

Grade 8 PRIME Math & Science Learning Opportunities

Week of May 25th

MATH PRIME - WEEK OF MAY 25TH

MANGAHIGH CHALLENGES

We will continue to focus our challenges **probability**.

Please let me know if you need your mangahigh password and I will send to you.

Don't forget you can always message me through mangahigh if you have any questions.

Always try each challenge at least three times.

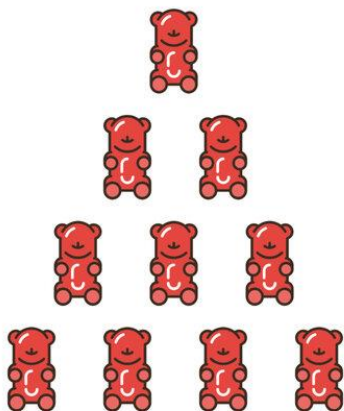
Good luck!

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MATH ANTICS - BASIC PROBABILITY

<https://www.youtube.com/watch?v=KzfwUEJG18>

How can you flip the gummy bear pyramid upside-down by moving only THREE gummy bears?



Game of SKUNK



S	K	U	N	K
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Each letter of "skunk" represents a different round of the game; play begins with the "S" column and continues through the "K" column. The object of "skunk" is to accumulate the greatest possible point total over the five rounds. The rules for play are the same for each of the five rounds.

To accumulate points in a given round, a pair of dice is rolled.

A player gets the total of the dice and records it in his or her column, unless a "one" comes up.

If a "one" comes up, play is over for that round and all the player's points in that column are wiped out.

If "double ones" come up, all points accumulated in prior columns are wiped out as well.

If a "one" doesn't occur, the player may choose either to try for more points on the next roll or to stop and keep what he or she has accumulated.

Note: If a "one" or "double ones" occur on the very first roll of a round, then that round is over and the player must take the consequences.

SOURCE: <http://illuminations.nctm.org/lessons/6-8/choice/worksheet.pdf>

CONGRATS GRADE 8!

**GSMS is #5 in North America on MangaHigh.com
(as of May 24th)**



Previous winner













Ralston Middle School

Time remaining

7 days 8 hrs 10 mins 22 secs

Current ranking

1	 Ralston Middle School	3,274 pts
2	 DePortola Middle School	1,866 pts
3	 St. Phillip the Apostle School	1,786 pts
4	 The Fernie Academy	1,526 pts
5	 George Street Middle School (GSMS)	1,181 pts
6	 WCSD GATE	1,170 pts
7	 Abbott Middle School	1,169 pts
8	 Longfields-Davidson Heights SS	1,145 pts
9	 Taylor Park Elementary	1,117 pts
10	 RIPLEY HOUSE MIDDLE CAMPUS	1,017 pts

***** Since there was a lot of info here last week, nothing new this week. Keep investigating the concept of Genetics!**

Probability + Cells = GENETICS!

Have you ever stopped to wonder if everyone can roll their tongue? Clasp your hands together – which thumb is on top, left or right? Do you have dimples? These are examples of traits which are passed on genetically from one generation to the next. If you'd like to learn more, check out the link below.

<https://learn.genetics.utah.edu/content/basics/observable/>

What does this have to do with Math and Science? The study of how cells pass down certain traits to the next generation is called Genetics. In this week's Math-Science link, we will tie in what you've learned about cells in Science with the mathematical concept of Probability.

To learn a bit about how genes are passed down, watch these short videos:

Introduction to genetics

1) What's an allele? A Punnett Square? (3:06)

<https://www.youtube.com/watch?v=Mehz7tCxjSE>

2) Amoeba Sisters (Genetics Video Series #1): Punnett Squares – Guinea Pigs (6:27)

<https://www.youtube.com/watch?v=i-0rSv6oxSY>

Curious about how eye colour is determined? Watch these two videos:

3) Punnett Squares (Genetics) 4:20

<https://www.youtube.com/watch?v=prkHKjfUmMs>

4) Punnett Squares (2:52) Eye Colour

https://www.youtube.com/watch?v=PyP_5EgQBmE

Interested in this topic and you'd like to explore further:

5) Amoeba Sisters (Genetics Video Series #2): Punnett Squares and Sex-Linked Traits (6:11)

<https://www.youtube.com/watch?v=h2xufrHWG3E>

6) Amoeba Sisters (Genetics Video Series #3): Multiple Alleles (ABO Blood Types and Punnett Squares) - Blood Types (7:04)

<https://www.youtube.com/watch?v=9O5JQqIngFY>

7) Amoeba Sisters (Genetics Video Series #3): Dihybrid and Two-Trait Crosses (cat example) 8:31

<https://www.youtube.com/watch?v=qIGXTJLrLf8&pbjreload=10>

8) Amoeba Sisters Video Series: Pedigree (9:41)

<https://www.youtube.com/watch?v=Gd09V2AkZv4>



Newspaper Building



Materials needed: newspaper (or flyers or any paper), a pencil, and masking tape.

We challenge you to:

- 1 Build a structure as tall as yourself.
- 2 Build the highest structure that you can in 10 minutes.
- 3 Build a structure that will hold a heavy book for at least 1 minute.

Reflection

- What could you do to improve your structures?
- What was most challenging?
- How did you overcome the challenges?
- How does this apply to engineering?

Helpful hint

Some shapes are stronger than others when building structures. Shapes like triangles, hexagons, arches and semi circles are a few of the best weight bearing shapes. To reinforce your newspaper, you can do an accordion fold, or roll each sheet tightly around a pencil and tape it, then take the pencil out so it looks like a straw. Can you find other ways to reinforce your newspapers to have a stronger structure?

SHARE!



SHARE YOUR STRUCTURES WITH US ON FACEBOOK, TWITTER OR INSTAGRAM