

# Englewood Public School District



## ***8TH GRADE***





# LANGUAGE ARTS

Directions:

1. Read the novel, *The Last Lecture*
2. Complete the ten (10) journal prompts
3. Respond to the *The Last Lecture* essay prompt

Name: \_\_\_\_\_



# 8th Grade Language Arts Summer Assignment

**Directions:** While you read, *The Last Lecture*, respond to the following prompts, in the journal provided to you. Your journal entries should be at least one page in length.

## **Journal Prompt One (Introduction-pg. 18)**

On page 17 Randy writes, "...We cannot change the cards we are dealt, just how we play the hand". What might this say about Randy and the type of person he is? How could you apply this motto to your own life?

## **Journal Prompt Two (pgs. 19-39)**

What items does Randy paint on his wall as a child? Why does Randy believe parents should let their children paint on their bedroom walls?

## **Journal Prompt Three (pgs. 40-54)**

What does Randy mean by "the brick walls are there for a reason"? What do you think the "brick walls" symbolize?

## **Journal Prompt Four (pgs. 57-79)**

What lesson do you think Randy was trying to teach his niece and nephew in chapter 15 "*Pouring Soda in the Backseat*"? How might this lesson influence others?

## **Journal Prompt Five (pgs. 80-104)**

In chapter 21, Randy writes about the lessons Jai has learned from their journey together. Describe some ways you stay positive during difficult times. What advice would you give to others to stay positive during a time of hardship?

## **Journal Prompt Six (pgs. 107-116)**

Pick one of the seven tips that Randy talks about in chapter 23. Describe the advice and how you would like to apply it to your own life.

## **Journal Prompt Seven (pgs. 117-128)**

In chapter 26, why does Randy say teamwork was central to success? Describe a time you worked as part of a group and the success you had. It could be in the classroom, as part of a team, a production (dance, theatre, concert). Why might it be necessary to work well with others? How does working with others contribute to your own success?

## **Journal Prompt Eight (pgs. 131-151)**

Explain Randy's phrase "Be the First Penguin" and why "experience is often the most valuable thing you have to offer".

## **Journal Prompt Nine (pgs. 152-171)**

Why does Randy title chapter 42 "*Loyalty Is a Two-Way Street*"? Why is loyalty important?

## **Journal Prompt Ten (pgs. 172-188)**

What does Randy believe will "lead to all your dreams coming true"? How are you going to achieve your dreams?

## Journal Prompt Rubric

Score	Basis for Scoring
<b>4</b>	<ul style="list-style-type: none"> <li>• Superior responses begin with a topic sentence which restates the question or states the topic</li> <li>• Ideas are fully developed with a sense of completeness</li> <li>• Specific details from book or passage support the topic, thoughts, ideas, and opinions</li> <li>• Organization is structured clearly, and is easy to understand</li> <li>• Sentence structure is correct and effective</li> <li>• Spelling, punctuation, and capitalization is correct</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>• Proficient responses begins with a topic sentence which restates the question or states the topic</li> <li>• Ideas are well developed and supported</li> <li>• Details from the book or passage relate to the topic, thoughts, ideas, and opinions</li> <li>• Organization is structured and understandable</li> <li>• Sentence structure is correct and effective</li> <li>• Spelling, punctuation, and capitalization is mostly correct</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>• Response begins with a topic sentence which restates the question or states the topic</li> <li>• Ideas are clear and somewhat address the topic</li> <li>• At least one specific detail from the book or passage that relates to the topic</li> <li>• Organization is unclear</li> <li>• Sentence structure has errors</li> <li>• Spelling, punctuation, and capitalization has occasional errors</li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li>• Response begins with a sentence which doesn't restate the question or state the topic</li> <li>• Ideas are not developed with limited support</li> <li>• May not have details from the book or passage that support answer</li> <li>• Organization is unclear and difficult to follow</li> <li>• Sentences have errors, fragments, and run-ons</li> <li>• Spelling, punctuation, and capitalization has mistakes</li> </ul>

## ***The Last Lecture Essay Prompt***

**Directions:** Your answer should be **at least** one paragraph (5-7 sentences). Make sure you cite evidence from the text in your answer.

**Prompt:**

How was Randy able to achieve his hopes and dreams? What details from Randy's childhood do you think led to the successes he had later in life? How might you incorporate Randy's life lessons into your own life? Cite evidence from the text to support your answer.

**Respond to the prompt in your journal, using the ACE strategy:**

- A-** Answer the question by restating the prompt
- C-** Cite evidence by quoting directly from the text
- E-** Explain how your evidence answers the prompt

## The Last Lecture Essay Rubric

Traits	Effective 4	Adequate 3	Marginal 2	Inadequate 1
<b>Focus &amp; Detail</b>	There is one clear, well-focused topic. Main ideas are clear and are <b>well supported</b> by textual evidence from <i>The Last Lecture</i> , to support the thesis statement. Evidence is well explained.	There is one clear, well-focused topic. Main ideas are clear but are <b>not well supported</b> by detailed information from <i>The Last Lecture</i> . More explanation is needed to connect evidence to the thesis statement.	There is one topic. Main ideas are somewhat clear and attempt to focus on the thesis. More evidence and explanation is needed to support the thesis statement and connecting of ideas.	The topic and main ideas are <b>not clear</b> and provide <b>no detail</b> to support the thesis statement.
<b>Organization</b>	The introduction is inviting, restates the questions, and provides an overview of the paper. Information is relevant and presented in a logical order. The conclusion is strong.	The introduction states the main topic and provides an overview of the paper. A conclusion is included.	The introduction states the main topic. A conclusion is not included.	There is no clear introduction, structure, or conclusion.
<b>Voice</b>	The author's purpose of writing is very clear, and there is a <b>strong evidence</b> of attention to audience. The author keeps a formal tone and his/her extensive knowledge and experience with the text is evident.	The author's purpose of writing is somewhat clear, and there is <b>some evidence</b> of attention to audience. The author's knowledge and/or experience with the text is evident but the author sometimes lacks a formal tone.	The author's purpose of writing is somewhat clear. There is no attention to audience and no formal tone. The author's knowledge and/or experience with the text is limited.	The author's purpose of writing is unclear and the tone is informal.
<b>Word Choice</b>	The author uses vivid words and phrases. The choice and placement of words is accurate, natural, and not forced.	The author uses vivid words and phrases. The choice and placement of words is inaccurate at times and/or seems misused.	The author uses words that communicate clearly, but the writing lacks variety.	The writer uses a limited vocabulary. Jargon (slang) or clichés may be present and detract from the meaning.
<b>Sentence Structure, Grammar, Mechanics, &amp; Spelling</b>	All sentences are well constructed and have varied structure and length. The author makes no errors in grammar, mechanics, and/or spelling.	Most sentences are well constructed and have varied structure and length. The author makes a few errors in grammar, mechanics, and/or spelling, but they do not interfere with understanding.	Most sentences are well constructed, but they have a similar structure and/or length. The author makes several errors in grammar, mechanics, and/or spelling that interfere with understanding.	Sentences sound awkward, are distractingly repetitive, or are difficult to understand. The author makes numerous errors in grammar, mechanics, and/or spelling that interfere with understanding.





Directions:

- Review your math facts every day!
- Be sure to show all your work.
- Visit <http://www.khanacademy.org> and type the topic in the search bar to find helpful videos.

Name: \_\_\_\_\_

# Write Rational Numbers as Terminating or Repeating Decimals

## Example 1 Terminating Decimal

Write  $\frac{3}{4}$  as a decimal.

**STEP 1** Divide the numerator by the denominator.

$$\frac{3}{4} \rightarrow 4 \overline{)3}$$

**STEP 2** In the dividend, insert a decimal point followed by zeros. In the space where the quotient will go, place a decimal point directly above the decimal point in the dividend.

$$4 \overline{)3.00}$$

**STEP 3** Divide. If you eventually get a remainder of 0, the decimal terminates.

$$\begin{array}{r} 0.75 \\ 4 \overline{)3.00} \\ \underline{-28} \phantom{0} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

So,  $\frac{3}{4} = 0.75$ .

## Example 2 Repeating Decimal

Write  $\frac{5}{6}$  as a decimal.

**STEP 1** Divide the numerator by the denominator.

$$\frac{5}{6} \rightarrow 6 \overline{)5}$$

**STEP 2** In the dividend, insert a decimal point followed by zeros. In the space where the quotient will go, place a decimal point directly above the decimal point in the dividend.

$$6 \overline{)5.000}$$

**STEP 3** Divide. If the remainders start to repeat, the decimal repeats.

$$\begin{array}{r} 0.833 \\ 6 \overline{)5.000} \\ \underline{-48} \phantom{00} \\ 20 \\ \underline{-18} \phantom{0} \\ 20 \\ \underline{-18} \phantom{0} \\ 2 \end{array}$$

So,  $\frac{5}{6} = 0.833\ldots$  or  $0.8\overline{3}$ .

### ✓ Quick Check

Write each number as a terminating or repeating decimal.

1  $\frac{2}{5}$  \_\_\_\_\_

2  $\frac{5}{8}$  \_\_\_\_\_

3  $\frac{3}{11}$  \_\_\_\_\_

4  $\frac{19}{12}$  \_\_\_\_\_

### Practice on Your Own

Write each number as a terminating or repeating decimal.

5  $\frac{9}{20}$  \_\_\_\_\_

6  $\frac{13}{15}$  \_\_\_\_\_

7  $\frac{5}{9}$  \_\_\_\_\_

8  $\frac{57}{40}$  \_\_\_\_\_

9  $1\frac{1}{2}$  \_\_\_\_\_

10  $2\frac{11}{12}$  \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Lesson 1.2 Prime Factorization

Circle all the prime numbers in the table.

1.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Express each number as a product of its prime factors.

2. 28 \_\_\_\_\_

3. 39 \_\_\_\_\_

4. 54 \_\_\_\_\_

5. 68 \_\_\_\_\_

6. 92 \_\_\_\_\_

7. 105 \_\_\_\_\_

8. 165 \_\_\_\_\_

9. 210 \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

10. 245 \_\_\_\_\_

11. 330 \_\_\_\_\_

12. 490 \_\_\_\_\_

13. 580 \_\_\_\_\_

14. 858 \_\_\_\_\_

15. 1,020 \_\_\_\_\_

16. 1,575 \_\_\_\_\_

17. 1,638 \_\_\_\_\_

**Solve.**

18. Given that 640 written as a product of its prime factors is  $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$ , write 1,280 as a product of its prime factors.

19. 750 written as a product of its prime factors is  $2 \times 3 \times 5 \times 5 \times 5$ .  
Write 3000 as a product of its prime factors.

20. 5,100 written as a product of its prime factors is  $2 \times 2 \times 3 \times 5 \times 5 \times 17$ .  
Write 1,700 as a product of its prime factors.

21. It is given that 6,300 can be expressed in terms of its prime factors as  $2 \times 2 \times 3 \times 3 \times 5 \times 5 \times 7$ .

a) Write 900 as a product of its prime factors.

b) Write 700 as a product of its prime factors.

Determine the value of the variable.

1. $x + 3 = 5$	2. $x - 5 = 2$
3. $3x = -3$	4. $-9x = 18$
5. $\frac{2}{7}x = 10$	6. $-\frac{5}{7}x = -25$
7. $3 = m + 7$	8. $23.6 = n - 7.1$
9. $a + 42 = 34$	10. $1.8 = w - 15.13$
11. $\frac{1}{4} = m - \frac{8}{3}$	12. $\frac{1}{3} + g = \frac{13}{15}$
13. $\frac{5}{8}y = 9$	14. $\frac{m}{4} = \frac{3}{5}$
15. $\frac{x}{8} = -3$	16. $n - 8 = -6$
17. $a + 7 = 2$	18. $b + 10 = -1$
19. $\frac{3}{5}k = 9$	20. $-24.6 = x - 56.2$

Evaluate.

1. $5^3$	2. $3^6$
3. $2^7$	4. $0.2^4$
5. $-4^3$	6. $(-2)^5$
7. $(-4)^3$	8. $1.3^2$
9. $4^4$	10. $0.8^3$

# Making Cookies

## Part 1

You want to make cookies for a bake sale at school. You choose the following recipe.

No-Bake Butterscotch Oatmeal Cookies	
<b>Ingredients</b> 2 cups of white sugar $\frac{1}{2}$ (12 fluid ounce) can of evaporated milk $\frac{3}{4}$ cup of butter $3\frac{1}{2}$ cups of quick-cooking oats 1 (3.4 ounce) package of instant butterscotch pudding mix	<b>Directions</b> <ol style="list-style-type: none"><li>1. In a 3-quart microwaveable bowl, combine the sugar, butter, and evaporated milk.</li><li>2. Cook on high power for 2 to 5 minutes, stirring occasionally until the mixture comes to a rapid boil.</li><li>3. Allow the mixture to boil undisturbed for 20 to 30 seconds. Remove from heat and stir in the instant pudding and oatmeal.</li><li>4. Spoon onto cookie sheets lined with waxed paper. Allow to sit at least 15 minutes or until firm.</li></ol>

The recipe will make 24 cookies. You have been asked to bring 36 cookies to the bake sale. How can you change this recipe to end up with 36 cookies? Answer the following questions.

1. How do you need to adjust the recipe in order to make 36 cookies?

4. Should the revised ingredient amounts be greater or less than the amounts in the original recipe? How can you confirm your answer?



5. Can you think of another way to determine the amounts needed to make 36 cookies? Explain fully.

## **Part 2**

You want to make some more cookies to keep at home. You measure the sugar you have left over and realize that you have only  $\frac{2}{3}$  cup. You need to determine how many cookies you can make. You also need to figure out how much of each of the remaining ingredients you need to use for this batch.

6. How can you determine how many cookies you can make with the  $\frac{2}{3}$  cup of sugar?

7. How do you need to adjust the amount of the remaining ingredients?

8. Write a revised ingredient list. Show the amounts of each ingredient needed for the new batch.

9. Should the revised ingredient amounts be greater or less than the amounts in the original recipe? How can you confirm your answer?

10. Can you think of another way to determine the amounts needed to make this batch of cookies? Explain fully.

## SAVING MONEY

Jack started with \$15.50 in his checking account. For the next five months, he deposited a quarter of his monthly allowance into his account. He expects his balance to be \$121.75.

1. Write an equation to find Jack's monthly allowance with the information given. Solve the equation.
  
  
  
  
  
  
  
  
  
  
2. However, after five months, Jack could not figure out why his balance become  $-\$35.75$ . What is the difference between the expected amount and the actual amount in Jack's account?
  
  
  
  
  
  
  
  
  
  
3. Jack learned that there was a monthly charge from the bank if the account did not maintain a balance of \$100 per month.
  - a. What was the monthly bank charge on his account?
  
  
  
  
  
  
  
  
  
  
  - b. Complete the table to show the transactions in his account from August to January. Use it to explain how  $-\$35.75$  was his account balance at the end of January.

Month	Opening Balance of the Month	Deposit	Charge	Closing Balance of the Month
August	\$15.50			
September				
October				
November				
December				
January				$-\$35.75$

## How Much Money Do You Need?

### Part 1

You can earn \$12.75 an hour working at ShopWell. You can earn \$7.50 an hour babysitting on the weekend. During the month of May, you worked hard to earn money for your summer vacation. You used a table to keep track of the number of hours you worked each week.

	ShopWell (hours)	Babysitting (hours)
Week 1	3.5	2.25
Week 2	3	3.5
Week 3	2.75	7.75
Week 4	3.5	0

1. Calculate the amount of money you earned each week. Calculate the amount of money you made in the month of May. Show your work and explain your reasoning. Round to the nearest hundredth if necessary.

	ShopWell (\$ amount)	Babysitting (\$ amount)
Week 1		
Week 2		
Week 3		
Week 4		
Total		

2. Your summer vacation is 8 weeks long. You want to have at least \$50 to spend each week. Have you met your goal? Explain how you know. Round to the nearest hundredth if necessary.
3. How many more full hours do you need work at ShopWell to meet your goal? Explain how you know. Round to the nearest hundredth if necessary.
4. You were only able to work for 5 more hours at ShopWell. How many more full hours will you need to work babysitting to reach your goal? Explain how you know. Round to the nearest hundredth if necessary.

## Part 2

You would like to donate money to help the animal shelter in your neighborhood. You have decided to donate 10% of your income to the shelter. For each problem, round to the nearest hundredth.

5. Calculate the amount of money you donated in the month of May. Show your work and explain your reasoning.
  
  
  
  
  
  
  
  
  
  
6. Calculate the amount of money you saved in the month of May after donating. Show your work and explain your reasoning.
  
  
  
  
  
  
  
  
  
  
7. After donating, how many more full hours do you need to work at ShopWell to meet your goal? Explain how you know.
  
  
  
  
  
  
  
  
  
  
8. You were only able to work for 7 more hours at ShopWell. How many more full hours will you need to babysit to reach your goal? Explain how you know.

# Speedy Texting

Joseph wants to compete in the local speed texting competition next year where participants compete on text speed and accuracy. Joseph's current text speed is 2 characters per second. Joseph has found that his texting speed increases at a rate of  $\frac{1}{2}$  a character per second for each month that he practices.

1. What is Joseph's new texting speed if he practices for
  - a. only 1 month? \_\_\_\_\_
  - b. 2 months? \_\_\_\_\_
  - c. 3 months? \_\_\_\_\_
  
2. Write an algebraic equation that gives Joseph's texting speed  $s$  for  $m$  months of practice.
  
  
  
  
  
  
  
  
  
  
3. Solve the equation from question 2 to determine how many months of practice it will take before Joseph's texting speed reaches 8 characters per second. Explain the steps to solve your equation.

Lynda would also like to compete in the same speed texting competition as Joseph. She currently texts at a rate of 4 characters per second, but will only have 10 months to practice before the competition.

- If Lynda wants to text at least 8 characters per second, like Joseph, then the equation  $10r + 4 = 8$  could be used to model this situation. Solve this equation for  $r$ .
- Explain what the variable  $r$  represents in the equation given in question 4.
- Consider the equation  $8x + 5 = 37$ . Write a real-life scenario that this equation could model.



## School Club T-Shirts

Bill and Ted are going to order t-shirts for their school clubs. The t-shirts will have the club logo printed on the front. Bill and Ted ask two local t-shirt companies to give them a price.

- Patty's Printing charges \$21.50 for each t-shirt.
  - Sandra's Shirts has a one-time set-up fee for \$63 and then charges \$18 for each t-shirt.
1. Bill and Ted need to order 30 t-shirts for their club. Which company should they choose to spend the least amount of money? Use math to justify your recommendation. Show all work.

2. Complete the table to explore the cost of buying various numbers of t-shirts from Patty's Printing and Sandra's Shirts. Show your work in the space below.

<b>Number of t-shirts</b>	2	4	6	8					
<b>Cost for Patty's</b>									
<b>Cost for Sandra's</b>									

3. Write a linear equation that represents the cost of buying t-shirts from Patty's Printing. Identify the meaning of each variable in your equation.
4. Write a linear equation that represents the cost of buying t-shirts from Sandra's Shirts. Identify the meaning of each variable in your equation.
5. Jackie's club had a bake sale to raise money for t-shirts and made \$495. Write a note to Jackie explaining which company will allow her club to buy the most shirts with the money they raised. Explain how you arrived at your answer.

6. Jackie thinks that Patty's Printing will always be cheaper. Defend or refute Jackie's thinking using the table, the equations, or any other mathematics you can come up with.

7. Is there a number of shirts that would cost the same at either company? What would that number be? Show and explain all work.



# SOCIAL STUDIES

**Directions:** Review each source and answer each question beneath it. Then, answer the prompt and include three pieces of evidence to support your claim.

Name: \_\_\_\_\_



# 8th Grade Social Studies Summer Assignment

## Historical Context

In the early 1800s success in war and diplomacy led to U.S. expansion and a growing sense of nationalism. Through war and diplomatic effort, the United States secured its borders and acquired millions of acres of new land for U.S. settlement, ultimately forcing Native Americans to search for new homes.

## Source # 1- Views of War

Tecumseh urged Native Americans to unite to oppose what he called the “evil” of white settlement.

“The only way to stop this evil is for all the red men to unite in claiming a common and equal right to the land, as it was at first, and should be yet. Before, the land never was divided, but belonged to all, for the use of each person. No group had a right to sell, not even to each other, much less to strangers who want all and will not do with less.”

—Tecumseh

William Henry Harrison was proud of his efforts to obtain land for settlers.

“By my own exertions in securing the friendship of the chiefs . . . by admitting them at all times to my house and table, my propositions for the purchase of their lands were successful beyond my . . . hopes . . . In the course of seven years the Indian title was extinguished to the amount of fifty millions of acres.”

—William Henry Harrison

1. How did Harrison’s and Tecumseh’s views on western settlement differ?
2. Why do you think Harrison’s and Tecumseh’s views on western settlement differ?

## Source #2- The Hartford Convention

The Hartford Convention resulted in a declaration calling on the Federal Government to protect New England and to supply financial aid to New England's badly battered trade economy. It also brought forth recommendations for Constitutional amendments, including a proposal that would limit the power of Congress to enforce an embargo for longer than sixty days.



1. What is the "leap" in this cartoon referring to?
2. What is the artist's viewpoint of The Hartford Convention?



### Source #3- The Rush-Bagot Agreement

After two years of letter correspondence between acting U.S. Secretary of State, Richard Rush, and British diplomat, Sir Charles Bagot, an agreement was reached to limit and balance the naval power of both countries on the Great Lakes.

“ . . . the naval force to be maintained upon the lakes of the United States and Great Britain shall henceforth be confined to the following vessels on each side, that is: On Lake Ontario to one vessel not exceeding One Hundred Tons burden and armed with an eighteen-pound cannon. On the Upper Lakes to two vessels not exceeding the like burden each, and armed with like force, and on the waters of Lake Champlain to one vessel not exceeding like burden and armed with like force. And it agrees that all other armed vessels on these lakes shall be forthwith dismantled, and that no other vessels of war shall be there built or armed.”

—Richard Rush

*Advocate of Peace*, Volumes 57–58, 1895 p. 277

1. According to the Rush-Bagot Agreement, how many naval vessels total could the United States maintain on the Great Lakes and Lake Champlain?
2. Why would Richard Rush and Sir Charles Bagot, come to an agreement to limit and balance the naval power of both countries on the Great Lakes?

**Using information from the documents and your knowledge of history, answer the question below and include three pieces of evidence that support your statement.**

**PROMPT:** How did war and diplomacy change the United States and people's lives in the early 1800s? Think about how American, Native American, British, and French perspectives of war and diplomacy during this period might have differed.

**Answer:** \_\_\_\_\_

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**Evidence 1:** \_\_\_\_\_

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**Evidence 2:** \_\_\_\_\_

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**Evidence 3:** \_\_\_\_\_

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Directions:

- Visit the following website
  - [https://itsi.portal.concord.org/eresources/91.run\\_resource\\_html](https://itsi.portal.concord.org/eresources/91.run_resource_html)
- Complete the assignment on “Reaction Time”



Name: \_\_\_\_\_

## Activity: Reaction Time

### Introduction

In this activity, you will measure how fast you can react to three different cues: sight, sound, and touch.

**Which of your senses produces the quickest reaction time?**



JTerkelson Creative Commons Wikimedia  
Uploaded by: Carolyn Staudt

Reaction time is how long it takes an organism to respond to a signal.

Describe four different situations in which reaction time is extremely important. Describe the signal and the reaction that responds to it.

### Standards

NSES Life Science – Regulation and Behavior

An organism's behavior evolves through adaptation to its environment. How a species moves, obtains food, reproduces, and responds to danger are based in the species' evolutionary history.

### Materials Needed

- Ruler or meter stick

## Prediction I

You will be testing how quickly you can move a finger in response to three different types of signals: sight, sound, and touch.

Predict your reaction speed, and put the three in order of reaction speed, with the quickest reaction first. Why did you choose that ordering?

## Collect Data I

Run the Light Reaction Test on the website. Click in the box to start the model. The color will change. Click again when the color changes. Try this at least five times, and write down your reaction time for each run in the table below.

Trial #	Reaction Time (in milliseconds)
1	
2	
3	
4	
5	

What is your smallest reaction time? \_\_\_\_\_

What is your average or typical reaction time? \_\_\_\_\_

## Collect Data II

Run the Sound Reaction Test on the website. Click in the box to start the model. Click again when you hear the beeping sound. Try this at least five times, and write down your reaction time for each run.

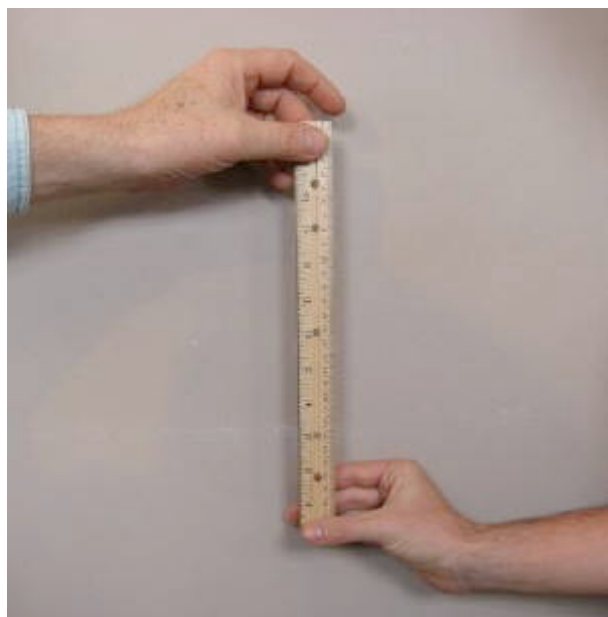
Trial #	Reaction Time (in milliseconds)
1	
2	
3	
4	
5	

What is your shortest reaction time? \_\_\_\_\_

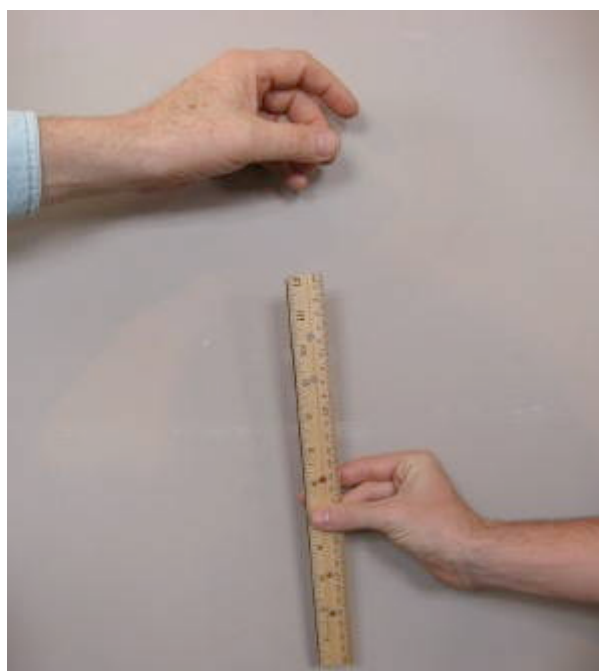
What is your average or typical reaction time? \_\_\_\_\_

### Collect Data III

A simple way to measure reaction time is the ruler drop test. One person holds the ruler at the end and drops it. The other person watches the ruler and tries to catch it as quickly as possible after he/she sees it drop. How far it falls is a very accurate measure of time, since the acceleration of gravity is constant.



ITSI-SU Creative Commons 2010  
Uploaded by: Carolyn Staudt



ITSI-SU Creative Commons 2010  
Uploaded by: Carolyn Staudt

Try this experiment at least five times. Each time, write down how far the ruler fell before it was caught.

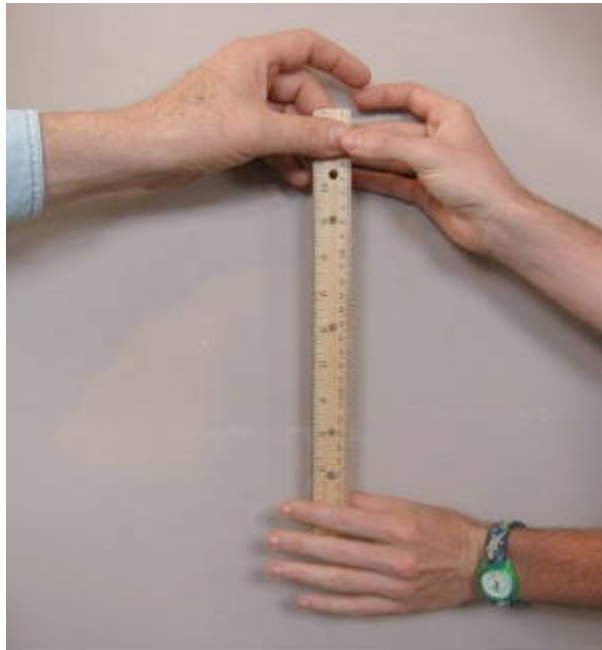
Trial #	Distance Dropped (in centimeters)
1	
2	
3	
4	
5	

Use the table below to convert this distance to time.

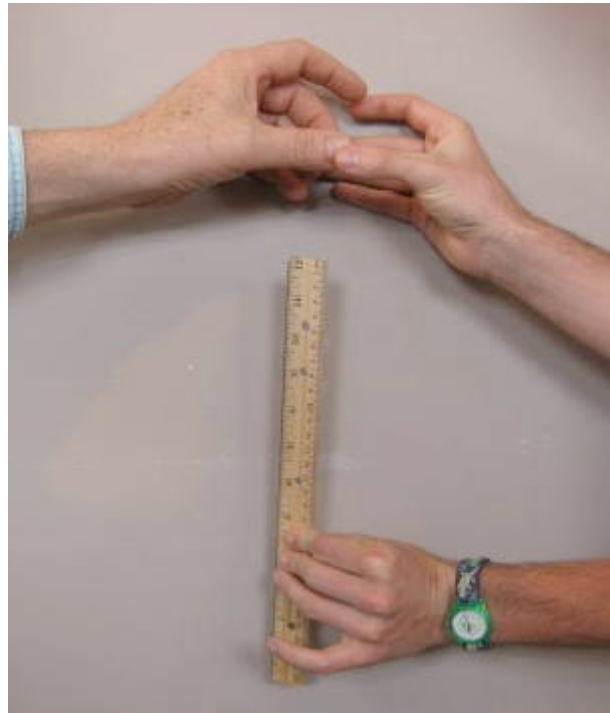
Distance dropped		Reaction time
cm	inches	seconds
5	2	0.10
10	4	0.14
15	6	0.18
20	8	0.20
25	10	0.23
31	12	0.25
36	14	0.27
41	16	0.29
46	18	0.31

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Try the ruler drop experiment again, but this time, close your eyes and touch the other person's finger so that you can feel when the ruler is being released.



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Try this experiment at least five times. Each time, write down how far the ruler fell before it was caught. Then use the table above to convert the distance fallen to reaction time.

Trial #	Distance Dropped (in centimeters)
1	
2	
3	
4	
5	

How do your results compare with your prediction?

## Analysis

Review your tables to help answer the following questions.

1. Compare your reaction times in the light reaction test and the sound reaction test, in which everything was the same except how you perceived the cue.

Which reaction time was faster?



2. Compare your reaction times in the light reaction test and the first ruler drop test, in which you reacted to a visual cue.

Are your reaction times about the same? Support your response with the reaction time, in milliseconds, from each test.

3. Compare your reaction times for seeing vs. touch, as you measured in the two ruler drop tests.

4. Discuss why your reaction times might be the same or different for the different kinds of cues.

## *Conclusion*

Which of your senses produces the quickest reaction time? Explain why.