



Holy Name of Jesus School

Summer Reading, English/Writing, Math, Science Fair, and National History Day Work Students Entering Grade 8 – 2026/2027 School Year

Students entering 8th grade must complete the following work for the first day of school:

SUMMER READING. Please see the attached assignment. Students are to read a novel of their choice and complete the activity accordingly.

NATIONAL HISTORY DAY: Students are to complete these two (2) activities in preparation for National History Day this upcoming school year.

ENGLISH/WRITING: Students are to complete the Summer English Review: Grammar, Usage, and Mechanics and the attached writing sample.

MATH: Students are to complete their level review worksheets. The accelerated worksheets (6) are listed first, followed by the academic worksheets (6). Do **NOT** do both sets of worksheets.

SCIENCE FAIR: Read the attached introductory letter. Then complete the worksheet regarding the science fair topic. Make note of the due dates given.

Students are to read a novel of their choice that is at least 200 pages in length and complete the *Story Map* and "Novel" paper with the bubbles.

In case you are unsure of some of the terms:

Inciting incident - what happened that sets the story in motion? It should have something to do with the problem.

Protagonist - main character

Antagonist - opposes the main character; has conflict with the main character

Exposition contains three parts - setting, main characters, hint of the conflict (problem) to come.

Theme of the story is asking for a lesson or morale, something that you can take from the story and apply it to your own life.

For the book summary, please use "Somebody Wanted But So.." Don't give away the ending and try to keep it short.

Mrs. Diehm

REVIEWER: _____

NOVEL

AUTHOR

BOOK SUMMARY (don't give anything away)

FAVORITE QUOTE

GENRE:

SETTING:

ONE WORD FOR THIS BOOK:

RATE THIS BOOK



EXPLAIN YOUR RATING

National History Day

Summer Work 2026

Innovation in History: Impact, Influence, Change

Directions: Please complete the following two activities to help prepare for the upcoming NHD project. This is an individual assignment even if you are planning to partner with someone you must each complete a separate assignment with a separate topic. This does not have to be your planned topic.

Activity One: Please complete the following by answering each question on a separate sheet of paper or retype your answers.

The Innovation

- What is the innovation? (Name, inventor/group, year)
- Before: What did it replace? How did people do things *before* it existed?

Historical Context

- What was happening in the world when this was created?
- What problem or need was the innovator trying to solve?

1. Impact (Short-Term)

- What happened within 1–5 years of its introduction?
- Who immediately loved it? Who resisted or fought against it? (you need to look at both sides)

2. Influence (The Ripple)

- How did it spread to other places or industries?
- Did it inspire secondary inventions? (ex., Cars influenced fast food).

3. Change (Long-Term)

- How does the world permanently look different 25+ years later?
- If we deleted this innovation from history, how would life change?

Activity Two: Please answer the following by filling in the blank or completing the statement using another sheet of paper or retyping.

Step 1: Identify your innovation & time period.

"The innovation of _____ during the
_____ era/time period..."

Step 2: State the short-term impact.

"...had an immediate IMPACT on society by
_____."

Step 3: Show the broader influence.

"It INFLUENCED history by changing how people
_____ and inspiring
_____."

Step 4: Prove the permanent change.

"Ultimately, this created a lasting CHANGE because it permanently
altered _____."

Name: _____ (Please turn into Mrs. Martinelli by 31 August 20)

Incoming 8th Grade Language Arts Summer Work

Sentence structure plays a big part in creative and expository writing and can be enhanced with phrases and clauses. Simple sentences are fine, but mixing in compound and complex sentences can elevate writing pieces through description and details.

Prepositional Phrases

A prepositional phrase gives description to a sentence by answering the following questions: which one, what kind, how many, how, when, where, or to what extent?

Example: In the morning, Sara collected the 12 eggs from the henhouse near the old barn. In the above sentence, the underlined phrases answer **when** and **where** the eggs were collected.

DIRECTIONS: For the following sentence stems, add prepositional phrases to give more detail to the sentence. Please use **CORRECT** capitalization and punctuation.

Example: Sara collected eggs (sentence stem) Added phrases: **In the morning, Sara collected the 12 eggs from the henhouse near the old barn.**

1. dog howled: _____

2. Jerry golfed: _____

3. sun rose: _____

4. blue bus crashed: _____

5. group project: _____

Common Prepositions

- aboard. about. above. across. after. against. along. amid. among. around. ...
- at. before. behind. below. beneath. beside. between. beyond. but. by. ...
- despite. down. during. except. excluding. following. for. from. in. inside. ...
- like. near. of. off. on. onto. outside. over. past. ...
- than. though. to. toward. under. underneath. until. up. upon. ...
- within. without.

Compound Sentences

A compound sentence has two or more independent clauses joined by a conjunction or a semicolon. Using compound sentences also elevates writing and helps with sentence fluency.

Example: **Chicago boasts many old skyscrapers, but it also has many modern ones.**

DIRECTIONS: Please add another independent clause to those stated to form a compound sentence.

Example: **Chicago boasts many old skyscrapers, but it also has many modern ones.**

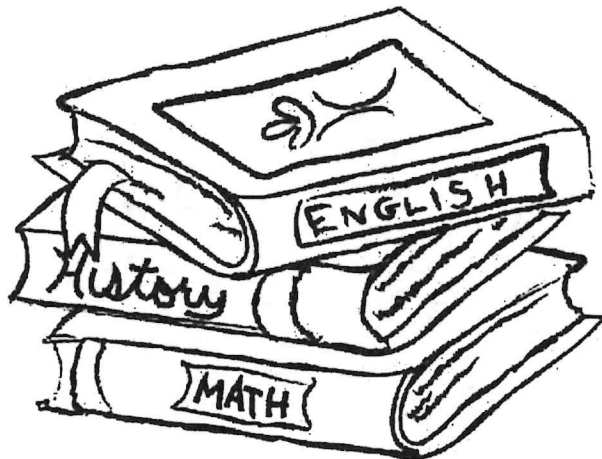
6. The stage door is locked, and _____

7. Stella loves to study, but _____

8. On the trip, we may see the Grand Canyon, or _____

9. Sally bought a blue dress; however, _____

10. The canoe filled with water; _____



Complex Sentences

A complex sentence is a sentence that has one independent clause and one or more dependent clauses (a clause that has a subject and a predicate but is an incomplete sentence).
Subordinating conjunctions are often used to connect clauses.

Example: **When the snow covers the ground,** it is fun to build snowmen and make snow angels.
(the bolded part of the complex sentence is the dependent clause, and the underlined part of the sentence is the independent clause)

DIRECTIONS: Please add an independent clause to the following dependent clauses to complete the complex sentence.

Example: **When the snow covers the ground,** it is fun to build snowmen and make snow angels.

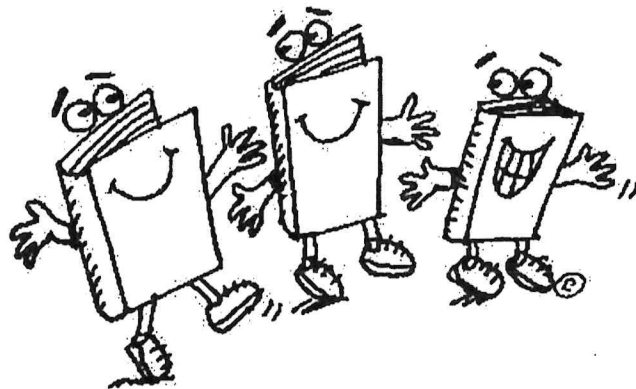
11. Although we will get there early, _____

12. Wherever squirrels are, _____

13. As soon as it gets warmer, _____

14. After Grandma knitted the blanket, _____

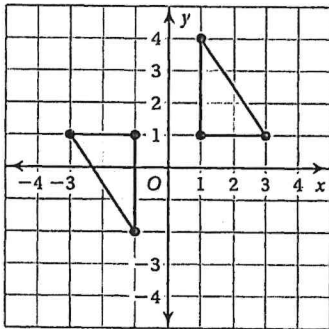
15. Since the kitten had the ball of yarn, _____



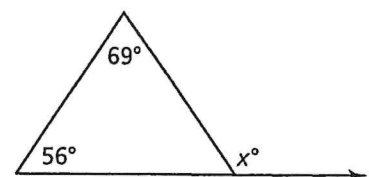
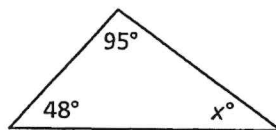
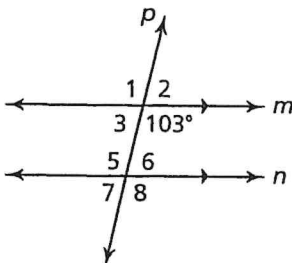
8th Grade Accelerated

1. Solve $\frac{1}{5}x + \frac{2}{5}x - 12 = 3$.
2. Solve $-6(8 - 7x) = 5(7x - 4)$
4. The vertices of a triangle are $A(-4, 3)$, $B(-1, -2)$, and $C(-3, -2)$. Translate the triangle 3 units right and 1 unit down. What are the coordinates of the image?
5. The vertices of a triangle are $A(-4, -3)$, $B(-3, -1)$, and $C(-1, -2)$. Reflect the triangle in the y -axis. What are the coordinates of the image?
6. The vertices of a triangle are $A(3, 4)$, $B(4, 2)$, and $C(4, -1)$. Rotate the triangle 90° counterclockwise about the origin. What are the coordinates of the image?
7. $\triangle MNP$ is the image of $\triangle JKL$ after a translation 2 units up. $\triangle JKL$ is scalene.
 - (a) Is the measure of $\angle K$ equal to the measure of $\angle P$?
 - (b) Is the length of side KL equal to the length of side PM ?

11. Describe a sequence of rigid motions between the triangles.



13. Find the measures of the numbered angles.
14. Find the values of x .
15. Find the values of x .



16. Triangle A has interior angle measures of 108° , x° , and 37° . Triangle B has interior angle measures of 108° , y° , and 35° . Are the triangles similar?

17. Omitted

18. Omitted

19. Solve the system by graphing or algebraically.

$$y = 3x + 4$$

$$5x + y = -4$$

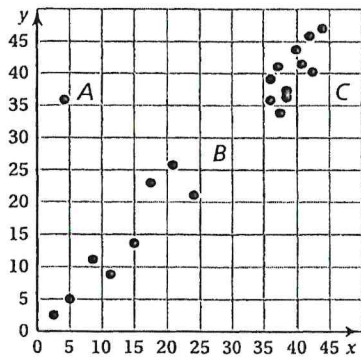
20. Solve the system algebraically.

$$y = -5x + 7$$

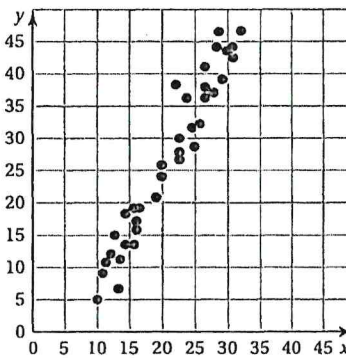
$$7x - 6y = -5$$

21. You buy 4 health bars and 2 health drinks for \$14. Your friend buys 5 health bars and 3 health drinks for \$19. How much does each item cost?

23. Identify any outliers, gaps, or clusters.



24. Describe the relationship between the data in the scatter plot.



25. Make a scatter plot of the data and draw a line of fit. Write an equation of the line of fit.

x	10	20	15	20	40	20	10	40	5	25
y	15	20	20	25	45	15	5	40	5	25

26. Omitted

27. You randomly survey middle school students and high school students about whether they prefer baseball or soccer. The results are shown in the tables. Create a two-way table that includes the marginal frequencies.

Middle School	
Baseball	Soccer
60	25

High School	
Baseball	Soccer
66	51

28. Do the ordered pairs (2, 20), (5, 15), (12, 19), and (14, 13) represent a function?

29. Graph the function $y = -\frac{5}{4}x + 2$.

30. Two arcades charge an entrance fee and a fee per game. At Arcade A, the total cost y (in dollars) of playing x games is represented by the linear function $y = 0.75x + 5$. The table shows the total cost for playing x games at Arcade B. Which arcade has a higher fee per game? a higher entrance fee?

Number of Games, x	0	4	8	12
Total Cost, y	8	10	12	14

31. Omitted

32. Omitted

Simplify the expression. Write your answer as a power.

33. $4^5 \cdot 4^2$

34. $(2^2)^7$

35. $(xy)^4$

36. $\frac{5^8}{5^4}$

37. Evaluate the expression $\frac{2^6}{2^7}$.

38. The population of Country A is about 12,402,000 and the population of Country B is about 1,216,000,000. Approximately how many times greater is the population of Country B than the population of Country A?

39. Write the number 231,000 in scientific notation.

40. A calculator display shows 9.2E9. Write the number in standard form.

Evaluate the expression. Write your answer in scientific notation.

41. $(7.7 \times 10^{-5}) - (6.4 \times 10^{-5})$

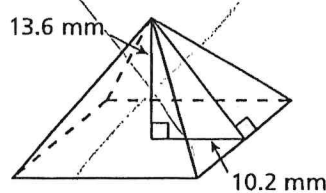
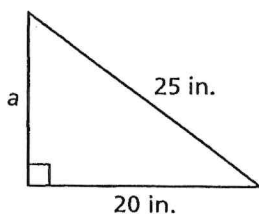
42. $(5 \times 10^{-2}) \times (7 \times 10^{-4})$

43. Evaluate $\sqrt{4}$.

44. Solve $4x^2 - 39 = 105$.

45. Find a .

46. Find the slant height.



47. Your friend's house is 6.4 miles north and 12 miles west of your bank. How far is your friend's house from your bank?

48. Evaluate $\sqrt[3]{\frac{1}{343}}$.

49. Solve $\frac{1}{2}x^3 = 256$.

50. Write each number as a fraction.

a. $0.1\overline{6}$

b. 0.16

c. $0.8\overline{3}$

51. Write $0.\overline{19}$ as a fraction in simplest form.

52. Approximate $\sqrt{74}$ to the nearest tenth. ~~Plot the number on a number line.~~

53. Which number is greater, $\sqrt{8}$ or $\sqrt[3]{93}$?

55. Tell whether a triangle with the side lengths 65 feet, 72 feet, and 97 feet is a right triangle.

56. The volume of a cylindrical container is 151 cubic centimeters and the height is 3 centimeters. Approximate the radius of the container to the nearest whole number.

57. A cone has a radius of 12 meters and a height of 31 meters. Approximate the volume of the cone to the nearest tenth.

58. The volume of a spherical ball is $36,000\pi$ cubic centimeters. Find the radius of the ball.

59. Solve $\frac{x}{8} - \frac{5}{2} = \frac{5}{2}$.

60. You install 404 feet of fencing along the perimeter of a rectangular yard. The width of the yard is 100 feet. What is the length of the yard?

61. Omitted

Graph the solution of the inequality.

62. $x - 4 < 2$

63. $3x < 21$

64. $\frac{x}{4} + 2 < 1$

65. The probability of an event is $\frac{1}{4}$. Describe the likelihood of the event.

66. Use the table to find the relative frequency of spinning a 6 on a spinner.

Number Spun	1	2	3	4	5	6
Times Spun	10	10	8	7	8	7

67. There are 11 green marbles and 12 orange marbles in a bag. You randomly choose one of the marbles. What is the probability of choosing a green marble?

68. The table shows the results of rolling a number cube 200 times. How does the experimental probability of rolling an odd number compare with the theoretical probability?

Number Rolled	1	2	3	4	5	6
Times Rolled	38	25	30	41	34	32

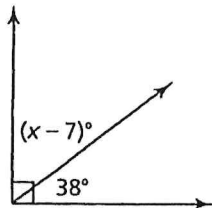
69. Find the total number of possible outcomes when you select one color of wallpaper and one color of carpet.

Wallpaper	Purple, Blue, Red, Green
Carpet	Purple, Red, Yellow, Blue, Green

Name _____ Date _____

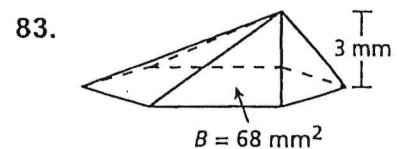
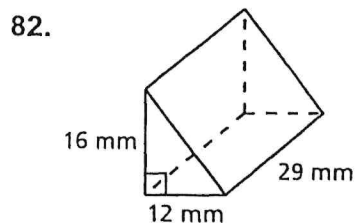
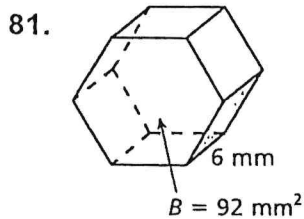
73. You ask 200 randomly chosen students to name their favorite ice cream flavor. Of the students you asked, 49 said vanilla, 59 said chocolate, 56 said strawberry, and 36 said chocolate chip. There are 1800 students in the school. Estimate the number of students in the school whose favorite ice cream flavor is chocolate.
76. Find the circumference of a circle with a radius of 8 kilometers. Use 3.14 or $\frac{22}{7}$ for π .
77. Find the area of a circle with a diameter of 26 inches. Use 3.14 or $\frac{22}{7}$ for π .

79. Find the value of x .



80. Find the surface area of a cylinder with a radius of 3 centimeters and a height of 4.2 centimeters. Round your answer to the nearest tenth.

Find the volume of the solid.



Name _____

GRADE 8 Academic**Directions: Put all your work on loose leaf and attach to your answers. This assignment is due the FIRST day of school.**

1. What is a solution for the equation $n - 45 = 12$?

2. Solve $n + 342 = 500$.

3. Solve $12x = 108$.

4. Solve $147 \div n = 21$.

5. Evaluate $5 + 3 \cdot 4$.

6. Simplify the expression $(5 \div 5) + 5 \times (5^2 - 5)$.

7. Simplify the expression $96 \div 6 - 4 \div 2$.

8. Simplify the expression $2 \times 6^2 - 26 \div 2$.

9. Simplify the expression $222 - 3(5^2 - 4^2) + 12$.

10. $1,000,000 \times 1 = 1,000,000$ is an example of which property?

11. Tyrell took 12 days to read x books. What is an algebraic expression to show how long he took to read 1 book?

12. Which property is represented?
 $23 + 19 = 19 + 23$

13. Evaluate $r + 2$ for $r = 5$.

-
14. Evaluate $3p - 5q$ for $p = 4$ and $q = 2$.

15. Simplify $x^2 + 3x^2 + 3x^2 - 4x^2$.

16. Solve: $g - 25 = 52$

17. $1,000,000 \times 1 = 1,000,000$ is an example of which property?

18. $12 + (9 + 4) = (12 + 9) + 4$ is an example of which property?

19. Which property is shown?
 $34(5) = 30 \times 5 + 4 \times 5$

20. Evaluate $g^2 + 11$ when $g = 11$

21. $444 + 555 = 555 + 444$ is an example of which property?

22. $cd = dc$ is an example of which property?

23. Simplify $2y^3 - 3y^3 + 3y^3 - 4y^3$

24. Evaluate $\frac{q}{3} + 13$ for $q = 21$.

25. Evaluate $4x^2 + 2x - 1$ for $x = 9$.

26. Evaluate $16a - b$ for $a = 3$ and $b = 2$.

27. Write "the product of 3 and a number" as an algebraic expression.

28. Evaluate $5p^2 \div 4q$ for $p = 4$ and $q = 2$.

29. Evaluate $\frac{55}{n} + 7m$ for $n = 5$ and $m = 11$.

30. Evaluate $12n \div m + m$ for $n = 3$ and $m = 2$.

31. Which phrase represents $9p - 4$?

- A the difference between 9 times a number and 4
- B 9 times the difference between a number and 4
- C the difference between 4 and 9 times a number
- D 4 times the a number minus 9

32. Which expression is equal to "the quotient of a number and 8"?

- F $n \div 8$ H $n - 8$
- G $n \times 8$ J $n + 8$

33. Which expression is equal to "a number decreased by 7"?

- A $7n$ C $7 - n$
- B $n - 7$ D $\frac{n}{7}$

34. Which expression is equal to "the sum of 7 times a number and 4"?

- F $7(n + 4)$ H $7n + 4$
- G $7 + n \times 4$ J $4n + 7$

35. Which expression is equal to "7 times the sum of a number and 4"?

- A $7(n + 4)$ C $7n + 4$
- B $7 + n \times 4$ D $4n + 7$

36. Simplify $4b^3 - 1b + 2b + 2b^3 + 2b$.

37. Hendrick makes birdhouses. It takes him 35 minutes to make a birdhouse. What is an expression that shows how long it takes him to make t birdhouses?

38. Simplify $2(x^2 + 3y) + x + y$.

39. Which number is greater than $-\frac{3}{8}$?

- A -0.01 C -2.67
B -0.382 D -1.31

40. Which expression is equal to "6 less than the product of n and 15"?

- F $15 + n - 9$ H $15n - 6$
G $6 - n \div 9$ J $6 - 15n$

41. Evaluate $\frac{15}{u} + 7v$ when $u = 3$ and $v = 5$.

42. Find the sum $45 + (-32) + (-24)$.

43. Find the quotient $0 \div (-23)$.

44. Which property is shown?

$$15 + (13 + 11) = (15 + 13) + 11$$

- A Associate Property
B Commutative Property
C Identity Property
D Distributive Property

45. Find the value of 3^2 .

46. $454 + 0 = 454$ is an example of which property?

47. Which is "25 times the quantity 16 less than n " as an algebraic expression?

- F $25n - 16$ H $25 \cdot 16 - n$
G $(25 \cdot 16) - n$ J $25(n - 16)$

48. Find the difference $24.38 - 18.953$.

49. Find the quotient $\frac{5}{12} \div \frac{1}{4}$.

50. Find the difference $\frac{5}{8} - \frac{3}{16}$.

51. Irene bought 3 yards of fabric and a spool of thread for \$28.10. If the spool of thread cost \$1.25, how much did the fabric cost per yard?

52. Find the quotient $-19.4 \div 3.48$. Round to the nearest tenth.

53. When climbing out of Death Valley, Amy climbed from 256 feet below sea level to 834 feet above sea level. How far did she climb?

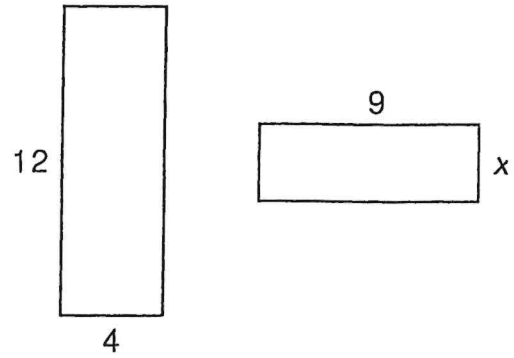
54. *Write* the numbers $-6, 2, 0, -1,$ and -5 in order from least to greatest?

55. Find the quotient of $-75 \div (-15)$.

56. Estimate $14.75 \div 2.85$ by using compatible numbers.

57. Find the product $(-4) \cdot 5 \cdot (-6)$.

58. Find the unknown length in these similar rectangles.



59. Find the difference $-27 - (-36)$.

60. *Write* the numbers $\frac{7}{8}, 0.825,$ and 0.78 in order from least to greatest?

61. Start at the origin. Point J is 3 units right and 4 units down. What are the coordinates of J ?

62. A grocery store sells 16 pounds of beans for \$9.60. What is the unit rate?

63. Evaluate the expression $6 \cdot 8 \div 4 + 12 \div 3$.

64. Solve $p + 2.57 = 8.31$.

65. Evaluate $c + d$ when $c = 12$ and $d = -6$.

66. Fred bought three books for \$12.95, \$18.50, and \$23.48. What was the average price of his books?

67. Simplify $55x^2 + y - 2x^2$.

68. Solve $\frac{3}{4}w = 1\frac{1}{2}$.

69. Divide $\frac{4}{9} \div 6\frac{2}{3}$.

70. A wall that is 80 inches long is 5 inches in a drawing. What is the scale factor?

71. Which expression is equivalent to "two times the difference between a number and 44"?

F $2n - 44$ H $2(n - 44)$
 G $44n - 2$ J $n - 44 \times x$

72. The table below shows the change in river height during a week. What was the average change per day?

Day	1	2	3	4	5	6	7
Change (in.)	12	-18	4	10	8	-6	4

73. When raking leaves, Jon raked $\frac{1}{3}$ of the yard, Mindy raked $\frac{1}{8}$, and Teresa raked $\frac{1}{4}$. How much of the yard did they rake altogether?

74. Evaluate $3.57 + 1.29$.

75. Which fraction, in simplest form, is equivalent to 0.375?

- F $\frac{1}{8}$ H $\frac{3}{4}$
 G $\frac{5}{9}$ J $\frac{3}{8}$

76. Which proportion has a solution of $x = 8$?

- A $\frac{2}{48} = \frac{x}{12}$
 B $\frac{2}{x} = \frac{48}{12}$
 C $\frac{2}{x} = \frac{12}{48}$
 D $\frac{2}{12} = \frac{48}{x}$

7th and 8th Grade Science Fair Summer Handout

- Starting Science Fair
 - You should be entering the Science Fair with a good topic. Choose a topic that is both grade appropriate and academically challenging. In the past, some projects have been basic and did not reflect the level of understanding at this grade.
 - As a starting point you may **get ideas** from science buddies or use the following link for ideas. [Read this list of 200 science-fair project ideas.](#)
 - You can also look at prior CASEF submissions and make it your own [CASEF: Capital Area Science & Engineering Fair](#)
 - Also, speak with an adult about your project ideas. If you would like any feedback, please email Mrs. Holland.
 - **These need to be testable ideas and not just observations!**
 - You need to be able to have a minimum of 5 trials of your experiment with an independent variable, dependent variable, control, and measurable data. You must have at least 3 levels, conditions, or treatments. If you are working with humans, you must have 30 people willing to participate in your experiment. Please see me for the human consent form in August. Students will not be permitted to test during class time.
 - If your goal is to go to CASEF you will be required to fill out additional paperwork when you return to school. If you are planning on experimenting with humans or vertebrates you will have to get preapproval from CASEF before experimentation. (I will assist with that.) Potentially hazardous biological agents and microbiology projects are now being permitted under strict guidelines. You must be able to obtain a BSL-2 lab.
- The summer science fair project assignment is due the first day of school.
- We will assign your topic/category **officially** the first week of school after the topic has been reviewed and approved.
 - Categories include: Life Science, Physical Science, Chemistry, TEM (technology, engineering, and math), Behavioral and Social Sciences, Medicine and Health, Environmental

Name: _____

Grade: _____

Due Date: 8/31/26

Directions

During the summer, begin thinking about your **science fair project**. Complete this form as thoroughly as possible. Your topic does not need to be finalized, but it should be well-developed and appropriate for your grade level. This assignment will help ensure that your project is experimental, measurable, and challenging enough for the science fair.

1. What question are you trying to answer through your experiment?

2. What category does your project fit into? (Circle one)

100 Life Science – animals, plants, genetics, ecology, living organisms

200 Physical Science – physics, energy, motion, transportation, geology, astronomy, Earth science

300 Chemistry – substances, reactions, materials, food chemistry

400 Technology/Engineering/Mathematics – engineering, robotics, computers, coding, artificial intelligence, mathematics

500 Social/Behavioral Science – psychology, sociology, education, human behavior

600 Medicine & Health – microbiology, human body systems, disease, nutrition, biochemistry, biomedical engineering

700 Environmental Science – conservation, pollution, climate, water quality, renewable energy, natural resources

3. Is your experiment testable and not just a demonstration? YES / NO

Explain how you will test your idea:

4. Does your project have the following variables?

Independent Variable (what you change) **yes or no?**

Dependent Variable (what you measure) **yes or no?**

Control Group (standard group that does not receive experimental treatment and is used for comparison.) **yes or no?**

5. Is your data measurable using numbers? YES / NO

6. Are you able to complete at least five trials? YES / NO

7. Can you easily obtain the materials needed for this project? YES / NO

8. How challenging is this project for you? Please circle below.

Too easy Appropriate challenge Very challenging

9. Are you testing humans? YES / NO

If yes, you must have at least 30 participants and obtain signed consent forms before beginning your experiment.

10. Are you interested in participating in CASEF or PJAS? YES / NO

If you are interested in participating in CASEF, additional paperwork is required. Projects involving humans, vertebrate animals, hazardous chemicals, bacteria, or microorganisms require special approval before experimentation begins. If you plan on using bacteria or mold you must obtain a BSL-2 lab to conduct your experiment.

8th Grade Only

Are you working with a partner? YES / NO

If yes, who is your partner?

Is this project a continuation of last year's project? YES / NO

Science Fair Due Dates 2026

1. Index Card with Topic & Problem	Due: First Day of School 8/31/26 Revisions:
2. Working hypothesis and Rationale, Independent Variable, Dependent Variable, Control, & Constants	Due: Friday, September 11, 2026
3. Materials and Procedures	Due: Friday, September 18, 2026
4. Background Research	Due: To be determined
5. Experimental Journal (1st check) Introduction and Cover Page	Due: Friday, October 2, 2026
6. Table of Contents, Acknowledgments, Glossary	Due: Friday October 9, 2026
7. Observation/ Data & Discussion & Graphs	Due: Friday October 30, 2026
8. Conclusion, Future Directions, Practical Applications & Limitations	Due: Friday November 6, 2026
9. Summary & Abstract	Due: Wednesday November 11, 2026
10. Science Fair Displays with Experimental Journal, Report Copy & Science Fair Folders	Due: Monday, November 16, 2026