

# Teacher Guide

## Bills, Budgets & Bank Accounts



This program includes 20 sequential and guided activities dealing with every aspect of Noah's personal finances as he takes his first full-time job and begins life on his own. Each activity deals with a different aspect of his financial and work life.

Students must complete the activities sequentially. Any information or answers needed from earlier activities will be provided in the current activity the student is working on. All math is explained and examples given.

Students can stop, save their work and return to the same activity at any time. Each student's score for the current activity and the entire program is shown at the top of the work screen

Click on any activity title below to see an overview and all answers.

Activity 1: [Which Job Will Noah Take?](#)

Activity 2: [Moving to Raleigh](#)

Activity 3: [Noah's Apartment](#)

Activity 4: [Noah Buys Groceries Online](#)

Activity 5: [Apartment Furnishings](#)

Activity 6: [First Day at Work](#)

Activity 7: [Meet the Boss](#)

Activity 8: [Noah's Online Account Statement](#)

Activity 9: [Noah's First Budget](#)

Activity 10: [Noah's Credit Card Statement](#)

### Technical Information

(Click on any topic)

- [Student Login](#)
- [Full Screen Mode](#)
- [Teachers / Admins Log in](#)
- [Minimum System Requirements](#)
- [Generating Student Reports](#)
- [Limiting Availability to Students](#)

### Alignment with the Common Core State Standards

Anchor Standards for:

- [Reading](#)
- [Writing](#)
- [Mathematical Practice](#)

Activity 11: [I Don't Know What to Do!](#)

Activity 12: [Noah's Savings Account](#)

Activity 13: [Noah Wants a Pet](#)

Activity 14: [Noah's New Electric Car](#)

Activity 15: [Noah's Utility Bills](#)

Activity 16: [Two Situations at Work](#)

Activity 17: [Noah's MasterCard Statement](#)

Activity 18: [Noah's Bank Loan](#)

Activity 19: [Noah Wants the Project](#)

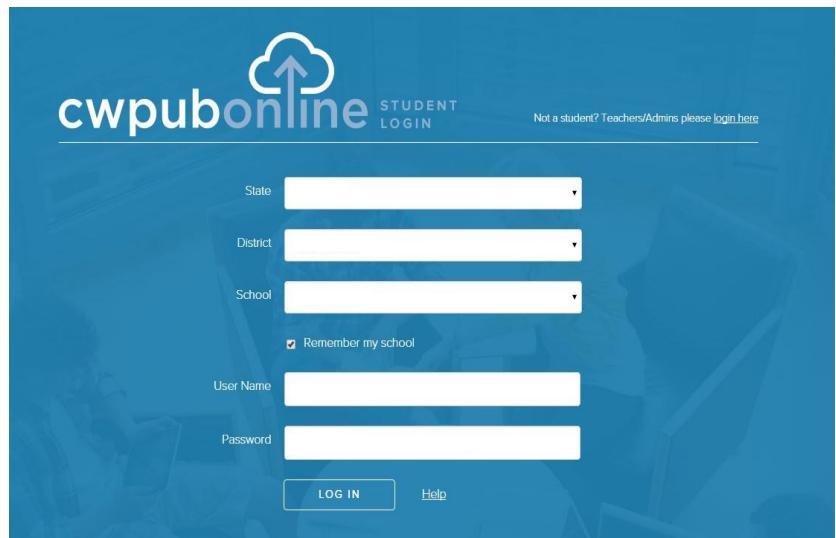
Activity 20: [Noah's Online Account Statement](#)

# Technical Information

## Bills, Budgets & Bank Accounts

### Student Login: How your students will access Bills, Budgets and Bank Accounts

- 1) Go to [www.cwpubonline.com](http://www.cwpubonline.com)
- 2) Click **STUDENT LOGIN** on the home page.
  
- 3) LOG IN :
  - **State:** First, use the drop down menu to select your state.
  - **District:** Next, use the drop down menu to select your district.
  - **School:** Finally, use the drop down menu to select your school.
  - **User Name:** Enter your user name.
  - **Password:** Enter your password.



- 4) Select Bills, Budgets and Bank Accounts from the Financial Literacy program menu.
- 5) Click the **BEGIN** button.



**TIP:** If you want to run Bills, Budgets and Bank Accounts just as your students do, login to your Teacher account and choose “Access the Programs”.

## The Programs Work Best in Full Screen Mode

To work in full screen mode, use the following commands based on your type of device:

- Windows: F11
- Mac: Command + Shift + F
- Chromebook: Full Screen key

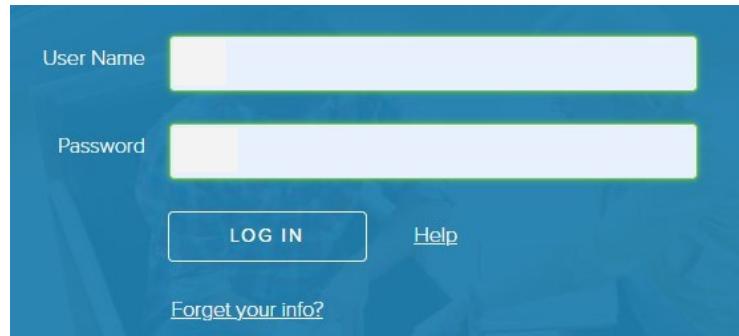


## Teacher/Admin Log in

To log in to the system as a teacher or admin, you will click the **TEACHER/ADMIN LOGIN** at the top right of the [cwpubonline.com](http://cwpubonline.com) homepage.

Enter your User Name and password and then click the **LOG IN** button.

If you cannot remember your user name or password, click the “Forget your info?” link under the **LOG IN** button and enter your email on the next screen and click the submit button. Your credentials will be emailed to your address.

A screenshot of a login form with a blue header. It has two input fields: 'User Name' and 'Password', both with placeholder text. Below the fields are 'LOG IN' and 'Help' buttons. At the bottom is a link 'Forget your info?'.

Note: Teacher and Admin accounts can only log into the admin portion of the portal.

**TIP: If you want to run Bills, Budgets and Bank Accounts just as your students do, login to your Teacher account and choose “Access the Programs”.**

## Minimum System Requirements

- Reliable Broadband Internet Connection
- A web browser that supports HTML5. C.W. Publications recommends Google Chrome.
- Microsoft Windows: Windows 7 / Windows 8 / Windows 10 / Windows 11
- Mac OS X 10.6 or higher
- Chrome OS
- Monitor
  - A Color Monitor with minimum resolution of 1024 x 768 is required.
- Sound Capability
  - The sound is optional and may be turned off by clicking on the Audio Icon located in Program Utilities.
- *For technical support email [support@cwpub.com](mailto:support@cwpub.com) or call 815.441.4308*

## Generating Student Reports



To create the reports for one or more students:

- 1) Click the "Classes" link on the left side of the page
- 2) Click the green reports icon next to the class containing the student(s) for which you want to generate the report(s)

### Classes

School	First Name	Last Name	Class	# of Students current/max	Expiration Date	Student Management
Demo School	Demo		Teacher	Demo 3	10/50	1/17/2016
Demo School	Demo		Teacher	Demo 2	4/100	1/23/2016
Demo School	Demo		Teacher	Demo 1	1/50	1/5/2016

Most Recent    <    >

- 3) On the Reports screen that opens, click the radio button next to the report you wish to print. If you are choosing to print a budget or a spending report, you will also need to choose the month from the drop down box.
- 4) Select the Student Name, or choose the All Students option if you want to print your entire class, from the drop down menu
- 5) Press the **Get Report** button
- 6) The report for the student will be present on the screen. If you wish to print the report, click the **Print Report** button and a printable version of the report will be created.

**Reports for Demo 2 - Demo School**

**Select Report:**

**On Your Own**      **On The Job**

Summary       Personnel File

Spending       August

Budget

**Select Student:**

Student504, Demo

**Get Report**    **Cancel**

**NOTE:** You are only able to generate reports for the current or finished simulation for students. If a student starts a new simulation the report data will reset.



## **Limiting Program Availability to Students**

By default, all students in your class(es) have access to all programs available within the cwpubonline portal. If you wish to limit your student(s) to certain programs this can be accomplished through the Admin Portal.

### **LIMITING INDIVIDUAL STUDENTS:**

- 1) Log into the Admin Portal
- 2) Click the "Students" link on the left hand side of the screen
- 3) You can scroll through the list of students on the bottom section of the screen or you can use the search box at the top of the screen to quickly find the student you wish to limit
- 4) Click the "Pencil Icon" next to the student
- 5) Click the check box next to "Customize access to simulations for this student (overrides current class setting)"
- 6) Remove the check marks next to the programs you do not want your student to access
- 7) Click the "Update" button

### **LIMITING YOUR ENTIRE CLASS TO ONE OR MORE PROGRAMS:**

- 1) Log into the Admin Portal
- 2) Click on the "Classes" link on the left hand side of the page
- 3) Click the "Pencil Icon" next to the class in which you to set the limits
- 4) Check the box next to "Select simulations available to students in the class"
- 5) Remove the check marks next to the programs you do not want your students to access
- 6) Click the "Update" button at the bottom of the screen
- 7) You will see a warning box state that setting limits for a class will override individual student selections,

### Activity 1: Which Job Will Noah Take?

Overview:

Students will calculate:

- (1) Noah's real salary in seven different cities where he has been offered industrial design jobs.
- (2) Using the average rent for a one bedroom apartment in each city, they will calculate the rent as a percentage of his annual salary in each city.

Answer 1	\$62,617	Answer 2	23.1%
Answer 3	\$56,881	Answer 4	29.8%
Answer 5	\$59,804	Answer 6	25.2%
Answer 7	\$50,000	Answer 8	29.8%
Answer 9	\$40,341	Answer 10	31.6%
Answer 11	\$50,000	Answer 12	30.7%
Answer 13	\$43,787	Answer 14	37.3%

### Activity 2: Moving To Raleigh

Overview:

Students will calculate Noah's:

- (1) total cost to rent a U-Haul trailer.
- (2) total cost for gas.
- (3) total cost for hotels.
- (4) total cost for food while traveling.
- (5) total cost for the trip.

Answer 1	U-Haul	\$525.33
Answer 2	Car Servicing	\$ 38.10
Answer 3	Gasoline	\$102.81
Answer 4	Ohio Hotel	\$109.74
Answer 5	Raleigh Hotel	\$269.54
Answer 6	Food	\$ 69.95
Answer 7	Total Trip Cost	\$1,115.47

### Activity 3: Noah's Apartment

Overview:

Students will calculate:

- (1) The percentage of Noah's salary it will take to rent a one or two bedroom apartment in each of three apartment complexes.
- (2) What the apartment rents will be in 2 years given the estimated annual percentage increases.

Answer 1	24.4%	Answer 2	29.7%
Answer 3	\$1,314	Answer 4	\$1,633
Answer 5	26.3%	Answer 6	30.7%
Answer 7	\$1,444	Answer 8	\$1,687
Answer 9	26.8%	Answer 10	35.8%
Answer 11	\$1,472	Answer 12	\$2,009

#### Activity 4: Noah Buys Groceries Online

Overview:

Students will calculate:

- (1) The total cost of the grocery items Noah purchased online from Walmart.
- (2) The percentage of the total cost that was spent on each category of food items.

Answer 1	Total Cost	\$219.28
Answer 2	Meats	15.2%
Answer 3	Produce	5.4%
Answer 4	Canned Goods	7.4%
Answer 5	Breads	3.2%
Answer 6	Drinks	7.5%
Answer 7	Snacks	8.4%

Students will read 16 statements and decide whether or not each statement is a way for Noah to save on food costs.

Answer 8	No	Answer 14	Yes	Answer 20	Yes
Answer 9	Yes	Answer 15	Yes	Answer 21	No
Answer 10	No	Answer 16	No	Answer 22	No
Answer 11	Yes	Answer 17	No	Answer 23	Yes
Answer 12	Yes	Answer 18	No		
Answer 13	No	Answer 19	Yes		

#### Activity 5: Apartment Furnishings

Overview:

Students will calculate:

- (1) The total cost including sales tax of several household items Noah buys at Walmart.
- (2) The sale prices of beds, mattresses and box springs at Kniederman's Home Furnishings.
- (3) The total cost including sales tax of a new bed Noah buys at Kneiderman's.
- (4) The percentage of his \$1,000 bed budget that he spent.

Answer 1	\$437.53
Answer 2	\$339
Answer 3	\$489
Answer 4	\$419
Answer 5	\$559
Answer 6	\$699
Answer 7	\$823.68
Answer 8	82.4%

### Activity 6: First Day At Work

Overview:

Students will calculate:

- (1) Noah's biweekly net pay based on his \$61,000 annual salary.
- (2) What his new health insurance policy will pay toward a hypothetical hospital bill.

Answer 1	Biweekly Gross	\$2,346.15
Answer 2	Total Withholding	\$ 747.29
Answer 3	Biweekly Net Pay	\$1,598.86

Answer 4	\$3,400	Answer 7	\$ 480
Answer 5	\$2,400	Answer 8	\$10,670
Answer 6	\$1,920	Answer 9	\$ 1,480

Students will read 16 statements and decide whether or not each statement is a way for Noah to be accepted by his coworkers.

Answer 10	Yes	Answer 16	Yes	Answer 22	Yes
Answer 11	Yes	Answer 17	No	Answer 23	No
Answer 12	Yes	Answer 18	No	Answer 24	Yes
Answer 13	Yes	Answer 19	No	Answer 25	No
Answer 14	No	Answer 20	No		
Answer 15	No	Answer 21	Yes		

### Activity 7: Meet The Boss

Overview:

Students will read 16 statements and decide whether or not it is a good way for Noah to create a good working relationship with his boss.

Answer 1	Yes	Answer 7	No	Answer 13	Yes
Answer 2	No	Answer 8	Yes	Answer 14	Yes
Answer 3	Yes	Answer 9	Yes	Answer 15	No
Answer 4	Yes	Answer 10	Yes	Answer 16	Yes
Answer 5	No	Answer 11	No		
Answer 6	Yes	Answer 12	No		

### Activity 8: Noah's Online Account Statement

Overview:

Students will calculate the balance in Noah's checking account on 05/31 and 06/08.

Answer 1	Balance 05/31	\$2,717.66
Answer 2	Balance 06/08	\$ 679.64

### Activity 9: Noah's First Budget

#### Overview:

Students will calculate the percentage of Noah's \$4,692.30 monthly gross pay that he has divided into 14 budget categories.

Answer 1	Food	5.3%
Answer 2	Utilities and Phone	4.3%
Answer 3	Transportation	3.2%
Answer 4	Other Insurance	5.9%
Answer 5	Credit Payments	12.8%
Answer 6	Clothing	1.1%
Answer 7	Personal Items	0.9%
Answer 8	Household Items	1.6%
Answer 9	Entertainment	2.1%
Answer 10	Contributions	0.4%

### Activity 10: Noah's Credit Card Statement

#### Overview:

- (1) Students will complete Noah's credit card statement.
- (2) Students will calculate what percentage of Noah's credit card charges were made at each of six retailers.

Answer 1	\$105.45	Answer 6	11.2%
Answer 2	\$404.42	Answer 7	10.0%
Answer 3	\$404.42	Answer 8	64.6%
Answer 4	\$4,595.58	Answer 9	6.1%
Answer 5	5.4%	Answer 10	2.7%

### Activity 11: I Don't Know What To Do

#### Overview:

Noah has been given his first design project, but he has no idea how to complete it. Students will read 16 statements and decide whether or not it is a good way for Noah to handle the situation.

Answer 1	No	Answer 7	No	Answer 13	No
Answer 2	No	Answer 8	Yes	Answer 14	No
Answer 3	No	Answer 9	Yes	Answer 15	No
Answer 4	Yes	Answer 10	No	Answer 16	Yes
Answer 5	No	Answer 11	Yes		
Answer 6	Yes	Answer 12	No		

### Activity 12: Noah's Savings Account

Overview:

Noah needs a savings account as an emergency fund. Students will read 15 statements and decide if it is a good method or not for building an emergency fund.

Answer 1	No	Answer 6	Yes	Answer 11	Yes
Answer 2	Yes	Answer 7	Yes	Answer 12	Yes
Answer 3	Yes	Answer 8	NO	Answer 13	Yes
Answer 4	No	Answer 9	No	Answer 14	No
Answer 5	No	Answer 10	No	Answer 15	No

Students will calculate:

- (1) Noah's savings account balance on 05/31.
- (2) Noah's total deposits.
- (3) The average size of Noah's deposits.
- (4) The average size of Noah's withdrawals.
- (5) Noah's average daily balance in March.

Answer 16	Balance on 05/31	\$1,332.40
Answer 17	Total Deposits	\$ 415.00
Answer 18	Average Deposit	\$ 41.50
Answer 19	Average Withdrawal	\$ 413.33
Answer 20	Average Daily Balance	\$2,261.28

### Activity 13: Noah Wants A Pet

Overview:

Students will calculate:

- (1) Noah's first year cost for owning a small dog.
- (2) Noah's first year cost for owning a medium dog.
- (3) Noah's first year cost for owning a large dog.

Answer 1	Small dog	\$1,707
Answer 2	Medium dog	\$1,939
Answer 3	Large dog	\$2,140

### Activity 14: Noah's New Electric Car

Overview:

Noah wants to buy a new electric car, but he is not sure it is the smart thing to do. Students will read 14 statements and decide if it is True or False in regard to buying an EV.

Answer 1	T	Answer 6	F	Answer 11	T
Answer 2	F	Answer 7	F	Answer 12	T
Answer 3	T	Answer 8	T	Answer 13	T
Answer 4	F	Answer 9	F	Answer 14	F
Answer 5	F	Answer 10	F		

Students will calculate:

- (1) Sales Tax (6.75%)
- (2) Total Cost
- (3) Amount Financed
- (4) Total of Payments
- (5) Total Credit Cost
- (6) Finance Charge

[Back To Top](#)

Answer 15	Sales Tax	\$ 1,852.38
Answer 16	Total Cost	\$31,827.38
Answer 17	Amount Financed	\$27,627.38
Answer 18	Total of Payments	\$33,548.40
Answer 19	Total Credit Cost	\$37,748.40
Answer 20	Finance Charge	\$45,921.02

## Activity 15: Noah's Utility Bills

### Overview:

Students will calculate the following entries on Noah's June electric bill:

- (1) June Energy Charge
- (2) Sales Tax
- (3) June Amount Due

Answer 1	Energy Charge	\$41.36
Answer 2	Sales Tax	\$ 3.93
Answer 3	Amount Due	\$59.29

Students will calculate the following entries on Noah's June cable and internet bill:

- (1) Spectrum program rentals for June
- (2) Spectrum other charges for June
- (3) Total amount due for June
- (4) Percentage for TV service
- (5) Percentage paid for internet service
- (6) Percentage paid for program rentals
- (7) Percentage paid for other charges

Answer 4	Program Rentals	\$ 30.94
Answer 5	Other Charges	\$ 16.56
Answer 6	Total Amount Due	\$207.48
Answer 7	% for TV Service	33.7%
Answer 8	% for Internet Service	43.4%
Answer 9	% for Program Rentals	14.9%
Answer 10	% for Other Charges	8.0%

Students will calculate the cost per month for 24 months if Noah trades in an older iPhone for the newest model.

Answer 11	iPhone 13	\$16.94
Answer 12	iPhone 12	\$22.30
Answer 13	iPhone SE	\$31.68
Answer 14	iPhone 11	\$26.77
Answer 15	iPhone XS	\$29.00
Answer 16	iPhone 8	\$33.47
Answer 17	iPhone 7	\$33.92

## Activity 16: Two Situations At Work

### Overview:

Playing practical jokes is part of the culture at the Atheron Corporation. Noah finds it annoying and a waste of time, but he also doesn't want to become an outlier.

Students will read 16 statements and decide whether or not it is a good way for Noah to deal with this situation..

Answer 1	No	Answer 7	No	Answer 13	Yes
Answer 2	No	Answer 8	No	Answer 14	Yes
Answer 3	Yes	Answer 9	No	Answer 15	No
Answer 4	Yes	Answer 10	Yes	Answer 16	No
Answer 5	Yes	Answer 11	Yes		
Answer 6	No	Answer 12	No		

Noah and another designer are constantly on the opposite side of issues which always seems to end up in an argument.

Students will read 16 statements and decide whether or not it is a good way for Noah to deal with this situation..

Answer 17	No	Answer 23	Yes	Answer 29	Yes
Answer 18	No	Answer 24	No	Answer 30	No
Answer 19	No	Answer 25	No	Answer 31	No
Answer 20	Yes	Answer 26	No	Answer 32	No
Answer 21	Yes	Answer 27	Yes		
Answer 22	No	Answer 28	Yes		

## Activity 17: Noah's MasterCard Statement

### Overview:

Students will complete Noah's June credit card statement by calculating each of the following:

- (1) Payments Made
- (2) Purchases Made
- (3) Interest Charged\*
- (4) New Balance
- (5) Available Credit

Answer 1	Payments Made	\$ 200.00
Answer 2	Purchases Made	\$1,792.98
Answer 3	Interest Charge	\$ 20.44
Answer 4	New Balance	\$2,017.84
Answer 5	Available Credit	\$2,982.16

\* Calculating Interest charged using the average daily balance method.

**Step 1:**  $\$ 404.42 \times 4 = \$ 1,617.68$

$\$ 929.75 \times 6 = \$ 5,578.50$

$\$2,190.96 \times 12 = \$26,291.52$

$\$1,990.96 \times 7 = \$13,936.72$

$\$2,001.95 \times 2 = \$ 4,003.90$

**Step 2:**  $\$51,428.32 / 31 = \$1,658.98$   
**Step 3**

**Step 4:**  $\$1,658.98 \times .015 = \$20.44$

[Back To Top](#)

## Activity 18: Noah's Bank Loan

### Overview:

Noah has decided to take out a \$4,000 bank loan to pay off the major items he charged to his credit card and buy some additional home furnishings.

Students will complete Noah's loan disclosure statement by calculating each of the following:

- (1) Amount Financed
- (2) Monthly Payment
- (3) Total of Payments
- (4) Finance Charge for 2 Years
- (5) Finance Charge for 1 Year
- (6) Finance Charge for 3 Years

Answer 1	Amount Financed	\$4,000.00
Answer 2	Monthly Payment	\$ 180.91
Answer 3	Total of Payments	\$4,341.84
Answer 4	Finance Charge (2 Years)	\$ 341.84
Answer 5	Finance Charge (1 Year)	\$ 175.52
Answer 6	Finance Charge (3 Years)	\$ 512.60

Students will calculate the sale price of 5 items he decides to purchase from Kniederman's and the total for the purchases including sales tax.

They will also calculate his total cost at the original prices, his savings and the total percentage discount from the sale.

Answer 7	\$ 254.99	Answer 12	\$1,345.41
Answer 8	\$ 389.99	Answer 13	\$1,882.19
Answer 9	\$ 93.49	Answer 14	\$ 536.78
Answer 10	\$ 355.99	Answer 15	28.5%
Answer 11	\$ 180.00		

## Activity 19: Noah Wants The Project

### Overview:

Noah would like to be assigned an important new design project. Students will read 16 statements and decide whether or not it is a good way for Noah to get the project.

Answer 1	No	Answer 7	No	Answer 13	No
Answer 2	Yes	Answer 8	No	Answer 14	No
Answer 3	No	Answer 9	Yes	Answer 15	Yes
Answer 4	Yes	Answer 10	No	Answer 16	Yes
Answer 5	No	Answer 11	Yes		
Answer 6	No	Answer 12	No		

## Activity 20: Noah's Online Account Statement

### Overview:

Students will calculate the balance in Noah's checking account on 06/18 and 07/02.

Answer 1	Balance 06/18	\$1,639.57
Answer 2	Balance 07/02	\$1,939.74

# Common Core State Standards for Literacy in History/Social Studies, Science and Technical Subjects

Each of the following anchor standards for reading which is aligned with *cwpubonline* has been marked with a **red arrow**.

## College and Career Readiness Anchor Standards for Reading

### Key Ideas and Details

- ▶ 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- ▶ 2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- ▶ 3. Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

### Craft and Structure

- ▶ 4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- ▶ 5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- 6. Assess how point of view or purpose shapes the content and style of a text.

### Integration of Knowledge and Ideas

- 7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
- ▶ 8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- 9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

### Range of Reading and Level of Text Complexity

- ▶ 10. Read and comprehend complex literary and informational texts independently and proficiently.

# Common Core State Standards for Literacy in History/Social Studies, Science and Technical Subjects

Each of the following anchor standards for writing which is aligned with *cwpubonline* has been marked with a red arrow.

## College and Career Readiness Anchor Standards for Writing

### Text Types and Purposes

- ▶ 1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
- ▶ 2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
- ▶ 3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

### Production and Distribution of Writing

- ▶ 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- ▶ 5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- 6. Use technology, including [the](#) Internet, to produce and publish writing and to interact and collaborate with others.

### Research to Build and Present Knowledge

- 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- 8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- ▶ 9. Draw evidence from literary or **informational** texts to support analysis, reflection, and research.

### Range of Writing

- ▶ 10. Write routinely over extended time frames (time for research, reflection, and revision) and **shorter time frames** (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

# Common Core State Standards for Literacy in History/Social Studies, Science and Technical Subjects

Each of the following anchor standards for math which is aligned with *cwpubonline* has been marked with a red arrow

## Standards for Mathematical Practice

- ▶ 1. Make sense of problems and persevere in solving them.
- ▶ 2. Reason abstractly and quantitatively.
- ▶ 3. Construct viable arguments and critique the reasoning of others.
- ▶ 4. Model with mathematics.
- ▶ 5. Use appropriate tools strategically.
- ▶ 6. Attend to precision.
- ▶ 7. Look for and make use of structure.
- ▶ 8. Look for and express regularity in repeated reasoning.