sqrt{\frac{a^3}{\mu}}$$

$$\mu = G \times M(\text{sun})$$

$$T = 2\pi \sqrt{\frac{149,597,887.5^3 \text{ km}^3}{132,712,440,018 \text{ km}^3 \text{ s}^{-2}}}$$

$$T = 2\pi(5022643.737) \text{ s}$$

$$T = 31558201.33 \text{ seconds}$$

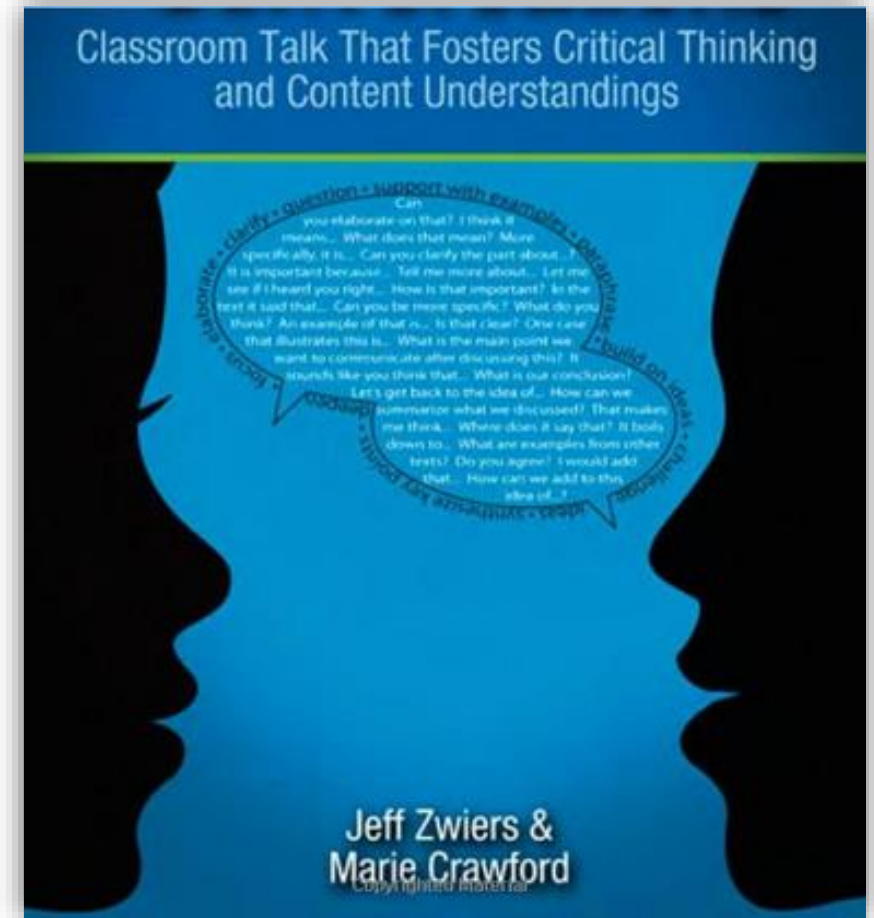
$$31558201.33 \text{ s} \times \frac{1 \text{ minute}}{60 \text{ seconds}} = 525,970 \text{ minutes}$$

$$525,970 \times \frac{1 \text{ hour}}{60 \text{ minutes}} \times \frac{1 \text{ day}}{24 \text{ hours}} \approx \underline{\underline{365.25}}$$

Classroom Talk That Fosters Critical Thinking and Content Understandings

Back-and-forth dialogue in which students focus on a topic and explore it by building, challenging, and negotiating relevant ideas:

- Elaborate and Clarify
- Support Ideas With Examples
- Build On and/or Challenge Ideas
- Paraphrase
- Synthesize



Academic Conversations @ Mantua



Gathering Contributions

- What should we write?
- What do you think makes sense?
- Do you have a suggestion?
- We haven't heard from you yet.

Confirming Contributions

- I see what you mean.
- That's an interesting example.
- Now I understand your perspective.
- I share your point of view.

Clarifying Contributions

- I don't quite understand what you mean by _.
- I have a question about _.
- Will you explain what you meant by__?
- What makes you think that?

Rephrasing Contributions

- In other words, you think _.
- So, what you are saying is that _.
- So, you are recommending that _.
- If I understand you correctly, your idea is _.

Reporting Contributions

- My partner , __, and I discussed _____.
- My partner and I/group decided/agreed on this response: ____.
- One example my partner offered was _____.
- As a group, we determined that the correct _____ is _____.

Classroom Talk That Fosters Critical Thinking and Content Understandings

Conversation Starters:

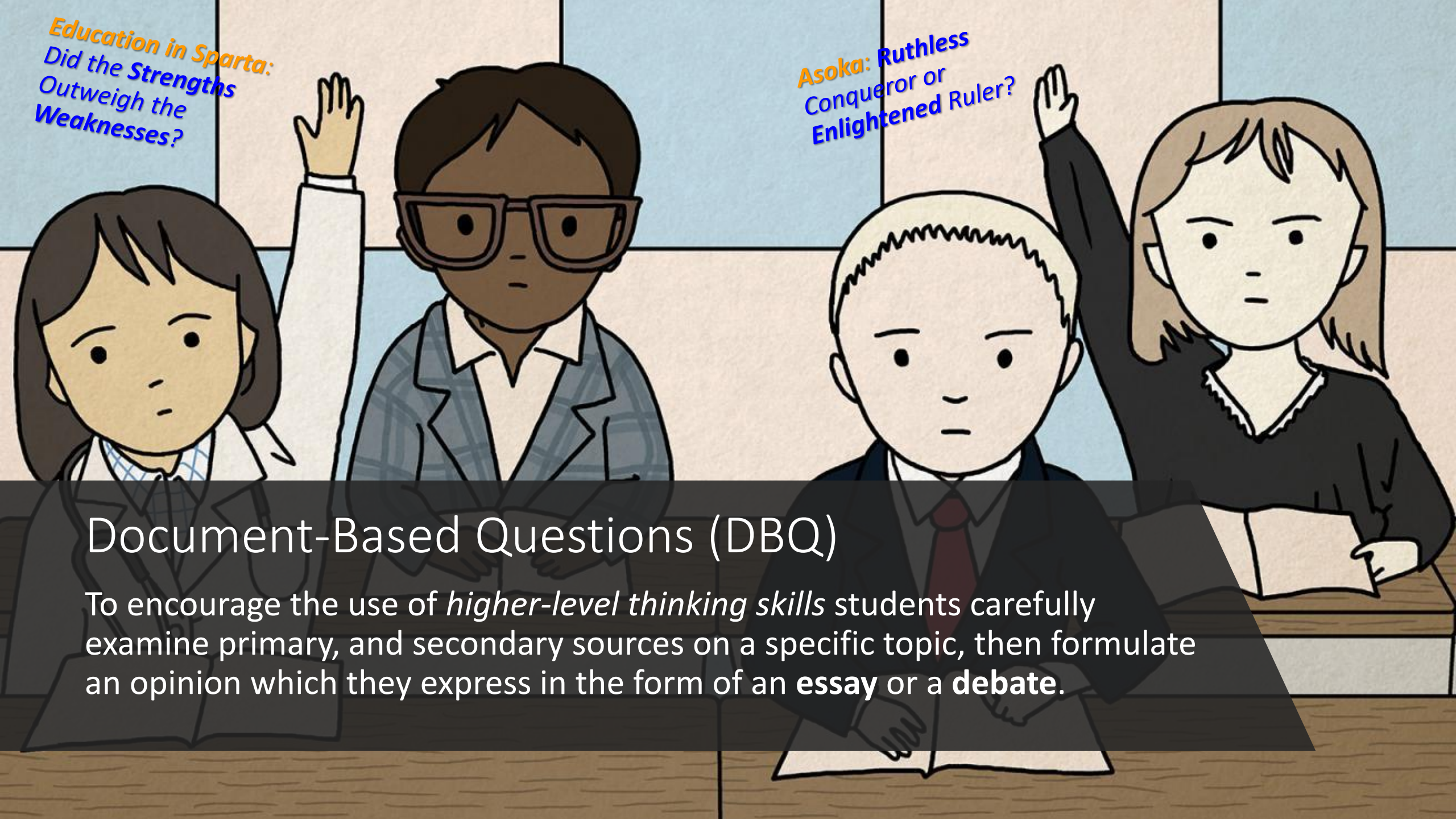
- I would like to piggyback on...
- I would like to add...
- I did not understand...
- I agree with _____ because _____ .
- I agree with you, but I also think that...
- I disagree with _____ because _____ .
- When _____ said or did _____, I think it meant _____ .



Comparison of Local Level IV (LLIV) and Center Programs

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Education in Sparta:
Did the Strengths
Outweigh the
Weaknesses?

**Asoka: Ruthless
Conqueror or
Enlightened Ruler?**

Document-Based Questions (DBQ)

To encourage the use of *higher-level thinking skills* students carefully examine primary, and secondary sources on a specific topic, then formulate an opinion which they express in the form of an **essay** or a **debate**.



Problem-Based Learning (PBL)

*PBL is “students solving a problem with multiple solutions over time like a scientist in a real-world context

*Promotes collaboration, creativity, and critical thinking



Third Grade studied Ladybugs in science. **They were given this problem:** *“What would the loss of ladybugs have on the ecosystem?”*

Students created posters, dioramas, and skits and then presented their findings to other classes.

Problem-Based Learning (PBL)

The Big Dig

5th Grade archaeologists unearth artifacts from other cultures and then seek to explain their use.





Problem-Based Learning (PBL): Bird MWEE

Meaningful Watershed Educational Experience



- Integrated Lessons Science & LA
- Classroom Sessions with Cornell Lab of Ornithology materials
- Field Day at Mantua to learn about:
 - Birds
 - Habitat
 - Watershed
 - Ecosystems





Problem-Based Learning (PBL): Bird MWEE

Meaningful Watershed Educational Experience

NaNoWriMo

National Novel Writing Month



Young Writers Program:

- 5th Grade AAP Language Arts Classes
- Students can write about anything they want!
- Novels range from 2,000 to 20,000 words

A Student's Day at Mantua



- Core academic time with AAP students
 - 3rd & 4th Grades – contained classroom
 - 5th & 6th Grades – rotate to different classrooms
- At least one “Specials” class per day mixed with AAP and General Ed students
- Lunch and Recess mixed with AAP and Gen Ed students



AAP at Mantua



- ❖ About 3 classrooms of AAP students per grade level
- ❖ 5th & 6th Grade classrooms departmentalize:
Math/Science or Language Arts/Social Studies
- ❖ All FCPS Specials:
 - ❖ PE, Art, Music, Library, Tech Lab
 - ❖ Spanish: 2x per week
 - ❖ Strings (starting in 4th Grade)
 - ❖ Band & Chorus (starting in 5th Grade)

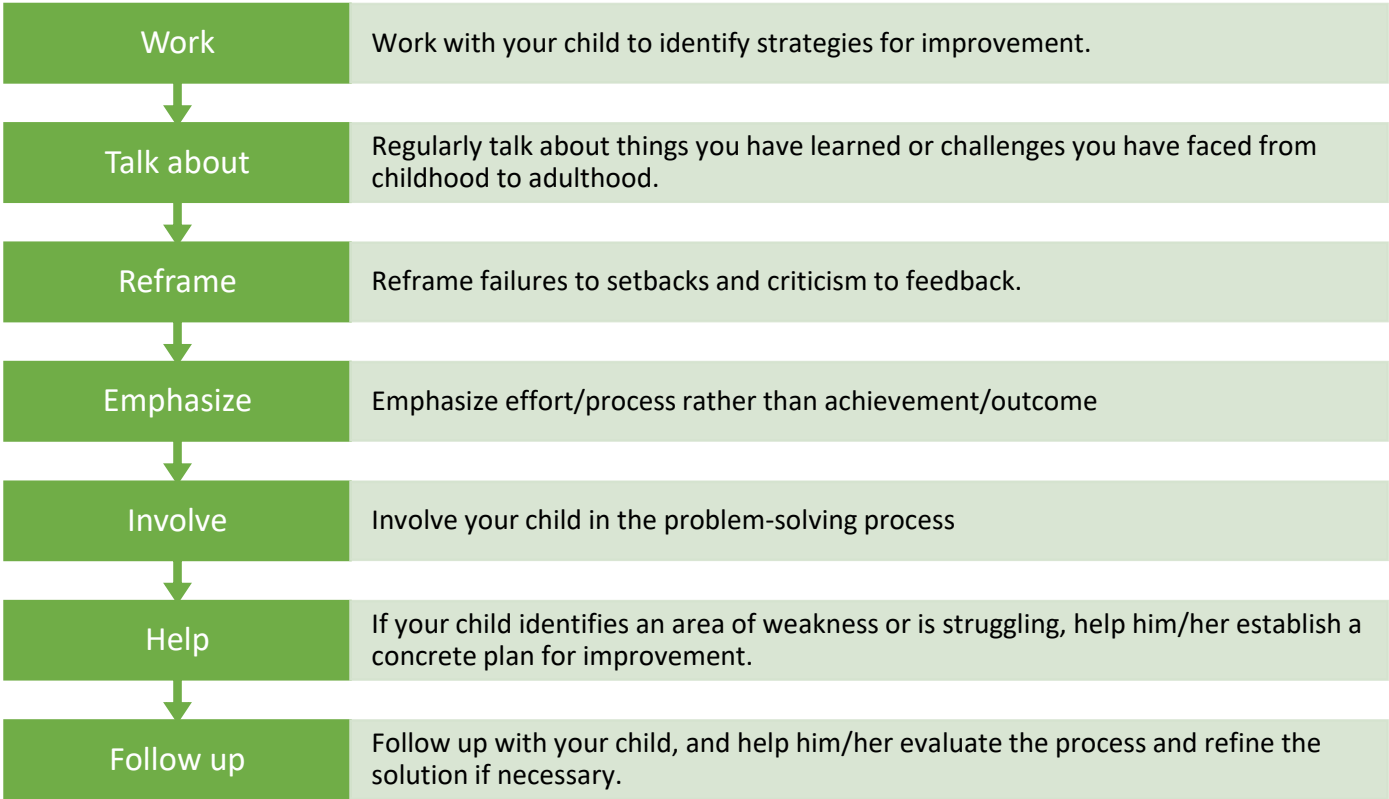
Student Expectations

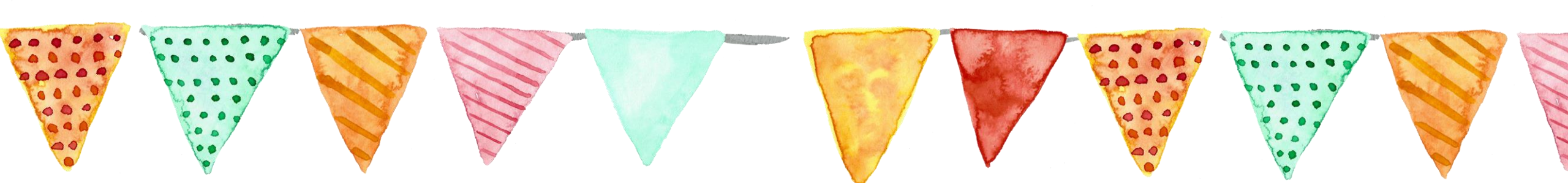
- ❖ In the Mantua AAP program, the goal is not “more work”
- ❖ Academic work is focused on higher-level thinking skills, problem-solving, and project-based learning.
- ❖ Students are expected to show effort and engagement to meet the demands of the academic work





What can I do to support my child?





Parent Resources

Advanced Academic Programs website:

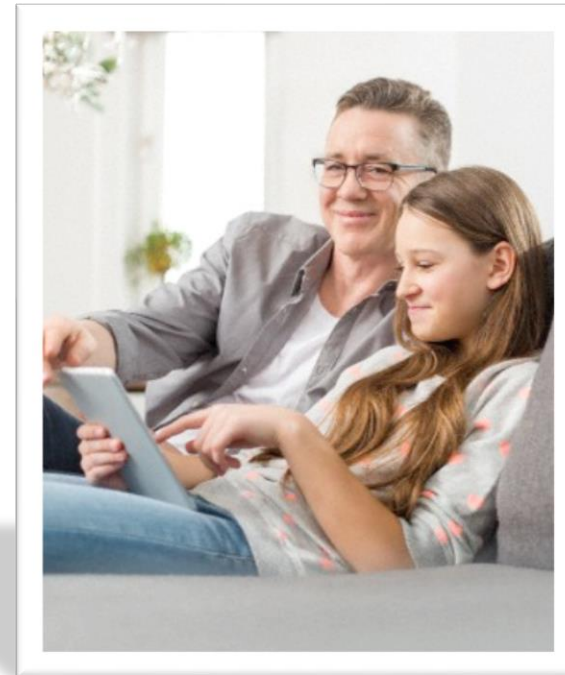
<https://www.fcps.edu/academics/academic-overview/advanced-academic-programs>

National Association for the Gifted

<http://www.nagc.org>

Virginia Association for the Gifted

www.vagifted.org





New Family Meet & Greets

- ❖ Meet & Greets are a great opportunity for new families to meet up at the Mantua Playground over the summer.
- ❖ Everyone transferring to Mantua is invited and encouraged to attend!
- ❖ The dates for the Meet & Greets will be posted on the Mantua ES website as well as on the PTA website over the summer, so please look for firm dates there.




Online Resources

You will find these links on the Parent Information Sheet.

Mantua Website
<https://mantuaes.fcps.edu/>

PTA Website
www.mantuapta.org

FCPS AAP
<https://www.fcps.edu/node/38893>



Forms
Due by
July 1st, 2020

Thank you for filling out the following forms:

New to Mantua Only:

- Emergency Care Information (SS/SE-3)
- Health Information form (SS/SE-71)

Rising 5th and 6th Graders Only:

- The **Music Intent Form** needs to be filled out for **ALL** rising 5th and 6th graders.

**All forms are due to Mantua ES by
July 1st, 2020.**