

**UNDERSTANDING BY DESIGN
INTEGRATION TEMPLATE
Best Practices**

CONTENT STANDARDS:

1.2.11E Vocabulary 3.7.10D Utilize computer software to solve specific problems
2.6.11B Use appropriate technology to organize data from the local community.

ESSENTIAL UNDERSTANDING:

The finality of the death penalty has far reaching consequences.

ESSENTIAL QUESTION:

What would you do that you would deserve to die for?

Students will know...

Business: Cost of life vs cost of death

Criminal Justice: Vocabulary, Lobby and Research, Racism

English: Position of writers - Camus and others concerned with the death penalty

Science: Forensics DNA

Student will be able to ...

Analyze cost/benefit of one choice over another

Use terminology to discuss death penalty and debate the issue

Create a coherent argument for and against the death penalty

Determine the reliability of DNA

Performance Task:

Re-create a trial, debate the issue, analyze associated financial data and study forensic evidence

Learning Activities: Business:

W: [where is the unit going?] What is the cost/benefit analysis?

H: [hook the students] Discuss the cost of putting a person to death.

E: [explore/experience issues/ideas] Brainstorm cost associated with life or death, and use a spreadsheet to conduct analysis.

R: [rethink/revise] Discuss ideas openly with class.

E: [exhibit understanding/evaluate work] Final analysis turned in.
Present to the class.

DeveloperNames:

Jonathan Kiefer - LCTI

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CONTENT STANDARDS:

Reading, writing, Research Technology, Math, Social Studies, Science and History

ESSENTIAL UNDERSTANDING: Students will determine whether the mathematics supports or undermines the theory that Lee Harry Oswald was the shooter of JFK.

ESSENTIAL QUESTION: Did Lee Harry Oswald kill JFK?

Students will know...

Basic trigonometry

Basic facts of investigation gathered from research
Single bullet theory
How to do a research paper
How to sift through the evidence

Students will be able to...

Calculate realistic parameters for angle of trajectory

Write an opinion papers to whether or not physical evidence supports math equations

Present and explain their findings orally to the class

Performance Task:

Investigate the assassination of President John F. Kennedy in 1963. Determine whether or not Lee Harry Oswald, and the evidence gathered, support the feasibility that Lee could have done it.

Learning Activities:

- W: [where is the unit going?] Starting out, we would teach how we need trigonometry branching into the research to find the facts with the case→ continuing on to apply to other areas such as – construction, navigating and surveying.
- H: [hook the students] The Questions ↑ Investigating a real life notorious Presidential Assassination and other titillating theories.
- E: [explore/experience issues/ideas] Trigonometry lessons and research techniques to garner the facts. Organizational skills to put it all together. Oral presentation for communication skills.
- R: [rethink/revise] We will posit new questions concerning the crime near completion of the project, also look for all bases covered. One-to-one teacher assistance during classroom meeting, teacher-made checklist.
- E: [exhibit understanding/evaluate work] Students will present their findings and their opinion orally to the class supported by a written explanation in paragraph form with graphics. Students will self-assess with teacher-made scoring devise. Students will also be assessed by the fury of their peers with a teacher-made scoring devise.

Developers' Names:

Laura Morrissey – Dieruff High School
Eric DeAntonis, Sandra Becker, and Dalton Semmel – Northern Lehigh High School

BEST PRACTICES

Academic

Subject Area: History, English, Math, Advertising Design

Career & Technical

task name and number

to which this relates: 4.19 Design a book jacket and inside illustrations

Lesson Objective:

After reading "The Red Badge of Courage", the students will design a book jacket and construct inside illustrations that visually depict historical reference and literary symbolism of the civil war.

Activity:

English - Instructor and class create a visual mapping of literary symbolism in the Red

Badge of Courage. The students write a paragraph or two demonstrating understanding of symbolism.

History - Instructor and class discuss similarities and differences between the novel and actual documented history.

Math - Instructor and class will research battlefields, manpower and other statistics related to the book and determine historical accuracy.

Advertising Design

Instructor and class will research civil war EPA Art/Advertising – Create thumbnails for design – create book covers for The Red Badge of Courage.

Resources Needed:

1. "The Red Badge of Courage"
2. Computers and Internet
3. Appropriate art materials
4. Maps
5. Historical references

Assessment:

Rubric encompassing focus, content, organization, style, conventions, design, principles, mathematical operations.

Estimated Time of the Lesson 1 class period each of English, History, Math

Advertising Design – 10-12 hours for creating book design

State Standard Addressed: Environment and Ecology-4.4.10, Math-2.1.11A, 2.2.11A

English-1.3.11B,C 3

(if appropriate)

Developers Name(s) Patricia Murray and Jade Hamilton - LCTI

and School(s) Joseph LiCausi, and Erika Smith – Dieruff High School

BEST PRACTICES

Academic

Subject Area: History/L.A. (et.al), Math – Metric conversions and weights
Science – Determining fluid and electrolytes, anatomy of kidney & blood
History – Research of (comparison & contrast), history of previous technology & treatment (including scientists) fluid-electrolytes
Language Arts – Writing a script to connect all departments, create characters to carry theme through video
Foreign Language – Translate some dialogue of ESOL patient or (write subtitles) or write an end list of do's and don'ts
Graphic Design – Credits for video to be included
Music–(Score the video) or (choose appropriate music for each portion of video)

Career & Technical

task name and number

to which this relates: Health related tech (et. al) Health related tech – Weigh patient
before and after the experiment, perform bladder scan, measure fluids before consumption and excretion to determine amount retained
Commercial Arts – To create audio/visual movie into final form
Electronics – Check bladder scanner for proper functioning & run test
Electrical – Lighting for video recording
Culinary – Preparation of food trays (fluids for consumption)
Cosmetology – Makeup (including creating “aged” patients) for video

Lesson Objective: To identify the impact of fluid and electrolytes within the body.

Activity: To create a cross-curricular video, see above for each areas' responsibility.

Resources Needed:

1. Library
2. Studio with audio-visual equipment
3. Computer, tech lab – Internet
4. Appropriate resources per academic area
5. Calibrated cylinders for measuring
6. Scale – bladder scanner

Assessment: Separate rubric for each subject area, created by teacher and students together.

Estimated Time of the Lesson Time line will vary – one area will follow another
(approximately 2 weeks)

State Standard Addressed: (L.A.) W.S.L. 1.2.11C, 1.2.11E, 1.4.11A, 1.6.11C,D,F,
Math – 2.2, 2.3, 2.6
Science – 3.1, 3.3, 3.6, 3.7, 3.8
(if appropriate)

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