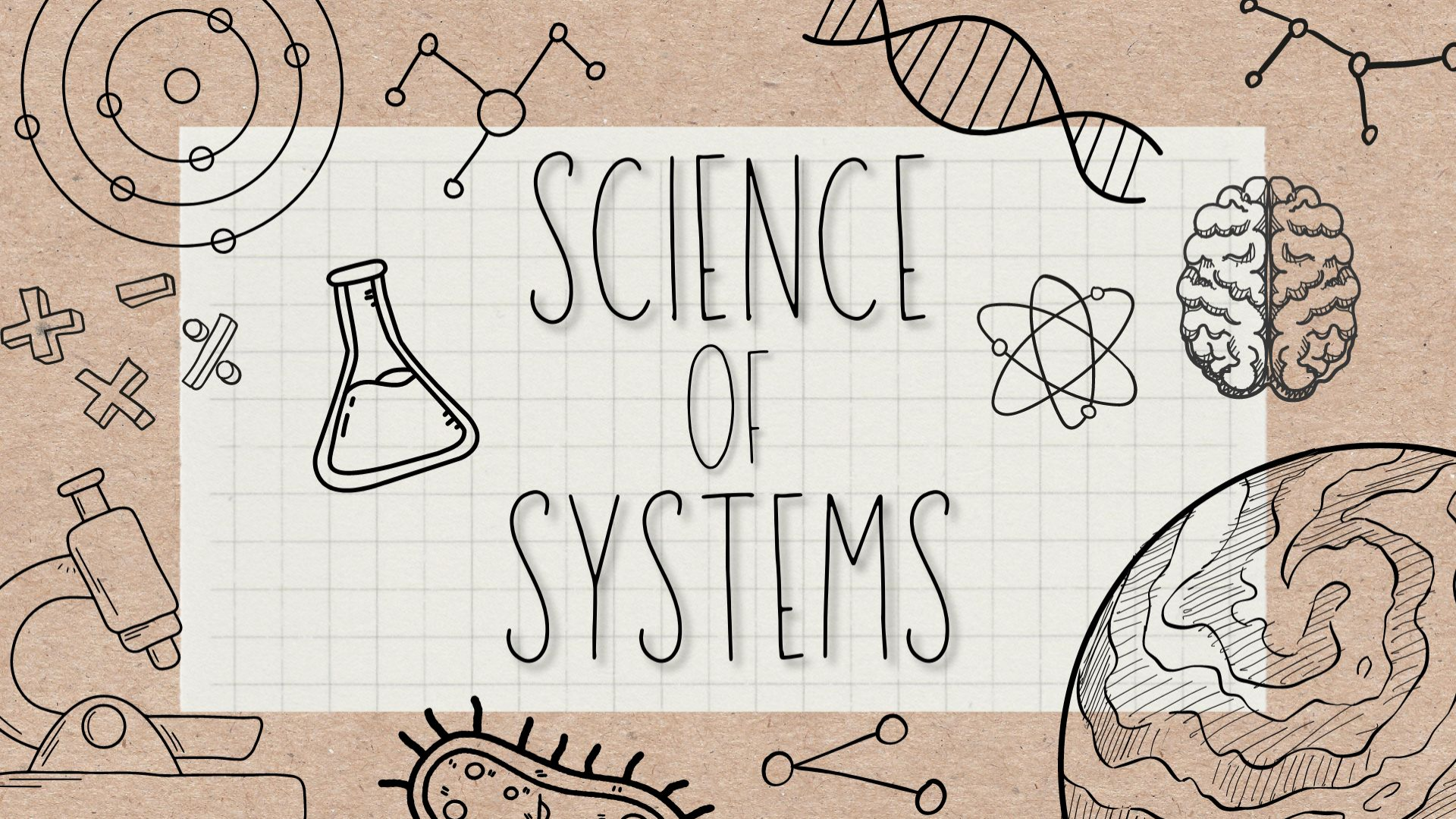


SCIENCE OF SYSTEMS

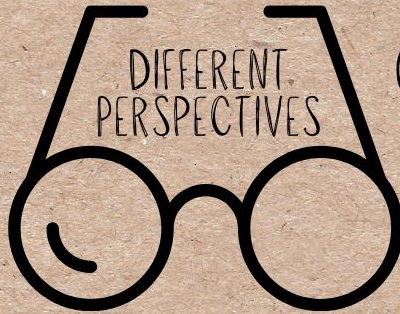
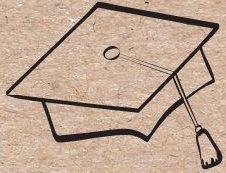




LET'S GET CURIOUS!



HABITS OF A SCHOLAR

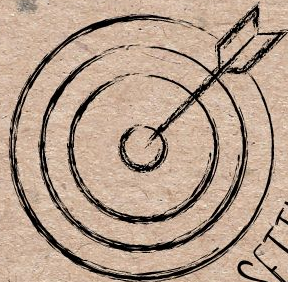


DIFFERENT PERSPECTIVES

CURIOSITY



PONDERING IDEAS



GOAL SETTING



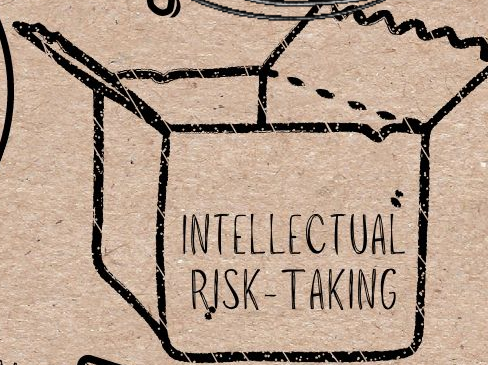
SAVING IDEAS



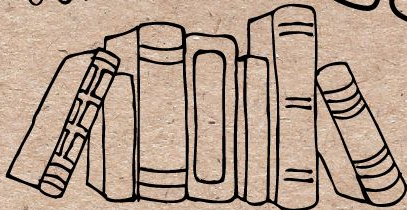
PREPARATION



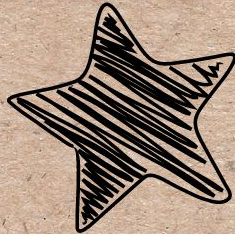
ACADEMIC HUMILITY



INTELLECTUAL RISK-TAKING



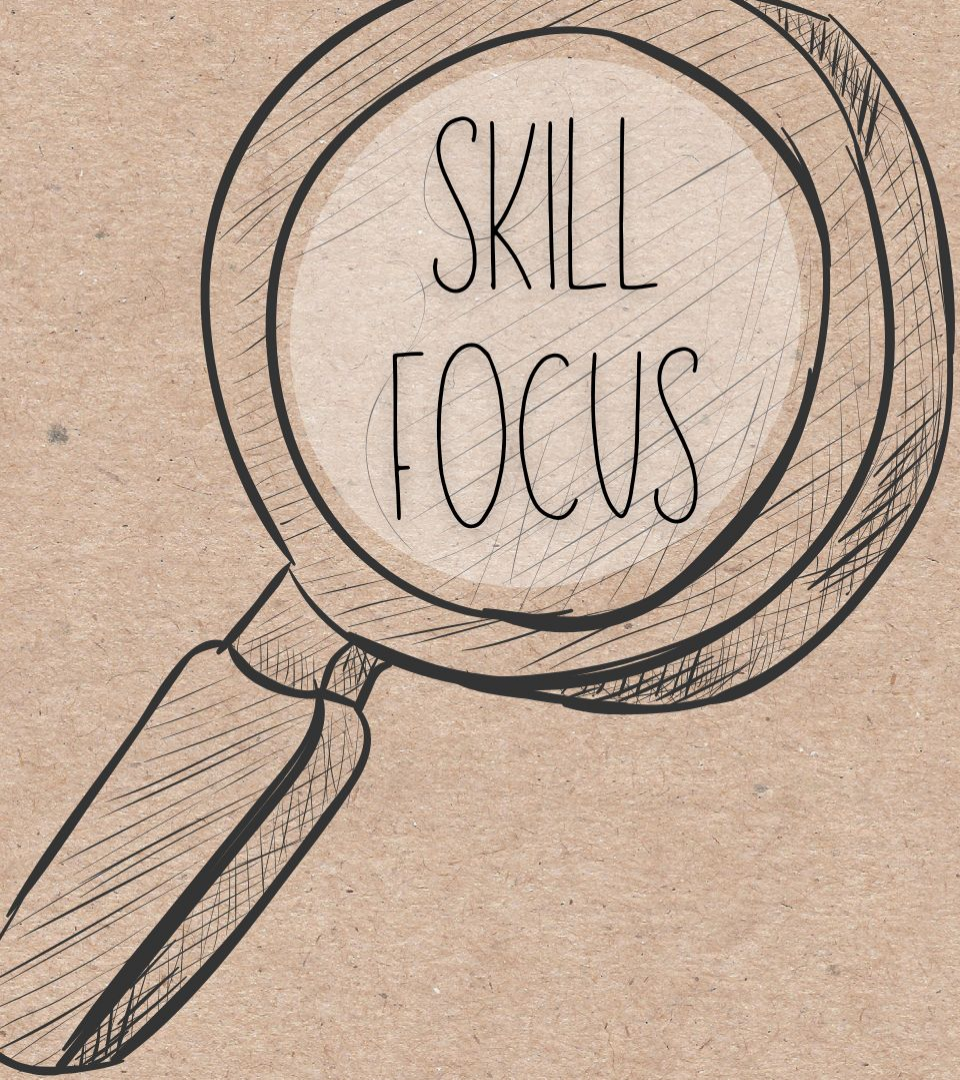
VARIED RESOURCES



EXCELLENCE



PERSEVERANCE



Number Systems

Across Disciplines





Where do you see numbers outside
the classroom?

- Money
- Address
- Cooking
- Time
- Measurement
- Tv channels
- Youtube viewers
- Website URLs
- PIN numbers
- Credit card numbers
- Phone numbers

- Miles per hour
- Student ID
- Keyboard
- Sports scores
- Healthcare
- Room numbers
- Building Floors
- Lucky 13
- Sports numbers
- Calendar year
- Calendar days

- Barcodes
- Prices
- Maps
- Page numbers
- Dewey decimal system
- Alarm clock
- Microwave
- Temperature
- Weather
- Nutritional information



Where do you see numbers outside the classroom?

Byrdseed.tv
Video 1

PLACE VALUE

Beyond Base 10

PART 1

▶ 0:00



Byrdseed.tv
Video 2

PLACE VALUE

Beyond Base 10

PART 1

▶ 0:00



Byrdseed.tv
Video 3

PLACE VALUE
Beyond Base 10

PART 1

▶ 0:00



Byrdseed.tv
Video 4

PLACE VALUE

Beyond Base 10

PART 1

▶ 0:00



Imagine we
switched to a base 9
system overnight...



(210)422-7623



Mastercard.



5412 7512 3412 3456

VALID THRU
12/23

Lee M. Cardholder



\$172.50





2/14/2023



Unlucky 13





5' 9"







Cookies Recipe

- 1 UNSALTED BUTTER
- 1 MILK
- VANILLA
- 3 FLOUR
- 1 EGG
- 1/4 SALT
- 1 SUGAR
- 3/4 BAKING POWDER



SYSTEMS HAVE PARTS THAT
WORK TO COMPLETE A
TASK.

SYSTEMS INTERACT.

PARTS OF
SYSTEMS ARE
INTERDEPENDENT
UPON ONE
ANOTHER AND
FORM SYMBIOTIC
RELATIONSHIPS.

SYSTEMS
FOLLOW
RULES.

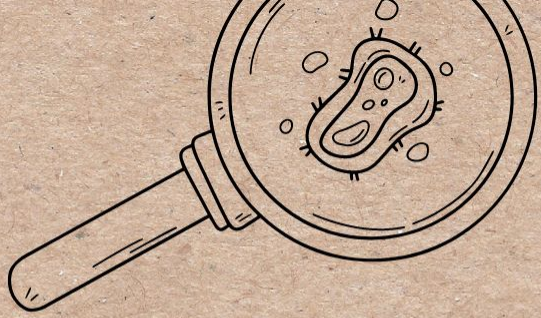
SYSTEMS 
GENERALIZATIONS

A SYSTEM MAY BE
INFLUENCED BY OTHER
SYSTEMS.

SYSTEMS ARE COMPOSED
OF SUBSYSTEMS.



BREAKOUT



LET'S REFLECT...

Was the decimal (base-10) system discovered or invented?

$a^2 + b^2 = c^2$

$A = \frac{\sqrt{3}}{4} a^2$

$a = \frac{v_f - v_i}{t}$

$S = \frac{d}{t}$

$V = Lwh$

$\frac{x}{a} + \frac{y}{b} = 1$

$V = \pi r^2 h$

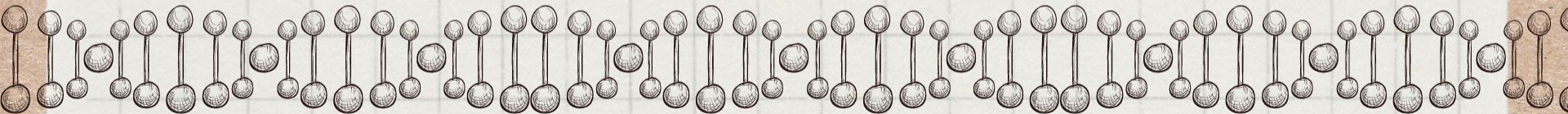
$y = mx + b$

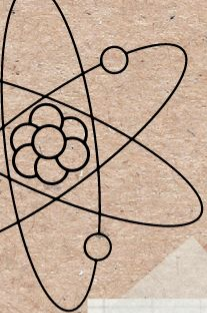
$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

TED Ed

IS MATH DISCOVERED OR INVENTED?





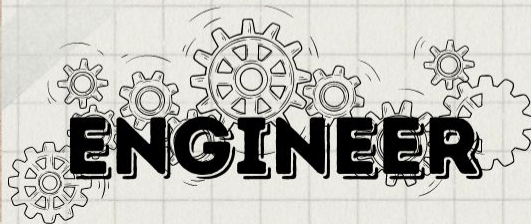
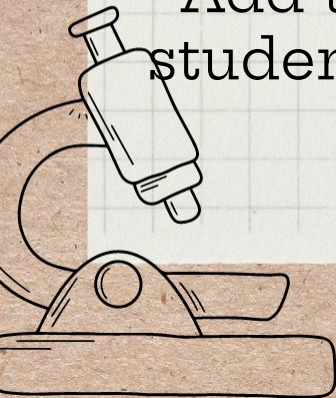
SKILL STATIONS



Create



Add task or
students here



ENGINEER

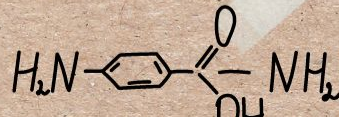
Add task or
students here



SOLVE



Add task or
students here





Fluency

MANY IDEAS

I CAN BRAINSTORM
MANY DIFFERENT IDEAS.





Flexibility

IDEAS HAVE VARIETY

I CAN LOOK FROM A
NEW PERSPECTIVE
AND SEE THINGS IN
DIFFERENT WAYS.





Originality

IDEAS ARE UNIQUE

I CAN THINK OF
SOMETHING OTHERS
HAVE NOT THOUGHT OF.





Elaboration

IDEAS ARE DETAILED AND COMPLETE

I CAN CONTINUE TO
ADD MORE AND BUILD
ON MY FIRST IDEA.



SKILL STATION: *Create*

EXPECTATIONS

- WHAT TOOLS ARE AVAILABLE?
- WHAT DOES IT LOOK LIKE?
- WHAT DOES IT SOUND LIKE?
- WHAT DOES IT FEEL LIKE?
- WHAT DEFINES SUCCESS?



SKILL STATION:

Create

Use your
imagination and
transform these
numerals

Name: _____

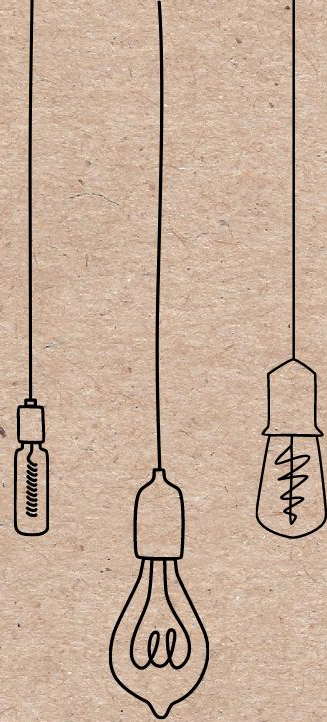
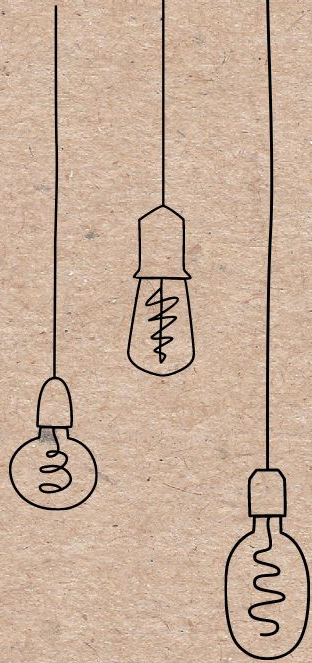
Numeral Transformations

1	2	3
4	5	6
7	8	9

SKILL STATION:

Create

Let's go on a
gallery walk!



SKILL STATION:

Create

EXTEND

