

Facts and Figures by Graphic Design

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This curriculum unit is recommended for: Multimedia and Webpage Design students; grades 9-12

Keywords: (social issues, multimedia, graphic design, information graphics, infographics, social research, multimedia and webpage design, adobe, statistical data, desktop publishing)

Teaching Standards: See Appendix 1 for teaching standards addressed in this unit.

Synopsis: This unit is designed to encourage students to gain an interest in social issues while utilizing percentages and proportions to demonstrate what they have learned through graphic design. Students will gain exposure of collaborative learning as well as experience hands on activities that are associated with this unit. This curriculum is designed for students to master advanced skills in the areas of adobe software, desktop publishing and graphic design. The finished product will result in students utilizing their creativity to design an information graph demonstrated by statistical data about their social issue.

I plan to teach this unit during the coming year to my grades 9-12 students who are in my Multimedia and Webpage Design class.

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Introduction

This curriculum is designed for ninth through twelfth grade high school students who plan to take the Multimedia and Webpage Design class. The development of Facts and Figures by Graphic Design curriculum will assist me with reinforcing common core elements that are taught in my Multimedia and Webpage Design class. These common core elements will be based upon essential standards designed by the state of North Carolina.

Students will research a current social issue of their choice and then utilize mathematical equations to demonstrate statistical data that affect social issues. The statistical data will be demonstrated by creating fun information graphics which will help master advanced skills in the areas of desktop publishing, graphic image design and multimedia production. Communication skills and critical thinking will be reinforced through software application.

This curriculum will define and demonstrate mathematics and social research through graphic image design. It will focus on how mathematical statistics can be incorporated within graphic design. The students will research a social issue and utilize mathematics to demonstrate what they learned to create visuals that will help them master advanced skills in the areas of adobe software, desktop publishing, graphic image design, and multimedia production. Practical skills and critical thinking will be reinforced through adobe software application.

Rationale

This unit was created to introduce mathematic equations along with researching social issues to students while teaching them the state curriculum standards as related to multimedia and webpage design. This curriculum will help students understand the impact of social issues and the importance of research and statistical data. Students are always excited to learn about computer animation and how to create visual designs while learning the software.

This curriculum is directly associated with teaching various North Carolina standards that directly tie into the multimedia and webpage design curriculum and its standards as designed by the State of North Carolina. The specific elements that the curriculum will cover will reinforce definitions as well as teach students about computer visualization software and design.

This curriculum is designed to allow students to select their own social topic, however, within this curriculum unit, I will conduct research on the homeless population within the United States for providing a step by step guide and demonstration on how to help students properly implement this unit.

School Setting Demographics

I teach at David W. Butler High School which is a part of the Charlotte Mecklenburg School system. David Butler High School is also known as "Butler High" within our district. In 2011-12, Butler High was recognized as a School of Distinction with High Growth. In 2014, David W. Butler; which is a part of the Charlotte – Mecklenburg School System. In 2011-12 David W. Butler was recognized as a School of Distinction with High Growth. In 2014, "David W. Butler

High School was recognized by *US News and World Report* **a**s the #1 high school in CMS and the 32nd highest rating in North Carolina". ⁱ The school is located in Mathews, North Carolina and has been operating since 1997. According to statistical data located on the Charlotte Mecklenburg School's website, "the current student enrollment is 2169 and the ethnic breakdown is as follows: 21.2%, African-American 31.4%, American Indian 0.5%, Asian 4.9%. Two or more races 3.8% and White 38.4%."

My current class load consists of teaching two Multimedia and Webpage Design classes as well as one Entrepreneurship I class. My current class sizes are approximately 24 per each course. The Multimedia Webpage Design classes consist of mostly freshman and sophomores. The Entrepreneurship I class consist of juniors and seniors. Both classes have a variety of cultural backgrounds.

Unit Goal Objectives

Facts and Figures by Graphic Design unit goal objectives curriculum will assist students with the development of the connection between statistical data and social issues. Students will research specific social issues that affect everyday lives within communities and create an information graphic design using the statistical data and information in which they research. The statistical data will be demonstrated by creating fun information graphics which will help master advanced skills in the areas of desktop publishing, graphic image design and multimedia production. I will provide research surrounding homelessness in the United States within this curriculum unit for the purpose of demonstration, however, this curriculum is designed for students will be given an opportunity to select their own social issue to research.

This curriculum will reinforce common core elements that are taught in my Multimedia and Webpage Design class. This unit goal is based upon North Carolina State objectives as presented by the essential standards for Multimedia and Webpage Design. Students will be responsible for taking the North Carolina CTE final exam at the end of the semester. This curriculum unit will address the following essentials:

- 1.01 Understanding Typography, multiuse design principles and elements
- 1.02 Understanding Digital communication products (graphic design layouts)
- 2.01 Understanding Raster Graphics
- 2.02 Understanding Vector Graphics
- 3.01 Understanding Time Based Media
 - 3.1.1 Digital Audio
 - 3.1.2 Digital Video ii

Lesson plan competencies and objectives will provide students with a breakdown of how the unit will be covered. Students will be expected to take notes as a digital explanation is provided. Students will also be given guided practice and demonstrations to help them with the development of their project. Students will be expected to begin the brain storming process of how they will develop their visual demonstration of facts and figures of graphic design.

The interesting fact sheet will help students sketch out the main design and the elements in which their digital demonstration will include. It will help them visualize they demonstration in sequence for pre-visualizing their final project as an information graph.

Students will be expected to apply the strategies that they have learned. The teacher will provide a guided practice to demonstrate the use of adobe software. In addition, various software tools will be introduced to help students successfully navigate the project.

Content Research

Topic: Homeless in America

Essential Question: Who Are the Homeless in America?

"In 2016, according to the National Coalition, at any given time, there are over 564,708 homeless people in the United States." ⁱⁱⁱ Over half of the homeless are living on the streets, in the cars in homeless shelters or in subsidized transitional housing. The National Coalition states that "Americans are homeless because of housing, poverty, lack of employment, decline in public assistance, lack of affordable health care, domestic violence, mental illness and addictions". ^{iv}

Out of the 564,708, homeless people, there are five overall categories of homelessness in America These categories consist of: Single adults, children and families, veterans, chronic homelessness and young adults. ^v

Single Adults:

Out of the total population of homeless individuals, 358,422 were single adults. Single adults are a result of non-available and unaffordable housing. The causes of inadequate housing among single adults range from inadequate incomes, loss of a job, relationship problems, loss of a partner or health emergencies. Most single adults are homeless for a short period of time before locating adequate housing. Vi

Children and Families:

"Out of the total population of homeless individuals, 61, 265 households were children and families. Children and families experiencing homelessness is normally a result of a lost of job, family member problems, unanticipated bills or violence within the home." The household of children and families is normally headed by a young single parent woman with limited education.

Veterans:

"Out of the total population of homeless individuals 39,471 are Veterans. Veterans who are returning from war are at greater risk for not being able to locate adequate housing after deployment". War wounds such as post-traumatic stress disorder and other brain injuries play a part in veteran homelessness.

Chronic Homelessness:

Out of the total population of homeless individuals 77,486 experienced chronic homelessness. "Chronic homelessness are individuals who experience long-term housing rather than an emergency arrangement. Most chronic homeless individuals are often disabled, un-employed, substance abuse problems or other medical problems". ix Once a chronic homeless individual experiences homelessness, it is difficult to get them back into sustainable housing, they often time experience relapse.

Young Adults:

Out of the total population of homeless individuals 36,000 were young adults. "Young adults experience homelessness is normally rooted in family conflict such as involvement with a traumatic event, child welfare or the juvenile system". x

Gathering data about the homeless is difficult because of the various dynamics. Local governments have developed systems that help collect data about homeless to get a clear picture of the total number of homeless individuals as well as attempt to understand them through data.

Approaches to data collection for the homeless include: surveys, counting of shelters, street counts (in which volunteers count homeless individuals living on the street), sample interviews and service based interviews (in which the community ie. soup kitchens, health care agencies, social services, etc. count as homeless individuals receive services). Housing of Urban Development (HUD) requires communities to collect the data and submit it to the federal agency to be recorded and tracked. "HUD collects and maintains the homelessness data annually to assist with the process of services and ending homelessness within the United States of America".

The coalition to end homelessness has created a system that encourages a community-wide response that is strategic and data driven. Communities have adopted an approach to assist with resources, services and programs geared towards helping to end homelessness. "The key elements to the approach includes: coordinating in-take, planning, collecting and examining local data, sharing the data, measuring and evaluating the process to determine its effectiveness". xiiiThis approach is utilized to best address the needs of those experiencing homelessness in the community.

Calculation and chart of statistical data

Students will utilize percentages and proportions to determine the statistical data associated with this curriculum. Proportions are defined as a comparative relation between things or magnitudes as to size, quantity, number, ratio, etc. Percentages are a key concept in mathematics and is defined as a rate or proportion per one hundred.

How to Calculate Percentages:

1. Determine your variables

Determine which numbers are your part and your whole. Your whole number is the number that equals 100 percent. The part is the number that you're trying to find how many percent of the whole number it takes up.

- 2. Divide the part into the whole
 - Divide the part number variable into the whole number variable to obtain a decimal.
- 3. Multiply by 100

Multiply your decimal by 100 to convert the decimal into a percentage. Add a percent sign.

Example of percentage calculation

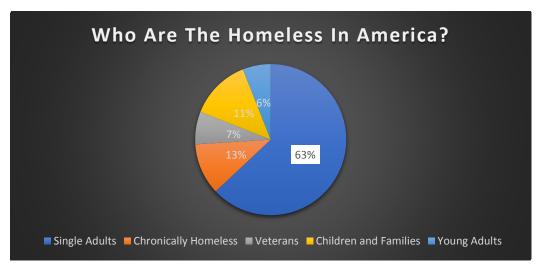
Utilizing the data from the research, students will determine percentages by dividing the variable of numbers into the common whole number. This mathematical equation will allow students to determine the decimal (percentage) of each category as it relates to the overall number of homeless people in America. The statistical data provides student with valuable information as it relates to proportion of individuals that are divided among categories. xiv Here's an example and pie chart that demonstrates percentages and related proportions.

Data

According to National Alliance to End Homeless, there are \$564,708 Homeless in America

Homeless	# of	Amount of	Percentage	Total
Category	homeless	homeless	calculation	percentages
	in America	per category	(# of homeless per category # of homeless in America divided by)	per category (round to the nearest tenth)
Single Adults	564,708	358,422	358,422/564,708	63%
Children and				
Families	564,708	61,265	564,708/61,265	11%
Veterans	564,708	39,471	39,471/564,708	7 %
Chronically				
Homeless	564,708	77,486	77,486/564,708	13%
Young Adults	564,708	36,000	36,000/564,708	6%

Homeless in America demonstrated in a pie chart.



Teaching Strategies

Instructional Overview

The relevant characteristics that influence instructional strategies for this curriculum pertain to the wide range of academic abilities and diverse backgrounds of students. There are no prerequisite courses; therefore, students are not required to complete any foundational classes for preparation of this class. Since most of our Career & Technical Education (CTE) courses are not considered Honors or College Preparatory, this curriculum should be easily adaptable. Many students have career aspirations that are directly related to this curriculum and the skills learned will be very beneficial to their career plans.

This curriculum requires students to research, write, utilize mathematical equations and their creativity to develop an information graphic. The concepts and skills in this curriculum also connect to workplace principles because information graphics are utilized within the business arena. This curriculum also focusing on the mastery of Adobe Photoshop, as well as Microsoft Publisher. Learning the software is also a marketable skill for students entering the workforce in any professional setting.

This curriculum requires students to prepare a professional document by utilizing example models. Critical thinking skills are needed to implement the proper format and creativity that students use on their own.

Suggested plans are to utilize classroom strategies that consist of providing students with clear learning expectations with a rubric. In addition, the goal of this curriculum is to utilize team collaboration as well as provide students with additional videos and reading resources to help them clearly understand the collection of research materials, the establishment of an essential

question as well as how to convert statistical data into percentages.

Classroom activities will consist of teaching through digital lessons utilizing Powerpoints, student note taking, watching videos for additional lessons, student planning through note/research worksheets. Students will create brain storm maps to help place their creative ideas down on paper prior to creating the visual on the computer. In addition, plan to provide examples and guided practices prior to the student's project development. The breakdown of detailed instructions are as follows:

After completing this lesson, the students will be able to identify a social issue that they will research, provide statistical data and create an information graph.

This program is organized into two units:

- Unit 1: Creating Information Graphics
- Unit 2: Creating Movies about Social Issues

INSTRUCTIONAL IMPLEMENTATION

- 1-1 Explore a social issue and its impact on everyday life
 - a. Provide lesson instructions about how to research social issues
 - b. Provide worksheets (brain storming,
 - c. Provide visual examples of completed project
- 1-2 Plan specify visual demonstrations of project
 - a. Discuss how visual demonstrations can be achieved
 - b. Students will get into groups of two to three
 - c. Brainstorm (create ideas through group discussion)
- 1-3 Apply strategies
 - a. Introduction to Adobe software, Microsoft Adobe, Movie Maker
 - b. Identify tools and strategies to create visuals
 - c. Demonstrate through guided practice examples of information graphic

How to use the curriculum

The content within this curriculum is designed to be used in an interactive classroom setting. The format of the program materials gives you flexibility within your classroom to meet the needs of your students. This curriculum has learning competencies with strategically planned activities that are lined up with essential standards related to multimedia and webpage design classes. The learning process guides students through guided practice and application activities so that they are empowered to demonstrate what they have learned.

Unit 1- Information Graphic- Lesson Plans

Objective:

After completing this unit, the students will be able to identify a social issue that they will research, provide statistical data and create an information graph.

NC Essential Standards: MAWD 1.01- Understanding Typography, 1.02- Digital Communication, 2.01- Raster Graphics, 2.02- Vector Graphics.

Vocabulary Terms: Percentage, Proportion, Typography, Typeface, Advertisement, Master page, Prototype, Graphics, Raster graphics, Vector Graphics, Image Trace.

Teacher Preparation:

- Explain the project utilizing the rubric in appendix
- Present handouts of lesson
- Prepare software guided practice on how to create information graphic
- Assist with group assignments
- Assist with the development of an essential question
- Prepare and explain handouts (Brain Storming, Interesting Fact Worksheet)
- Explain how to calculate percentages
- Show examples Information graphic

Guided Practice Strategies: After the teacher introduces a new lesson or activity, the teacher provides interactive instruction between the teacher and students. This allows students to practice an activity prior to completing the lesson.

Group Collaboration: Students will work in groups of 2 to 3 people. Each person will be responsible for participating within the project.

Activities:

- Step 1: Class will discuss social issues within society.
- Step 2: Students will complete vocabulary terms
- Step 3: Students will break into groups of two or three.
- Step 4: Students will select a topic to research.
- Step 5: Students will develop an essential question
- Step 6: Students will complete a brain map- with suggested outcomes from topic.
- Step 7: Students will create an essential question about the topic in which they will research.
- Step 8: Students will complete a two-page report about their social topics.
- Step 9: Students will complete an information graphic.

Detailed Instructions:

Step 1: Utilize the Brain Storming Worksheet to help with various topic selections.

Step 2: Utilize example information graphics to obtain a visual idea

Step 3: Complete the Interesting Fact worksheet which involves sketching their information on paper. Information graphic format ideas may include: graphs, diagrams, flow charts, timelines, maps, graphics and size comparisons.

Step 4: Students can download free images at www.iconarchive.com.

Step 5: Utilizing Microsoft Publisher, Adobe Photoshop or any equivalent software

Step 6: Save the file name as: MyInfograph and the file format should be: jpeg

Software: Adobe Photoshop, Microsoft Publisher or any equivalent software.

Materials Needed: Appendix 9

Teacher Resources: Appendix 10

Student Resources: Appendix 11

Unit 2- Creating Movies about Social Issues

Prerequisite: Unit 1 Information Graphic

Objective

After completing this lesson, the students will be able to create a storyboard and utilize the information from the storyboard to create a movie demonstrating their research learned about their social issue.

NC Essential Standards: MAWD 3.01 – Introduction to Digital Audio & Video

Vocabulary Terms: Analog video, Digital video, Capture, Frame, Frame rate, Preproduction, Brainstorming, Script writing, Storyboarding, Casting, Production.

Teacher Preparation:

- Teacher provides overview of lesson
- Teacher provides example of storyboard
- Teacher uses guided practice to teach or show video on how to use movie maker

Lesson: Students will utilize unit 1 to help complete this lesson. Students will use their social research and the information graphic to create a storyboard and use movie maker to make a movie demonstrating their social issue project.

Activities:

Step 1: Students will use research from unit 1 to help with this assignment

Step 2: Students will create a storyboard telling a story about their social issue

Step 3: Students will create a short movie demonstrating their social issue

Step 4: Students will present their movie to the class.

Detailed Instructions:

Step 1: Utilize the Storyboard Worksheet to sketch their movie prior to starting Movie Maker

Step 2: Review examples of storyboarding (see appendix).

Step 3: Prior to starting the Movie Maker, students must complete the storyboard worksheet which involves sketching their frames on paper, as well as creating captions to explain each frame.

Step 4: Upon completion of the storyboard, students will locate, digitally draw or upload pictures and or videos into Movie Maker to help develop their movie.

Software: Movie Make

Materials Needed: Appendix 9

Teacher Resources: Appendix 10

Student Resources: Appendix 11

Strategies for Units 1 & 2

Utilize classroom strategies that consist of providing students with clear learning expectations with a rubric. In addition, plan to utilize team collaboration as well as provide students with additional resources to help them clearly understand how to research and execute their project.

Assessment Plans for Units 1 & 2

The criteria used to assess this curriculum is contained in the rubric. I prefer to use rubrics so that grading is fair and consistent and students are aware of the requirements needed for evaluation of their final project. Specifically, students should be evaluated on content, use of proper mathematical equations, software features and layout design. The rubric should be distributed prior to the beginning of the project. In addition, I also suggest the following to assist with proper assessment:

- Observe students while in their groups and review their information for accuracy
- Review individual participation within groups
- Provide the students with a post assessment grade based on the rubric

Appendix 1: Teaching Standards for North Carolina

Essential Standard: 1.01 Understand typography, multiuse design principles and elements.

Objectives: Students will learn about typography and various design elements by creating and utilizing different fonts that create design elements.

Essential Standard: 1.02 Digital communication products (graphic design layouts)

Objectives: Students will learn various graphic design layouts and how to properly select a layout that fits an appropriate design.

Essential Standard: 2.01 Raster Graphics

Objectives: Students will learn how to draw and provide images demonstrating their research. This section is important for students to learn about image resolution and how statistical data relates to various graphic design images

Essential Standard: 2.01 Vector Graphics

Objectives: Students will learn specifically about lines and shapes and how they relate to graphic design images. In addition, this standard will teach them about units of measurement, resolution and color modes.

Essential Standard: 3.01 Understand Principles of Audio and Video

Objectives: Students will learn digital terms and how to brain storm ideas; which directly ties into the students researching social issues and creating an idea of how to demonstrate the stages of storyboarding which directly correlates with the development of sequence of drawings that helps students plan their sequence of illustration as it relates to the development of their information graph.

Appendix 2: Facts to Figures by Graphic Design Rubric

Evaluation Items	Not Demonstrated	Does Not Meet	Meets Expectations	Exceeds Expectations	Points Earned
Content	Demonstrateu	Expectations	Expectations	Expectations	Points Earneu
Output effectively meets goals of the	0	1	2	2	
project.	0	1	2	3	
Clear and relatable essential question.	0	1	2	3	
All pieces show a connection to theme	0	1	2	3	
throughout materials	U				
Included all information required in	0	1	2	3	
project instructions	U				
Use of Software					
Appropriate font selection an					
application including size, spacing,	0	1	2	3	
typeface, etc.					
Effective use of design principles and	0	1	2	3	
elements		1			
Appropriate use of technology to					
enhance design and accomplish	0	1	2	3	
project goals					
Layout					
Evidence of visual hierarchy to	0	1	2	3	
enhance readability	U	1			
Overall design impact is appealing and	0	1	2	3	
relates to target audience	U	1	2	3	
SCORE				Points	
NOTE(S):					

Appendix 3 – Units 1 & 2 Vocabulary

Unit 1 - Vocabulary

Percentage - a rate, number, or amount in each one hundred; any proportion or share in relation to a whole.

Proportion - a part, share, or number considered in comparative relation to a whole.

Typography – the style, arrangement, and appearance of text

Typeface – the basic design of a character

Advertisement - a notice or announcement in a public medium promoting a product, service, or event

Master page – includes items and formats common to every page; used to maintain layout consistency

Prototype – (also called a "comp" or "mockup") an example of how the final document should appear; often used to show clients in the early stages of design

Graphics – anything on a page that is not actual text, from simple line drawings to fully active images found on the World Wide Web. The two major categories of graphic images are raster and vector.

Raster graphics – also called bitmaps, are images composed of grids of pixels that have a fixed resolution (number of pixels per inch) and cannot be resized without losing image quality. Raster graphics are edited in paint programs.

Vector Graphics – graphics that are based on mathematical formulas and are comprised of paths connected by anchor points that define lines, shapes, and curves.

Image Trace – a tool in a vector program will take a raster image or scanned drawing and automatically convert it to paths, based on selected settings.

Unit 2 - Vocabulary

Analog video - video uses a continuous electrical signal to capture footage on a magnetic tape.

Digital video - videos that are made up of 1's and 0's, binary format, that represent the video image which computers can read.

Capture - to record audio, video, or still images as digital data in a file.

Frame - a single picture or still shot in a video.

Frame rate - the number of video frames played per second

Preproduction – tasks undertaken before production begins.

Brainstorming – producing ideas through spontaneous group discussion.

Script writing – the written text for your movie.

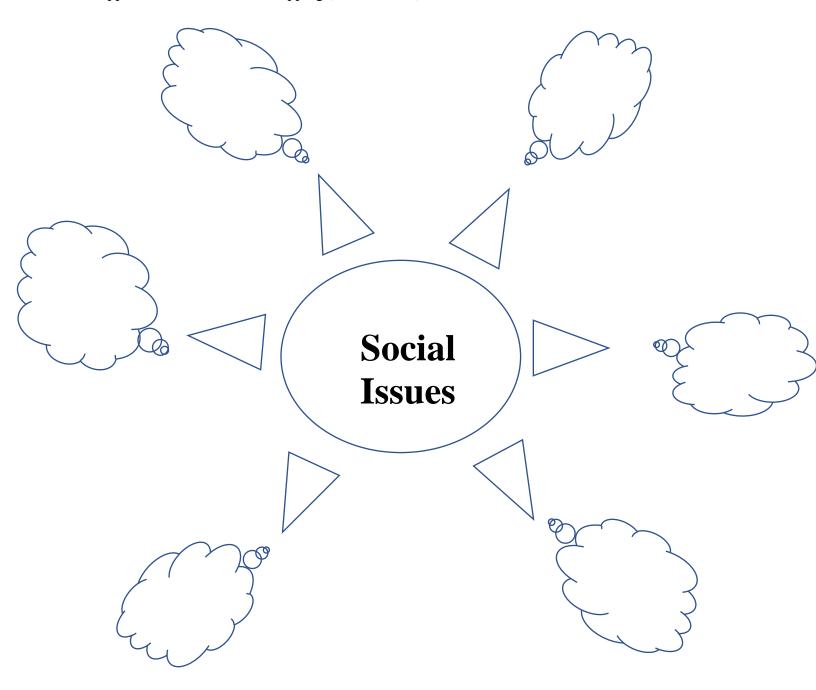
Storyboarding - a sequence of drawings, with directions and sometimes dialog, that represents planned shots for a movie.

Casting- finding appropriate people to play the roles of the video.

Production- Filming the video

Vocabulary adopted from NC Public Instruction, CTE MAWD Essential Standards

Appendix 4: Brain Storm Mapping (Social Issues)



Appendix 5: Unit 1 - Research/Notes Template

Research Topic:	
Essential Question:	
Summarize your research findings in two paragraphs using this area. Include the following in your research:	
Historical Information	
• Interesting Facts	
• Statistical Facts relating to your essential question.	

Appendix 6: Unit 1 - Interesting Fact Sheet What is your social research topic? What is your essential question? Directions: Utilize this worksheet to create a minimum of four interesting facts from your research. Each fact must accompany statistical data surrounding your research. Your interesting fact sheet should include a minimum of four interesting facts with statistical facts. **INTERESTING FACT & PICTURE: INTERESTING FACT& PICTURE:** STATISTICAL DATA: STATISTICAL DATA: **PERCENTAGE CONVERSION:** PERCENTAGE CONVERSION: INTERESTING FACT & PICTURE: **INTERESTING FACT & PICTURE:** STATISTICAL DATA: STATISTICAL DATA: PERCENTAGE CONVERSION: PERCENTAGE CONVERSION: INTERESTING FACT & PICTURE: INTERESTING FACT & PICTURE: STATISTICAL DATA: STATISTICAL DATA:

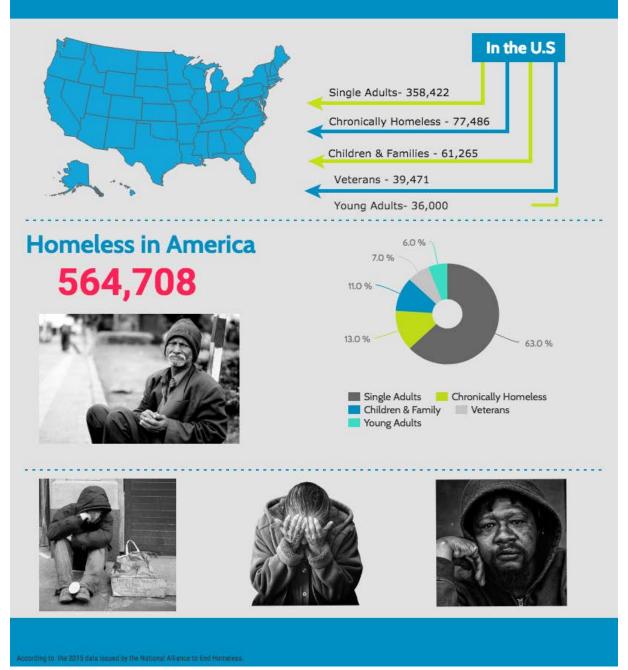
PERCENTAGE CONVERSION:

Appendix 7: Information Graphic

PERCENTAGE CONVERSION:



Who are the Homeless in America?



Appendix 8: Unit 2 - Storyboard

Directions: Utilize this worksheet to create a short movie that demonstrates your social issue. Each block represents a frame in which you will use pictures and or videos to tell your story. You may utilize additional worksheets to complete your film.

		· -
PICTURE OR VIDEO:	PICTURE OR VIDEO	PICTURE OR VIDEO
CAPTION	CAPTION	CAPTION
PICTURE OR VIDEO	PICTURE OR VIDEO	PICTURE OR VIDEO
CAPTION	CAPTION	CAPTION
PICTURE OR VIDEO	PICTURE OR VIDEO	PICTURE OR VIDEO
CAPTION	CAPTION	CAPTION

Appendix 9: Materials Needed

Unit 1: Creating Information Graphics

Materials Needed:

- 1) Teachers and students will need access to computers that have design software as such: Adobe Photoshop, Microsoft Publisher or other software of similarity
- 2) Rubric
- 3) Unit 1 vocabulary list
- 4) Activity worksheets (Brain Storming, Research Notes Template, Interesting Facts Worksheet)

Unit 2: Creating Movies about Social Issues

Materials Needed:

- 1) Teachers and students will need access to computers that have design software as such: Movie Maker
- 2) Rubric
- 3) Unit 2 vocabulary list
- 4) Movie Maker powerpoint
- 5) Storyboard worksheet

Appendix 10 Teacher Resources

Resources	Website Link
Unit 1 Sample Information graphics	http://venngage.com/templates
Unit 1 6 Simple Steps to Mastering the Arts of Writing Essential Questions By: Lee Watanabe- Crockett	https://globaldigitalcitizen.org/6-steps- writing-essential-questions
Unit 2 40 Professional Storyboards and examples How to Create a Storyboard	http://templatelab.com/storyboard- templates/#How_to_create_a_storyboard
Unit 2 Windows Movie Maker By Coldwell Banker	https://www.slideshare.net/mayerjes/how-to-use-windows-movie-maker

Appendix 11 Student Resources:

Resources	Website Link
Sample Information graphics	http://venngage.com/templates
6 Simple Steps to Mastering the Arts of Writing Essential Questions By: Lee Watanabe- Crockett	https://globaldigitalcitizen.org/6-steps- writing-essential-questions
Windows Movie Maker By Coldwell Banker	https://www.slideshare.net/mayerjes/how-to- use-windows-movie-maker
Pixaby - Free Images	https://pixabay.com/
Sample Homeless report with storyboard By Rebecca Ricks Sept 15, 2015	http://rebecca- ricks.com/2015/09/23/homelessness-in- greenpoint-initial-storyboard/

Notes page

i (US News 2017)

ii (North Carolina Public Instruction 2015)

iii (National Alliance to End Homeless 2016)

iv (National Alliance to End Homeless 2016)

v (National Alliance to End Homeless 2016)

vi (National Alliance to End Homeless 2016)

vii (National Alliance to End Homeless 2016)

viii (National Alliance to End Homeless 2016)

ix (National Alliance to End Homeless 2016)

^x (National Alliance to End Homeless 2016)

xi (Using Data to Understand the Homeless 2017)

xii (U.S. Bureau of Economic Analysis 2010)

xiii (National Coalition for the Homeless 2014)

xiv (Calculating with Percentages 2017)

xv (National Alliance to End Homeless 2016)

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Http://www.dpi.state.nc.us/docs/cte/programareas/business/programs/blueprint/mwd.pdf. Pdf.

Essential standards blueprint

National Alliances to End Homeless (2016). Accessed October 11, 2017 https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-report

A look at various statistics and ways to end homelessness

Calculating with Percentages. Accessed November 12, 2017
https://www.helpingwithmath.com/resources/lessons/percentages/Percentages01.htm
This helps understand the calculation of percentages

Using Data to Understand the Homeless. Accessed October 11, 2017 https://www.huduser.gov/portal/periodicals/em/summer12/highlight2.html This website explores various data to help understand the homeless

U.S. Bureau of Economic Analysis. Branch, G. (2011). 2010 Urban and Rural Classification - Geography - U.S. Census Bureau. Retrieved 4 April 2017, from https://www.census.gov/geo/reference/ua/urban-rural-2010.html
Statistical data as it relates to urban and rural areas

National Coalition for the Homeless (2017). Accessed October 2, 2017 http://nationalhomeless.org/

Research and Homelessness awareness in America

Semega, Jessica L., Kayla R. Fontenot and Melissa A. Kollar. Income and Poverty in the United States. Accessed September 12, 2017.

https://www.census.gov/library/publications/2017/demo/p60-259.html Provides statistical data about income, poverty and its relationship to homelessness

The State of Homelessness in America 2015. (2015). Accessed October 11, 2017 from http://www.endhomelessness.org/library/entry/the-state-of-homelessness-inamerica-2015

A look at homelessness in America