

Differentiated Instruction

School Committee Presentation

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Differentiation is responsive teaching rather than one-size fits-all teaching

(Tomlinson 2005)



A philosophy and way of teaching that respects the different learning needs of students and expects all students to experience success as learners.



Differentiation means that teachers proactively plan varied approaches

to what students need to learn,

how they will learn it,

and/or how they will show what they have learned.



Guiding Principles

- Focus on the essential ideas and skills of the content area.
- Respond to individual student differences (such as learning style, prior knowledge, interests, and level of engagement).
- Group students flexibly by shared interest, topic or ability.
- Integrate ongoing and meaningful assessments with instruction.
- Continually assess; reflect; and adjust content, process and product to meet student needs.

DIFFERENTIATION

Is a teacher's response to learners' needs

Guided by mindset and general principles of differentiation

Quality Curriculum

Continual Assessment

Respectful Tasks

Flexible Grouping

Teaching Up

Building Community

Teachers can differentiate through

Content

Process

Product

Affect

According to students'

Readiness

Interest

Learning profile

Using a variety of instructional strategies.

Principles of Differentiation

Quality Curriculum

What do we want students to **Know, Understand**, and be able to **Do** as a result of the learning experience?

The **Essential Understandings**- that allow students to see the relevance of what they are learning to other subjects and to the world around them.

Continual Assessment

Assessment steers instruction in a differentiated classroom.

Pre- assess students readiness and interest prior to unit.
Continually asses each student progress toward learning during the unit.
Summative assessments to allow students to demonstrate what they have learned.

Respectful Tasks

Tasks should be challenging, interesting, and worth doing.

Task may be adjusted for different readiness levels, interests, or learning preferences.

Flexible Grouping

Students work in a variety of arrangements.

Small Groups

Partner

Individually

Whole Class

Teaching Up

All students should be working at a level of complexity that is just above their comfort level.

By providing each student with reasonable levels of challenge and instructional scaffolding as needed students learn that hard work results in successful growth.

Building Community

Building a learning community where students feel safe, accepted, and supported.

Teachers Can Differentiate Through

CONTENT

PROCESS

PRODUCT

AFFECT

The knowledge, understanding, and skills we want students to learn.

How students come to understand or make sense of the content.

How students demonstrate what they have come to know, understand, and are able to do after an extended period of learning.

How students emotions and feelings impact their learning.



According to Students

READINESS

Student current proximity to specific knowledge, understanding and skills.

INTEREST

That which engages the attention, curiosity, and involvement of a student.

LEARNING PROFILE

A preference for taking in, exploring, or expressing content.

Shaped by 4 elements:
Learning Style
Intelligence Preference
Gender
Culture



Differentiation Scenarios

Primary Grade Classroom: Reader's Workshop

Whole Group Lesson – (Essential Skills) - Shared Reading, Skills Lesson

Flexible Groupings

Small Groups

Scaffold instruction
Comprehension Strategies
Interest Groups
Book Clubs
Assessment

Partners

Paired reading
Interest
Choral reading
Leveled readers
Assessment

Individual

Independent Reading:
Self selected books:
Interest, leveled text, topic specific
Assigned text
Assessment

Differentiation Scenarios

Intermediate Grade Classroom

WHOLE CLASS NOVEL

Interactive Journals

Option 1: Common Prompt

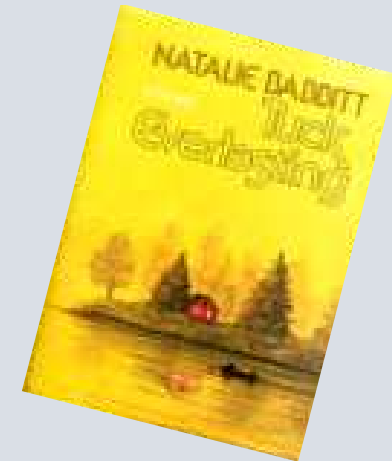
Think about the same idea:

Literary element

Language

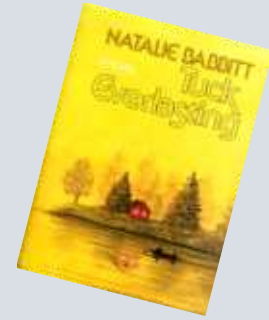
Author's purpose

Check comprehension



Intermediate Grade Classroom – cont.

Interactive Journals



Option 2: Varied prompts based on interests and needs

Pre Reading Assessment Question? “ Jot down what you think the word “everlasting” means.”

Students who seem unfamiliar with the word work in pairs to:

1. Guess what everlasting means and write their best guess explanation.
2. Find definitions of the word from 2 sources and compose your own.
3. Write a definition of the word everlasting that would be clear to a 2nd grader.
4. Illustrate at least 5 things that are everlasting and include defending why they think so.
5. Hypothesize what they think a book called “Tuck Everlasting might be about.

Students who seem to understand the word and whose skills are within the expected range per the grade level work alone or with a partner to:

1. Hypothesize what a book called “Tuck Everlasting” might be about and explain how they came to their hypothesis.
2. Present and defend their choices of what sorts of things would be included as everlasting in their own lifetime.
3. Present and defend their choices of what would be everlasting in a book written 200 years ago.
4. Present and defend their choices of what would be everlasting in a book written 200 years in the future.

Students with advanced skills of vocabulary, writing and abstract thinking work together in a group to:

1. Place on a continuum of “less enduring” to “more enduring” a list of items such as gold, coal, love, friendship, energy, time, fear, happiness, and any additional items of their choosing.
2. Write a piece that expresses their reasoning in placing the items on the continuum.
3. Hypothesize what a book called “Tuck Everlasting” might be about and be ready to defend the hypothesis.

Middle & High School

Curriculum Development has focused on the Development of Essential Understandings (Driving Questions) for all content /coursework.

The most important information that students will need to understand in each unit.

Every student will be expected to answer the driving questions, which are “big picture” critical thinking concepts.

Differentiation in Science Scenario

Mouse Trap Cars in Physics

- Project has undergone a 6 year evolution
 - Randomly assigned teams
 - Progress monitoring throughout
- Performance Based Assessment
 - Assesses Different Talents of Students
 - Assesses Physics understanding in several concept areas

Variety of Assessments

PHYSICS CONCEPTS ASSESSED

- Energy
- Forces (Friction, Spring Forces)
- Levers and Torque
- Velocity
- Power
- Efficiency

ADDITIONAL ASSESSMENTS

- Creativity
- Teamwork
- Artistic presentation
- Scale Drawings
- Written explanation
- Organizational Skills

Car performance

- **EVENT PERFORMANCE**

- **EVENT #1** Distance. The further your car travels the better!

50 POINTS

- **EVENT #2:** Most efficient. The higher your car goes the better!

50 POINTS

QUALITATIVE ANALYSIS

- **Team name.** Every team should have a name. Your team's name should determine the theme of your car and be reflected in the cars appearance. **2 POINTS**
- **Design of your car.** The design must include two drawings of the vehicle, a **top (2pts)** and **side view (2pts)**. The drawings must be **accurate (8pts each)** with **measurements in cm (3pts each)** shown. The drawings should also include a **brief explanation (3pts)** of how the car works with a list of **materials (3pts)**. The best drawing will be framed and on display in my room for eternity! The drawings must be done on standard sized 8.5" x 11" paper. **31 POINTS**
- **Project summary.** A two paragraph summary. The first paragraph should list 3 things you tried that did not work. **1pt for listing each item.** Explain why you thought they would work **2pts each** and why they didn't **2pts each**. In the second paragraph explain 3 characteristics a mousetrap car must have to perform well in the mousetrap Olympics. **1 point for each characteristic mentioned and 3 points for each explanation.** **27 POINTS**

MOUSTRAP CARS SCORESHEETS

Group Name _____

Group Members _____

Event Statistics

| Distance Test | |
|---------------|---------|
| Trial | D(feet) |
| 1 | |
| 2 | |
| 3 | |
| MAX | |

Efficiency Test

| Trial | Ht (m) | Mass(kg) | Energy(J) |
|------------|--------|----------|-----------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| MAX | | | |

EVENT SCORES

| EVENT SCORES | | | |
|--------------|---------------------|------------------|-------|
| Event | MAX Points Possible | Best Performance | Score |
| Team Name | | | |
| Design | | | |
| Originality | | | |
| Distance | | | |
| Efficiency | | | |
| Summary | | | |
| Total Score | | | |

High School Humanities

US History I - DRIVING QUESTIONS

- ① How did Jacksonian Democracy illustrate the changing nature of American politics?
- ② What was the result of the Mexican-American War on Texas, Mexico, and the US?
- ③ What does the passage of the Indian Removal Act indicate about American attitudes towards Native Americans?
- ④ What are the arguments for and against the nullification theory?

Driving Questions

(Essential Understandings):

These are posted in classrooms.

Essential Understandings - Driving Questions

Variety of Tasks & Assessments

- Essays
- Tests and quizzes
- Research papers
- Class discussion
- Artwork
- Poetry
- Song lyrics
- Photography
- Graphic organizers
- Timelines
- Venn diagrams
- Documentaries
- Map analysis
- Graph analysis
- Primary sources analysis

Analysis of Literature

Period 2

How the Industrial Revolution Influenced My Life

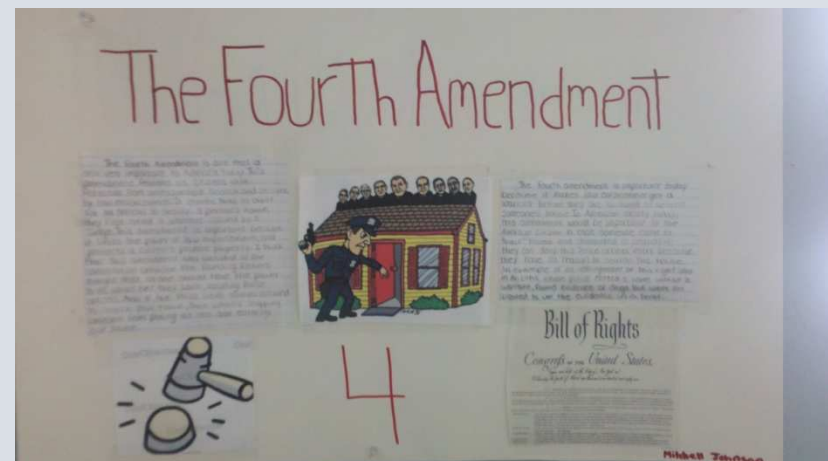
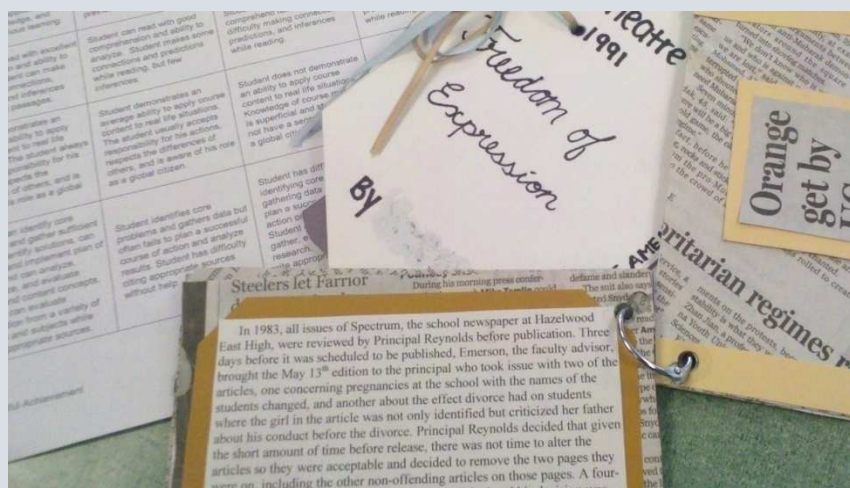
The Industrial Revolution has changed my life in many ways, both good and bad. I used to live in the countryside, but decided to move because I knew that because of the Industrial Revolution, I would make more money in the city. I started working in the cotton factory, and quickly worked my way up to being a manager. The Industrial Revolution allows me to make more money than I ever would have been able to work in the country. I now live in a bigger house, and am able to provide for my family in ways that never would have been possible before the Industrial Revolution. These include providing an education for my children, food for my family, a house where we can live comfortably, a job that allows me to pay for my wife's medical bills, and more.

Another effect of the Industrial Revolution is people's health. Since my family and I are now living in the city, diseases are being spread quite easily, which is how my wife got ill. Also, because of all the smog and pollution from the factories, my health has decreased, but since those factories are making me money, and supporting my family, I cannot do much about it. And although the pollution does not help my health, I am thankfully eating better, due to the new foods available that are traded from other countries. I also am able to buy cheaper, mass-produced clothes, which guarantees my family will be warm enough in the winter.

Loyalty is a common theme in many of the works of literature we have studied so far. It can give a lot of insight into the true character of someone. In "a Knight's Tale" Arcita didn't remain loyal to Palamon. Even though they were cousins and good friends when Arcita returned back to the castle, he lived for years without trying to free Palamon. This mak

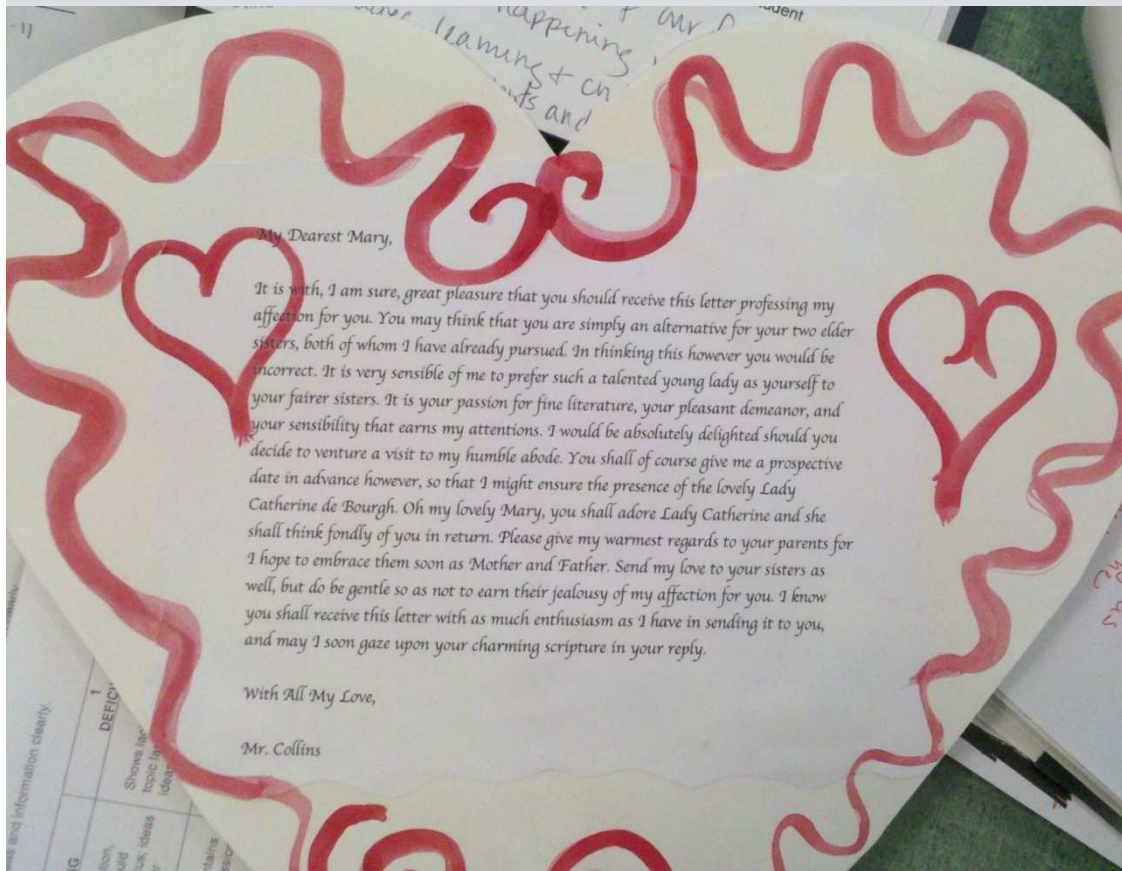
Rights of Americans

Students use a variety of tools to demonstrate their knowledge of the rights guaranteed all Americans under the U.S. Constitution



Pride and Prejudice

English IV – Grade 12



- Students wrote Valentine's cards from one character in the book to another... and had to take on the persona of that character in their writing



Push me! See how far I go!
Work me 'til I drop. Then pick me up.
Open a door, and then make me run to it before it closes.
Teach me so that I may learn,
Then let me enter the tunnel of experience alone.
And when near the end,
I turn to see you beginning another's journey
I shall smile.

A Poem to My Teacher - by Kathleen (age 14)