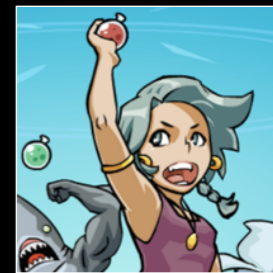
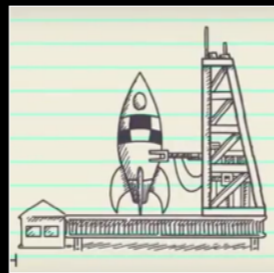


Tools from NMSU's Media Productions

Learning Games Lab

Animations • Video • Games • Apps • Virtual Labs



Jeanne Gleason • jgleason@nmsu.edu •

Barbara Chamberlin • bchamber@nmsu.edu •  [@bchamber](https://twitter.com/bchamber)



Barbara
Chamberlin



Jeanne
Gleason

Jeanne Gleason

Games



mathsnacks.org

GAME OVER GOPHER

New Game

Practice

Credits





MONSTER SCHOOLBUS

NEW GAME

CREDITS

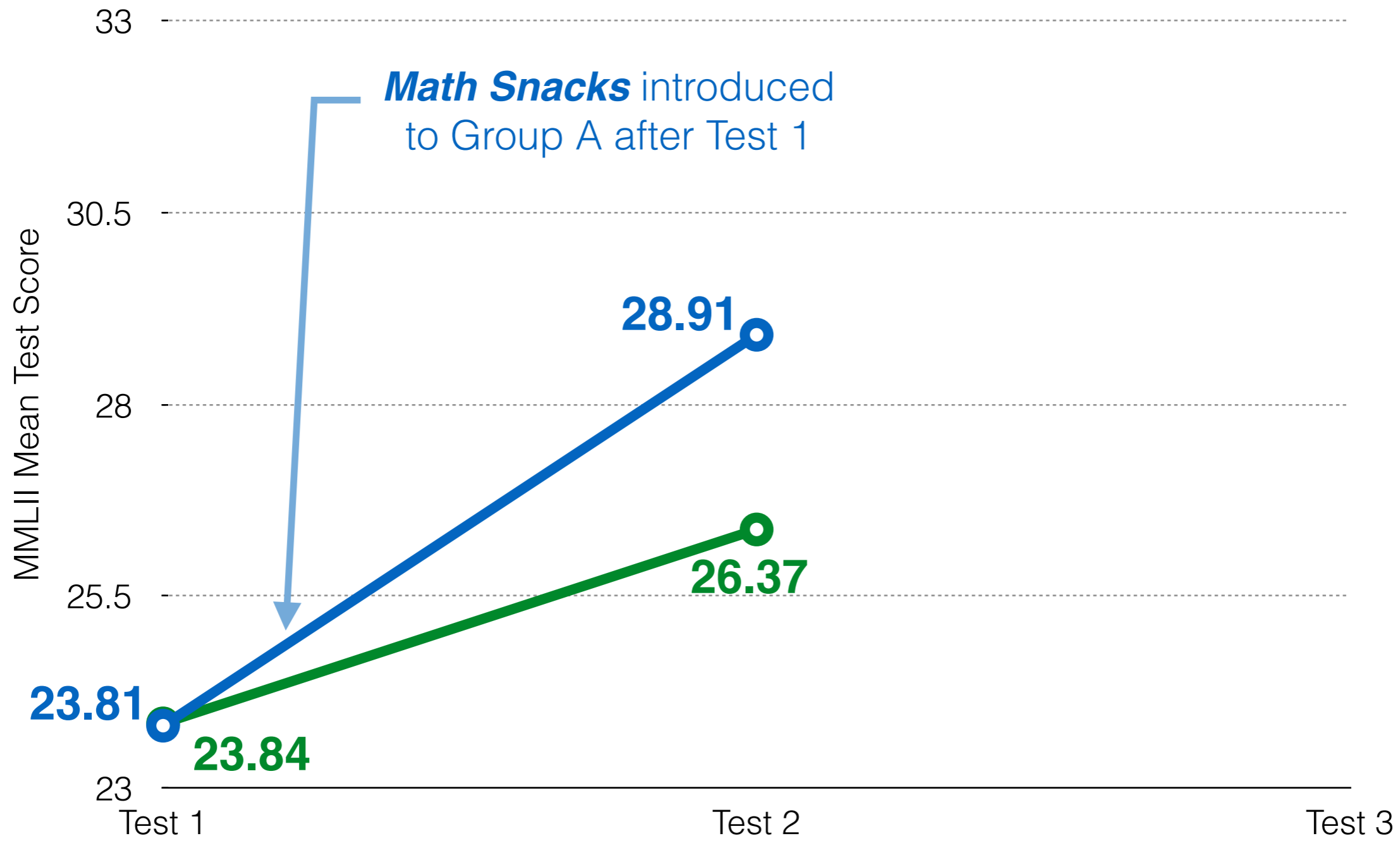
RATIO RUMBLE

- New Game
- Credits



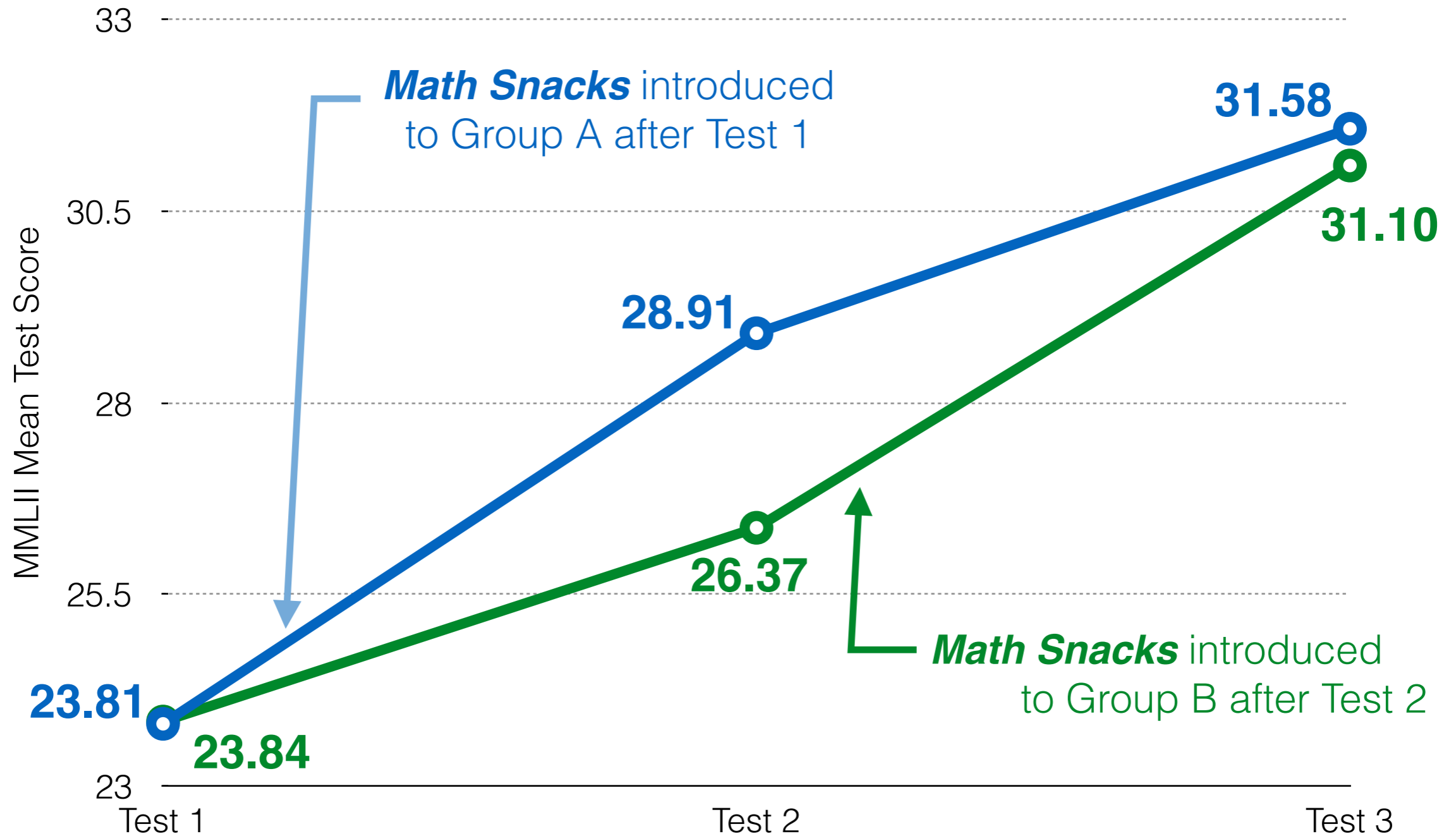
Impact of *Math Snacks* Games on Math Test Performance of 5th Graders

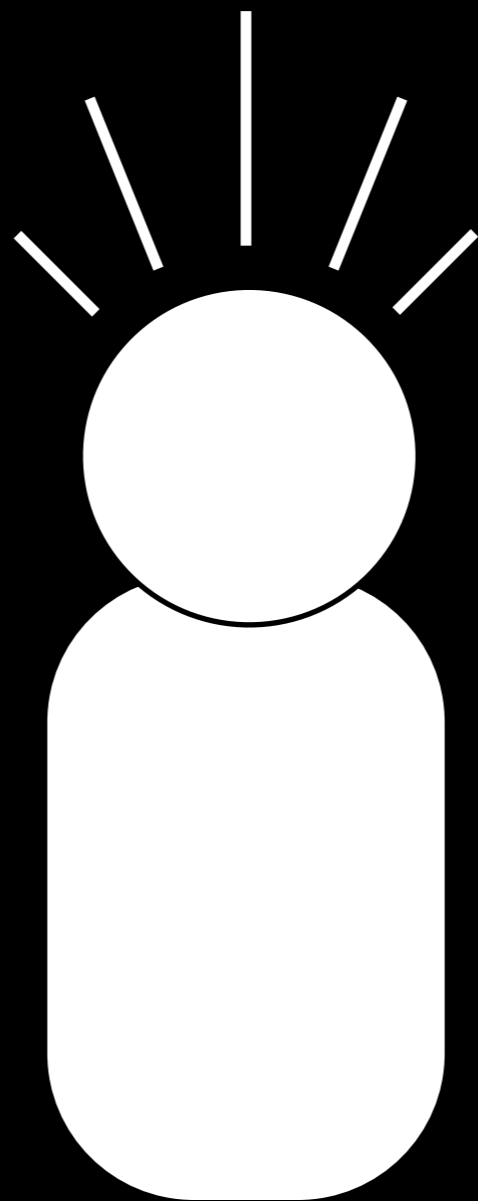
n=741 students in fifth grade



Impact of *Math Snacks* Games on Math Test Performance of 5th Graders

n=741 students in fifth grade





one great idea

myth of educational design

start with an

IDEA

for a course.

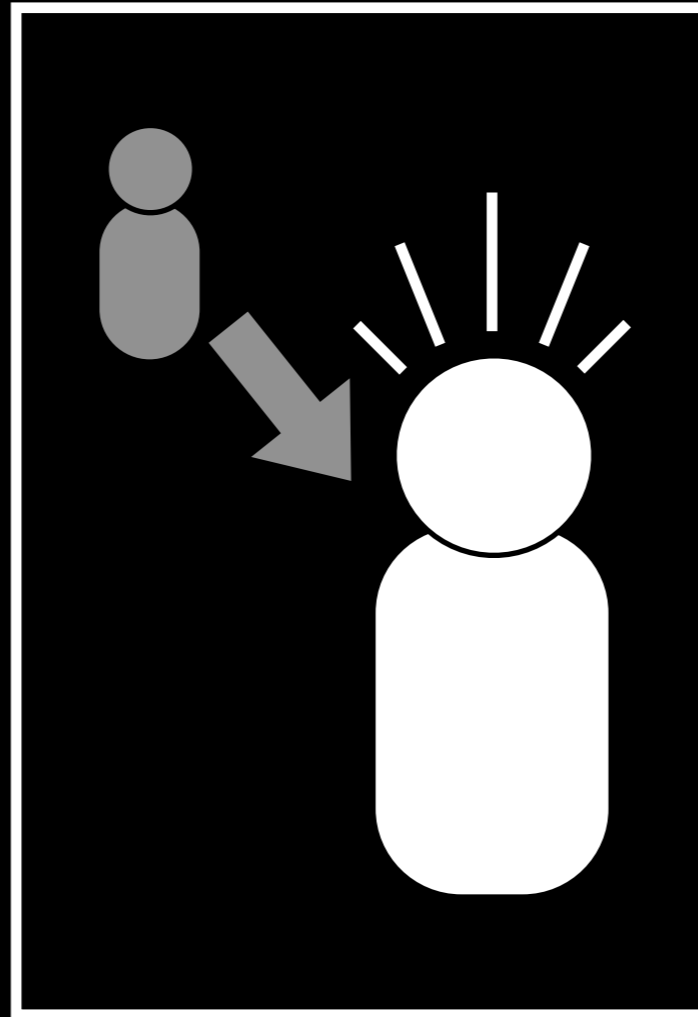
(or something that really needs to be taught.)

start with a

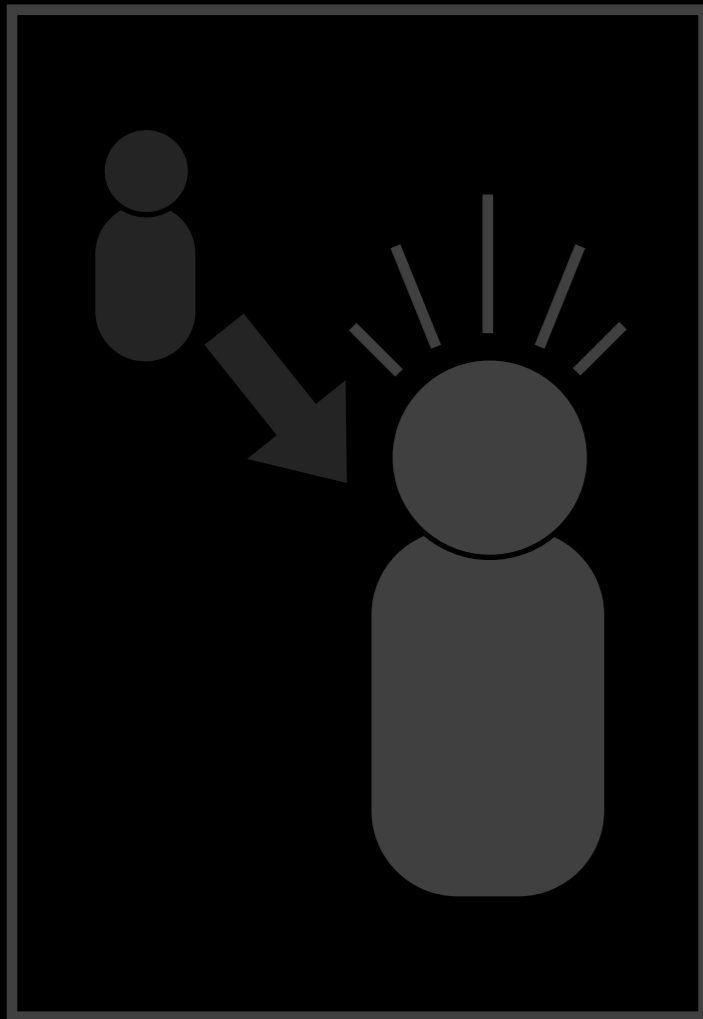
process

with clear outcomes.

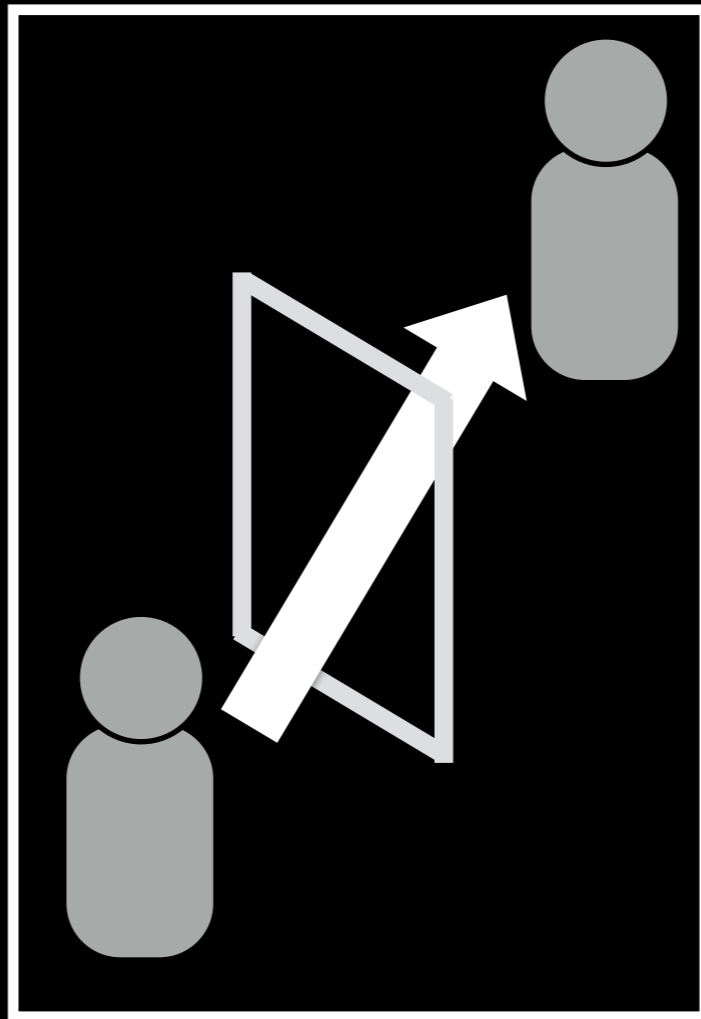
What
change
do I want
to see in
the learner?



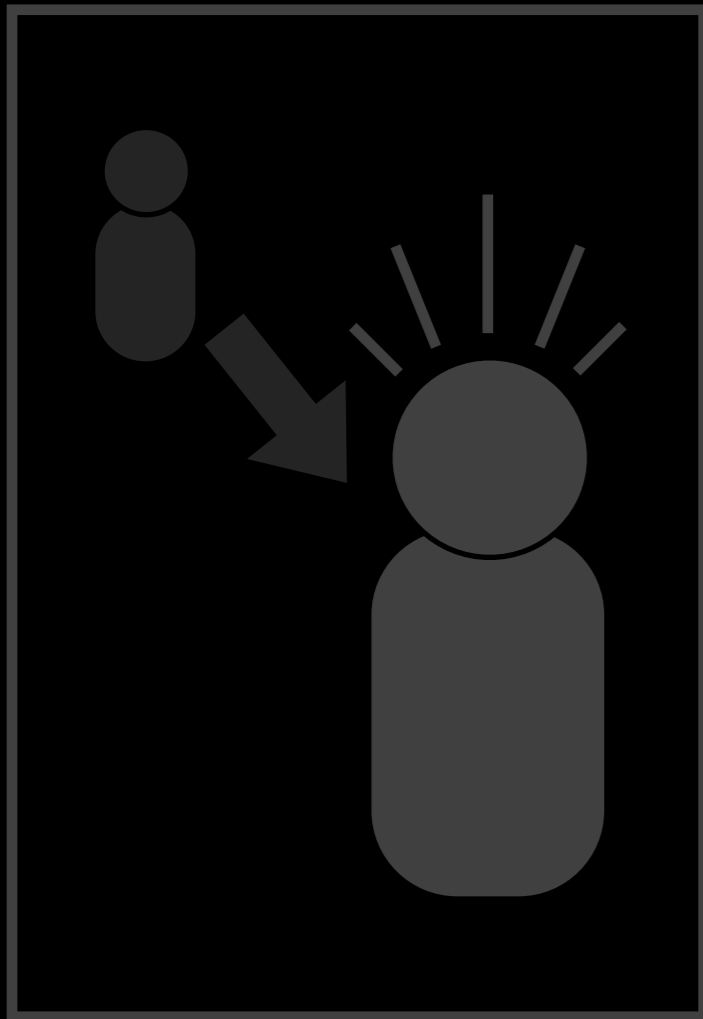
What
change
do I want
to see in
the learner?



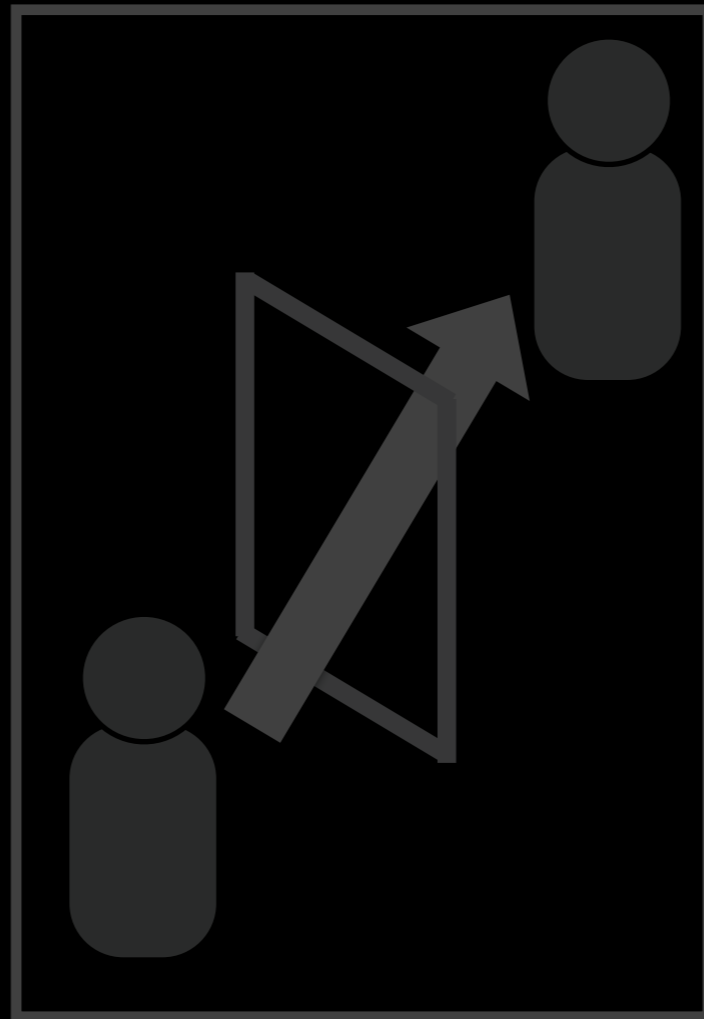
What
activities
lead to that
change?



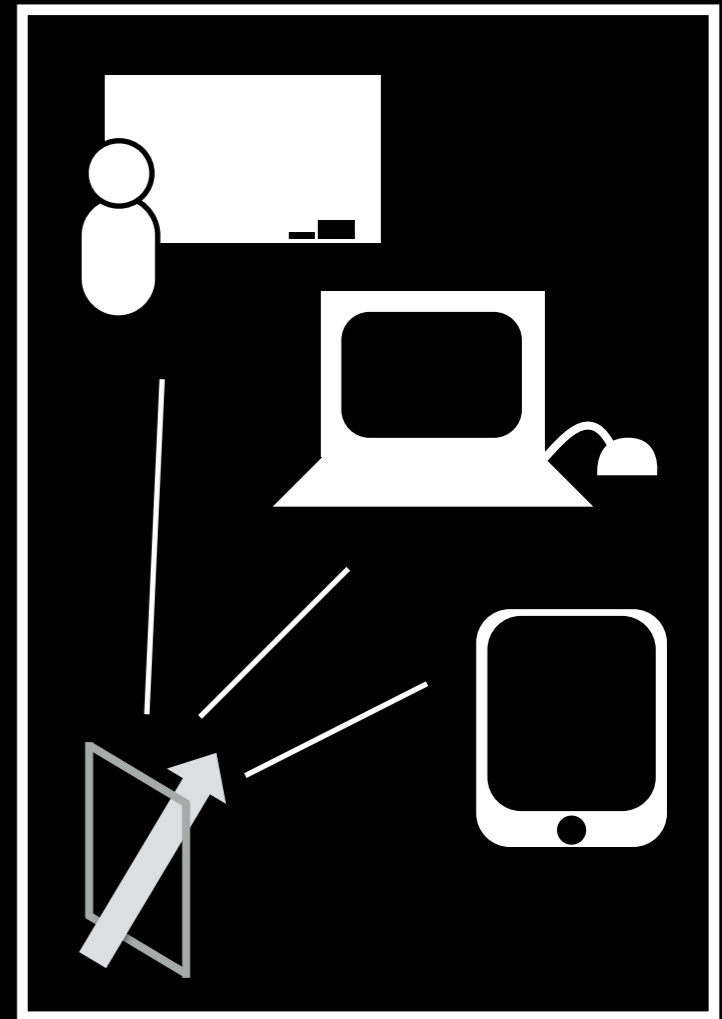
What
change
do I want
to see in
the learner?



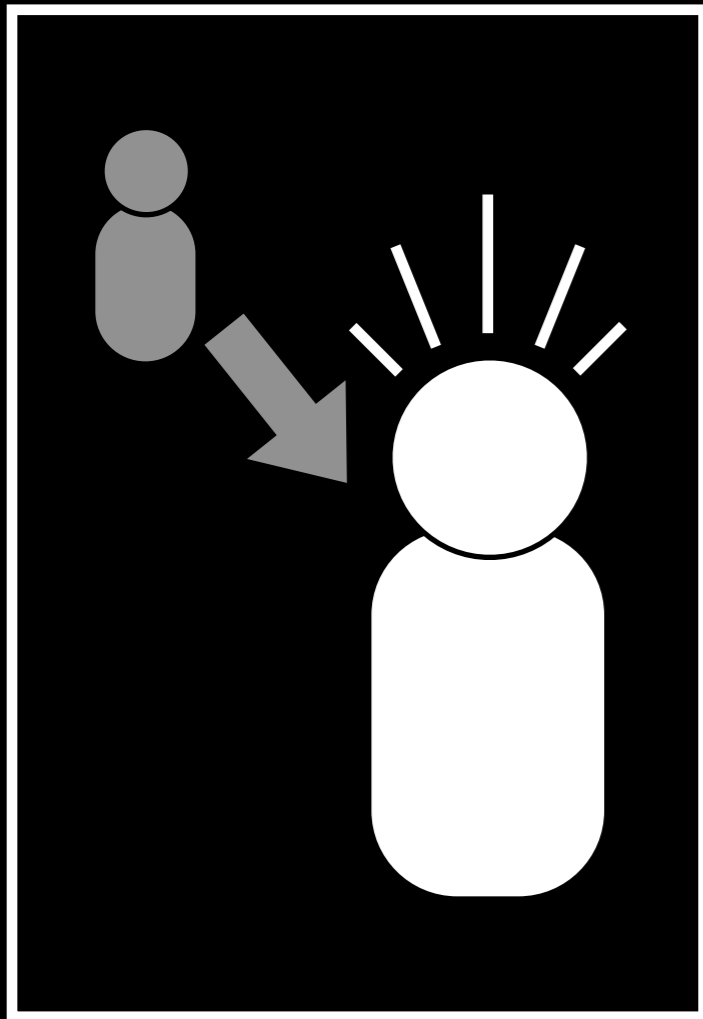
What
activities
lead to that
change?



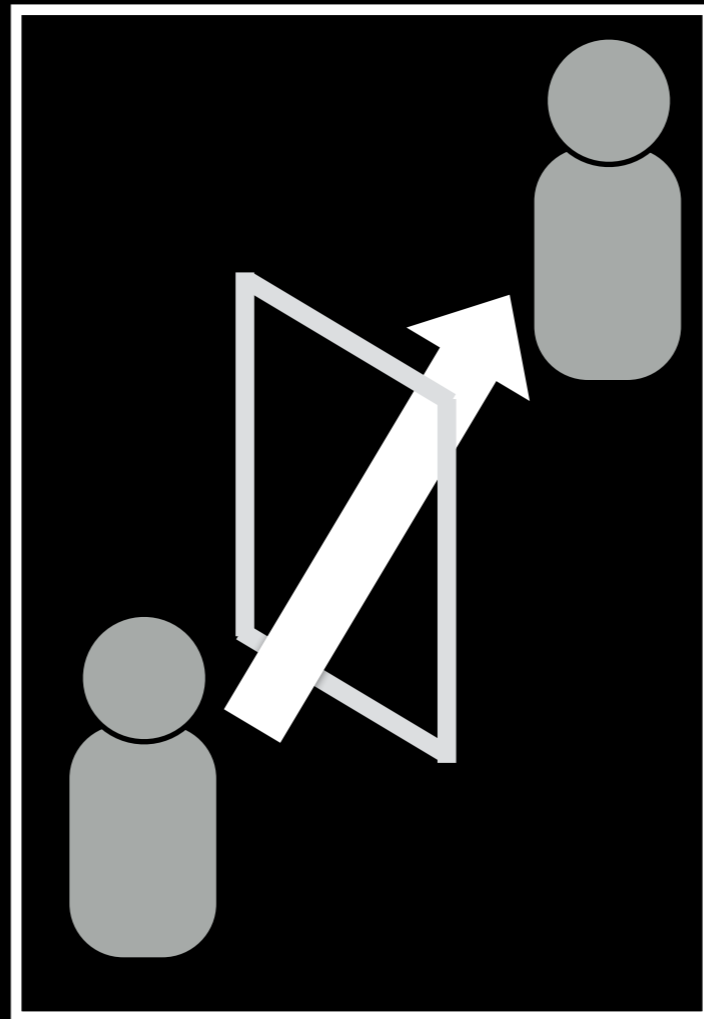
How can
gameplay
facilitate
those
activities?



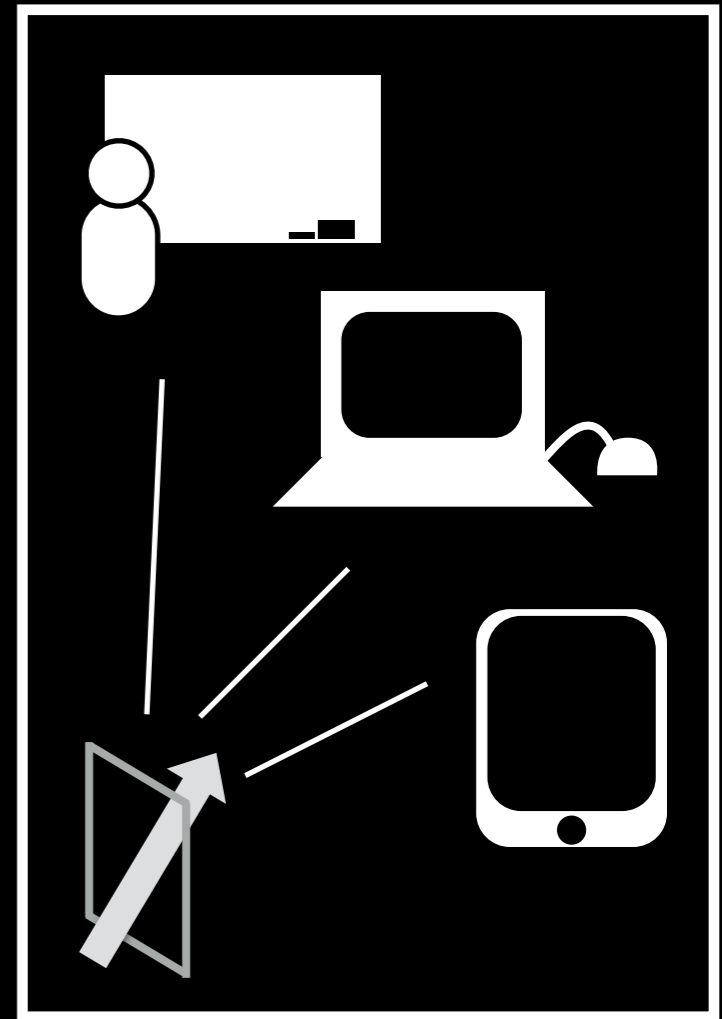
What
change
do I want
to see in
the learner?



What
activities
lead to that
change?



How can
gameplay
encourage
those
activities?



What do we want the learner to be able to do?

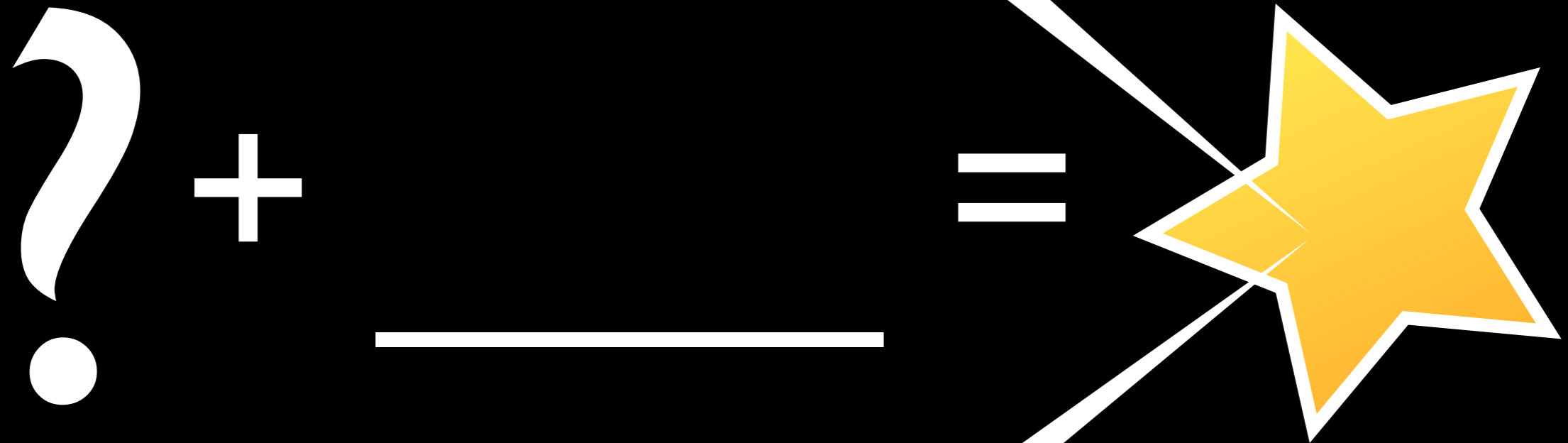
inquiry-based learning

have them do it
& reward them

gamification

create an environment
where they reveal how
to do it themselves

*answering questions may yield success
in answering questions*



but does it transform the learner?

Earnings: \$574



.00985

9.85×10^3

98.5

9.85×10^1

9,850

9.85×10^{-3}



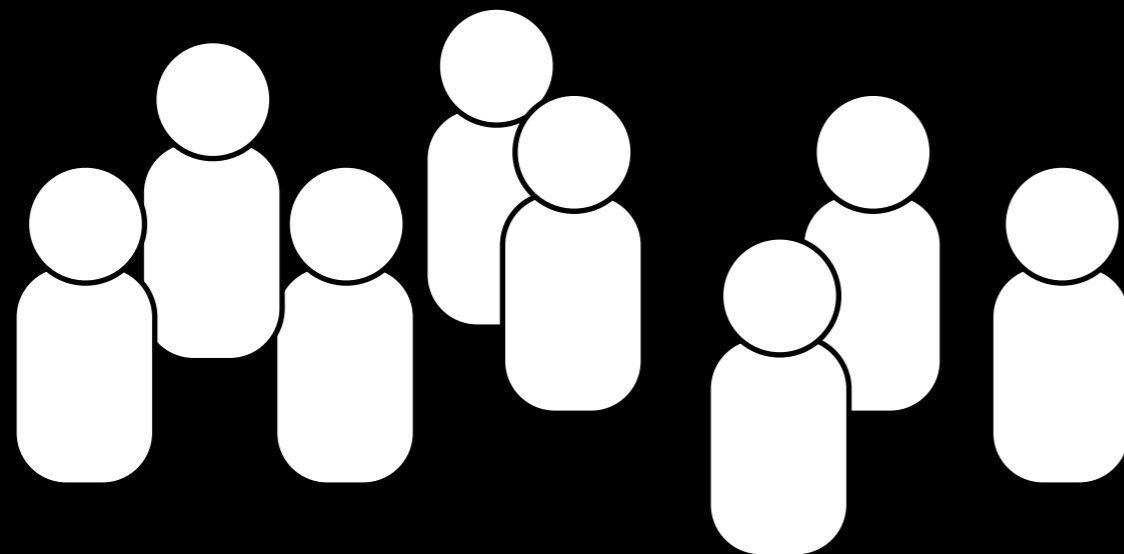
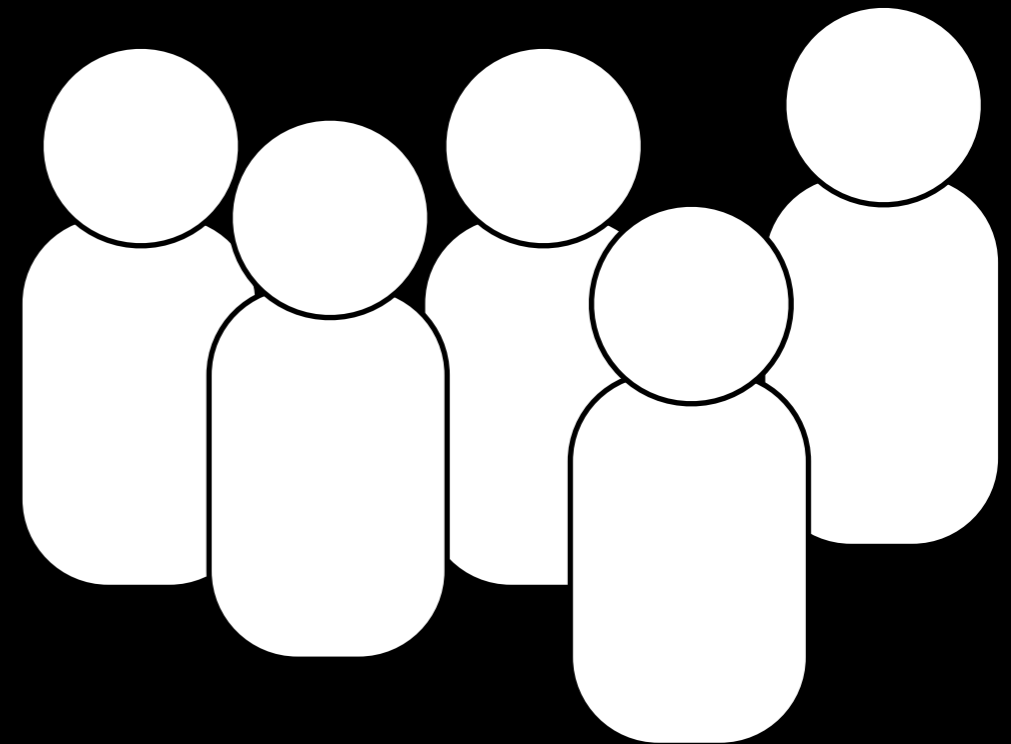
✠ Match up the clouds correctly. ✠

Guiding Questions

- If the learner doesn't know this coming into the game, will she *learn it through game play*?
- Will this lead to the *desired outcome*?
- Is it *fun enough* to sustain engagement?
- Are we maximizing this game's potential?

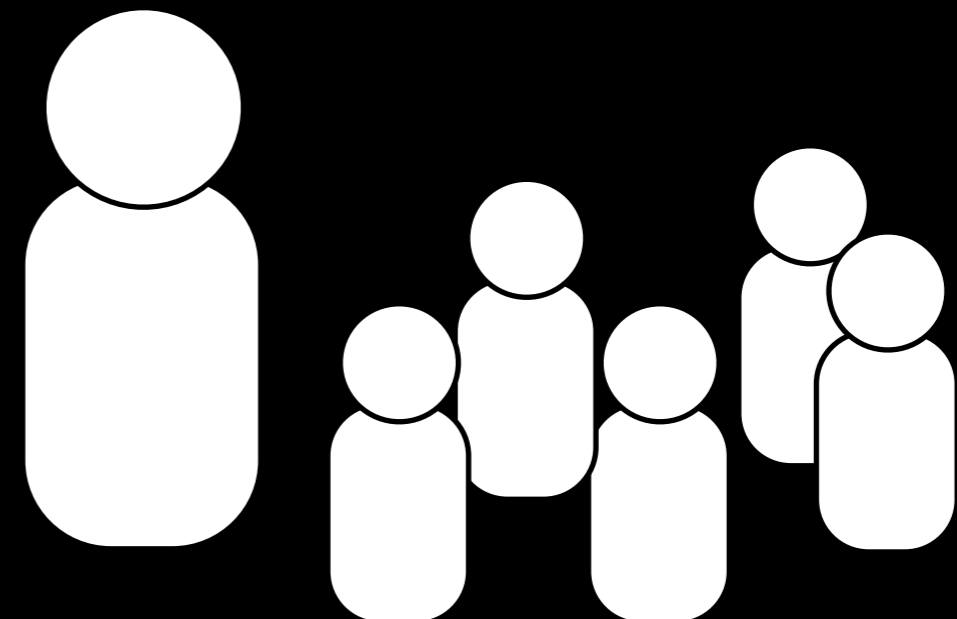
Important Elements:

Quality Advisory Committee



User testing

Teacher Training
Camps



Atlantean Dodgeball
Animation
Ratios & Differences

total words spoken

Bad Date
Animation
Ratios

Number Rights
Animation
Number Line & Fractions

Ratey the Math Cat
Animation
Unit Rates

Overruled!
Animation
Measures & Proportions

Scale Ella
Animation
Scale Factor

Pearl Diver
Game
Fractions & Number Lines

Ratio Rumble
Game
Ratios

Gate
Game
Numbers and Place Value

Game Over Gopher
Game
Coordinate Plane

Monster School Bus
Game
Base Ten Decimals

Math Snacks Video Player
iOS App
Teacher's Aide

Math Snacks - Teaching With Overruled

Overruled!
Learner Guide

Ratey the Math Cat
Learner Guide

Levels Reached	Money Earned
1	\$10
2	\$20
3	\$30
4	\$40

Overruled!
Teacher Guide

Version 1.6

Ninja Kitchen



New Game

Continue

Music

Sound FX

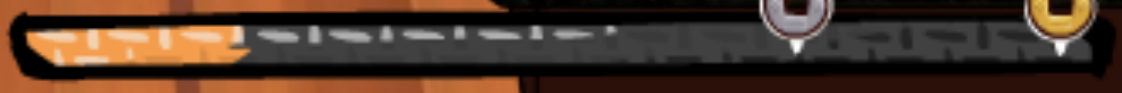


\$2004

Open

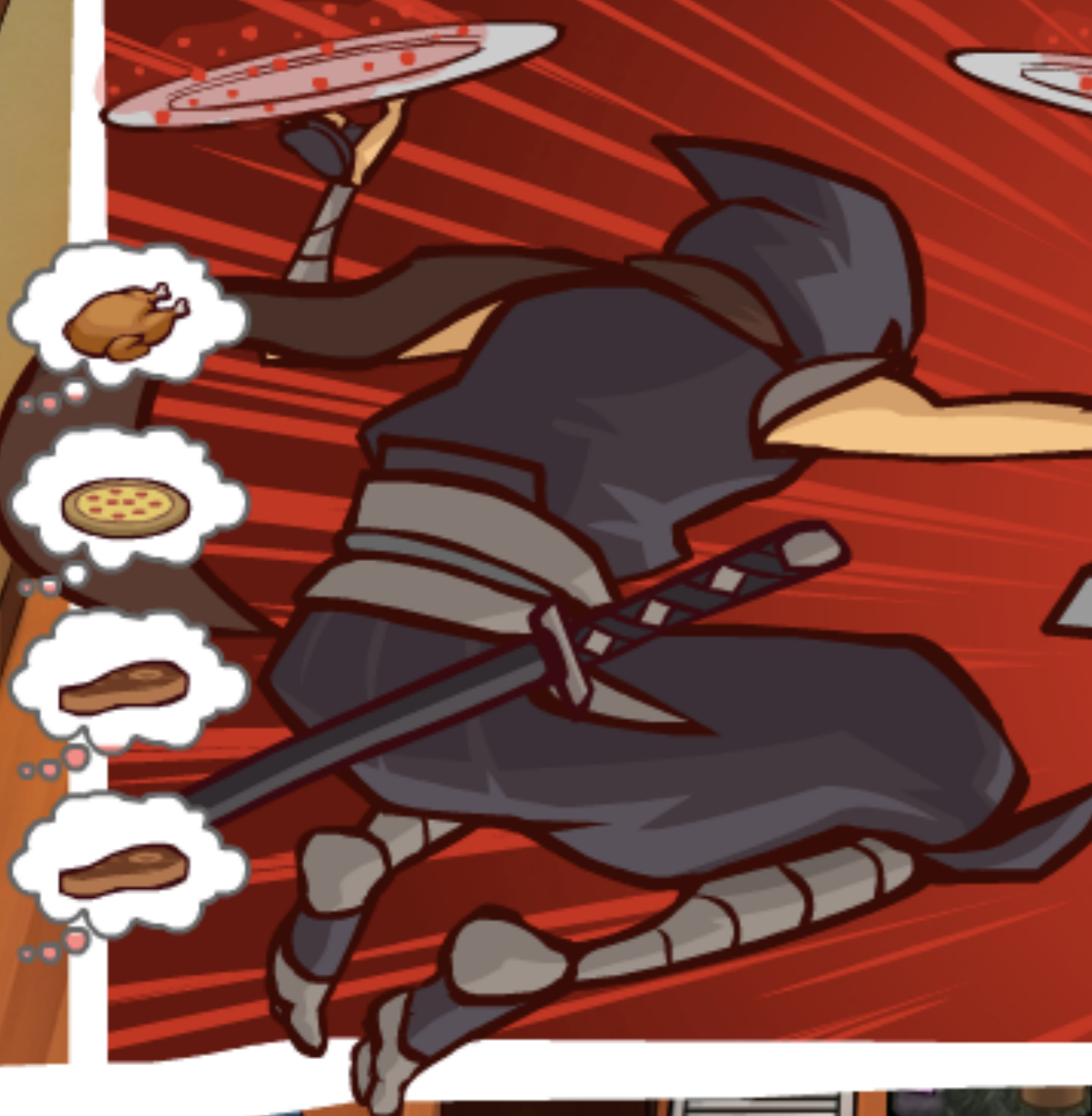


Level 6



\$2004

Game running slowly?
Type "Q" to toggle quality.



Level 7



Mobile Apps

ABOUT

ESPAÑOL

Eat & Move

o-matic

PLAY

Ready to make healthier choices about eating & m

Eat & Move

o-matic



Full Size Candy Bar

Instead of eating a full size candy bar, share with a friend or pick a mini bar.



Fast Biking

More pedaling and less cruising is considered fast biking

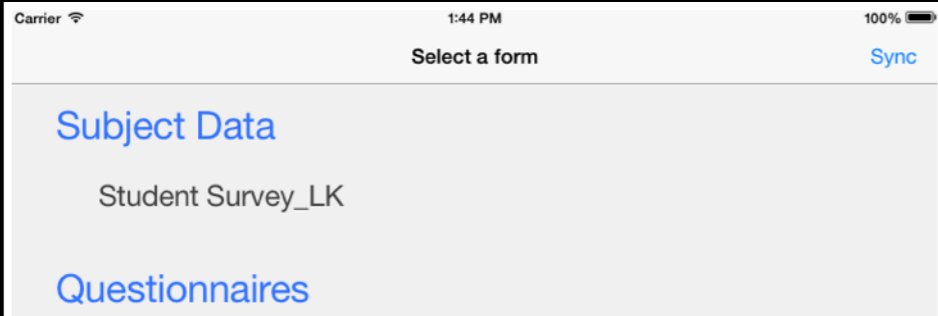
1 BURGER, 12 OZ. SODA

CALORIES

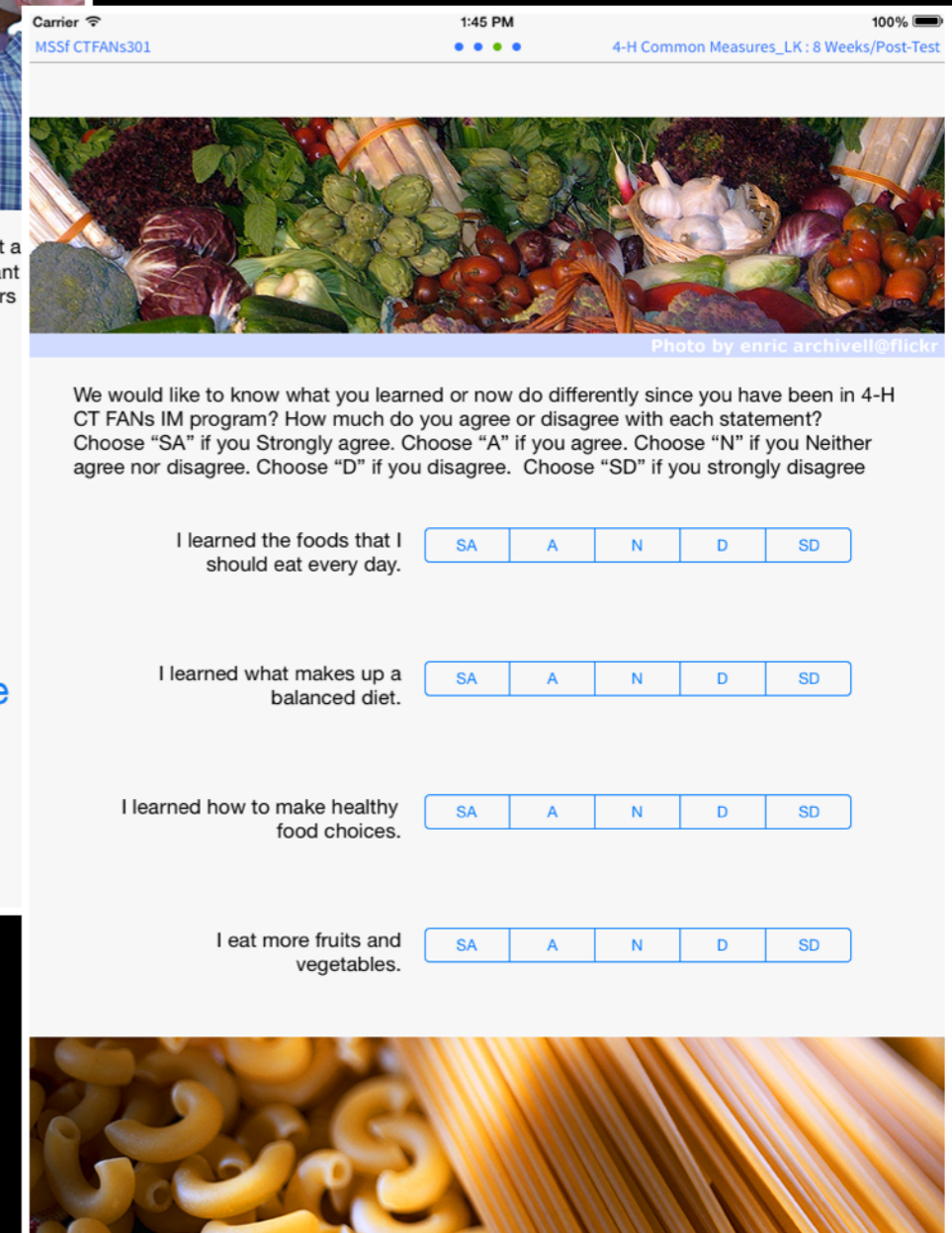
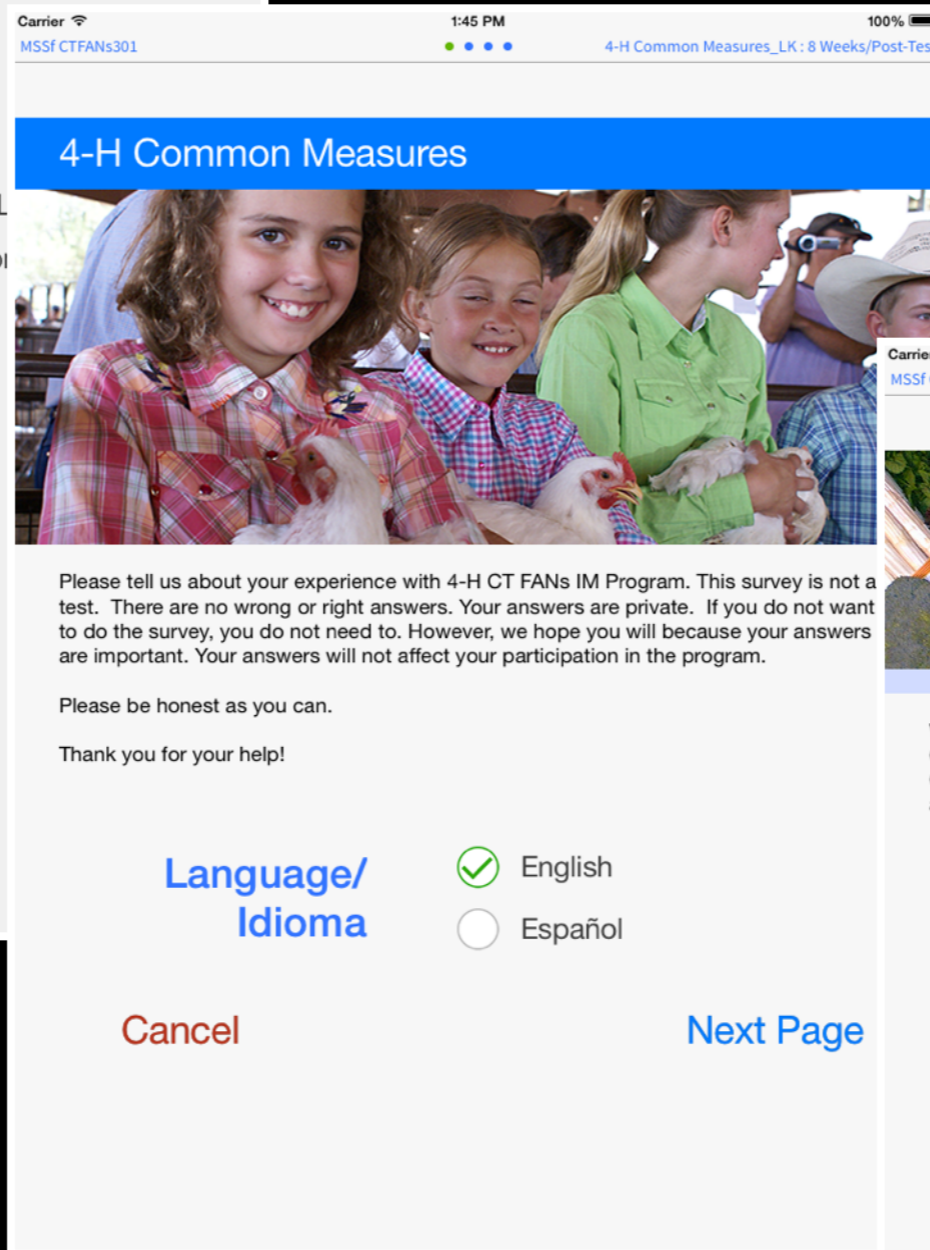
134 IN 134 OUT

TIME SPAN

1hr 45min



Ask Board



Credit Score Game



LAND OF THE DEBT
\$ SUPPLY
cooperative



Wipe yer
PAWS

FAST CASH

PAYDAY
LOANS

OPEN



Animations & Social Media

DON'T BE GROSS



[About Don't Be Gross](#)

[View All Animations](#)

Vomit Girl

[Good Boy](#)

[We Have A Winner](#)

[Vomit Girl](#)

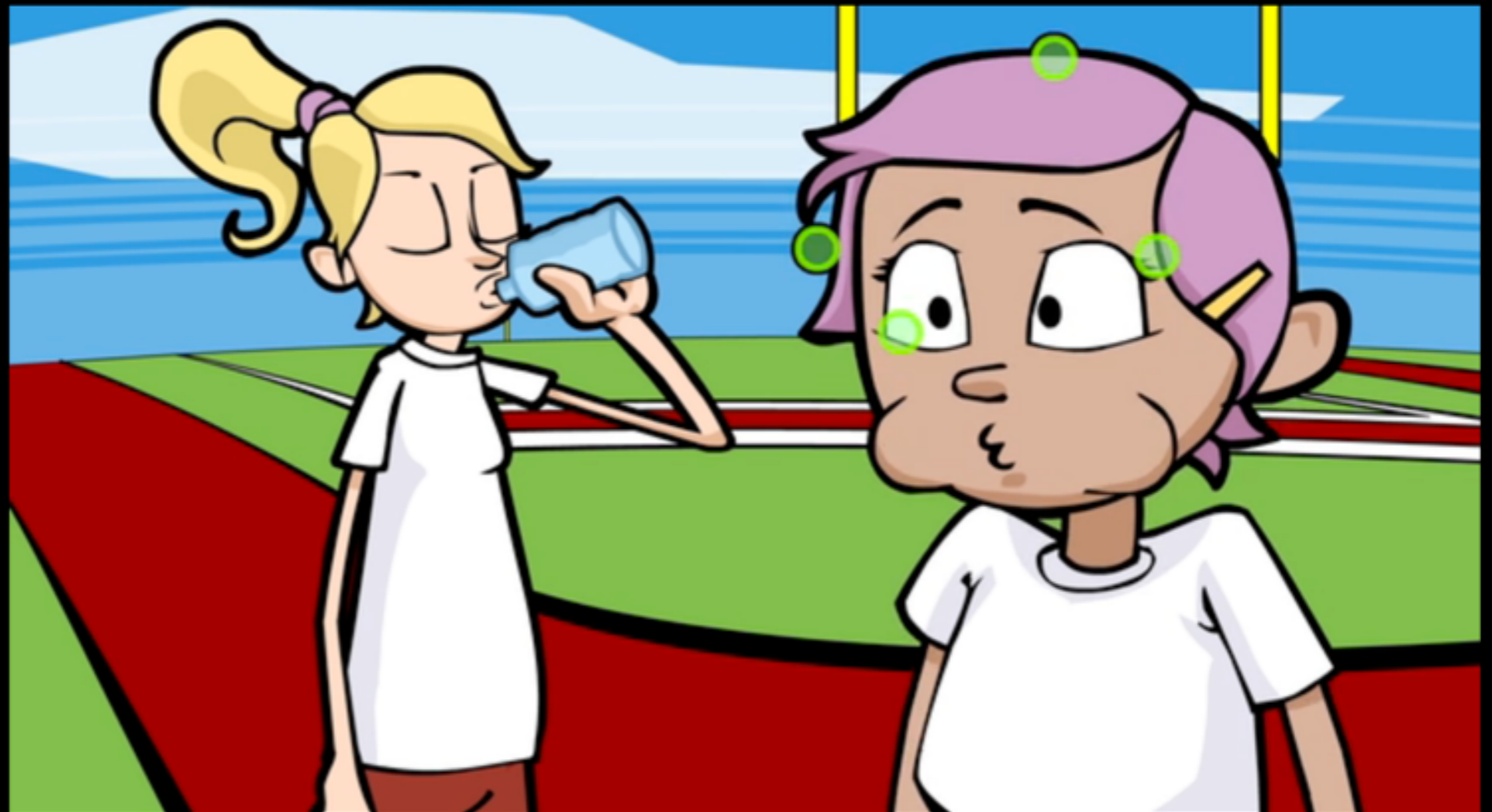
[10 Minutes Earlier](#)

[Suds of War](#)

[Sticky Situations](#)

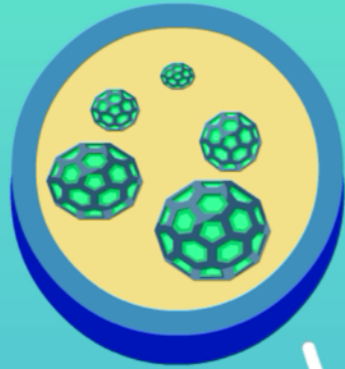
[HandCam](#)

[5 Second Invasion](#)

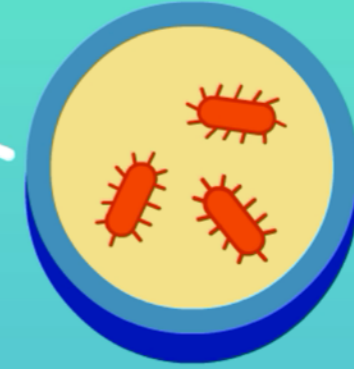




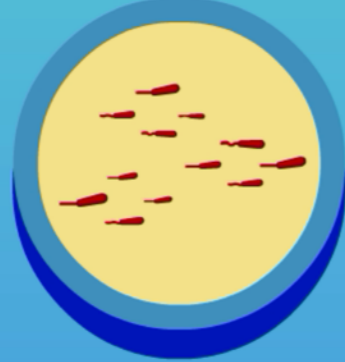
Norovirus



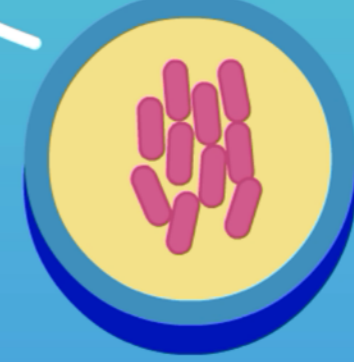
E. coli 0157H7



Vibrio



Salmonella



Scientific Visualizations

NOROVIRUS
CALICIVIRIDAE FAMILY

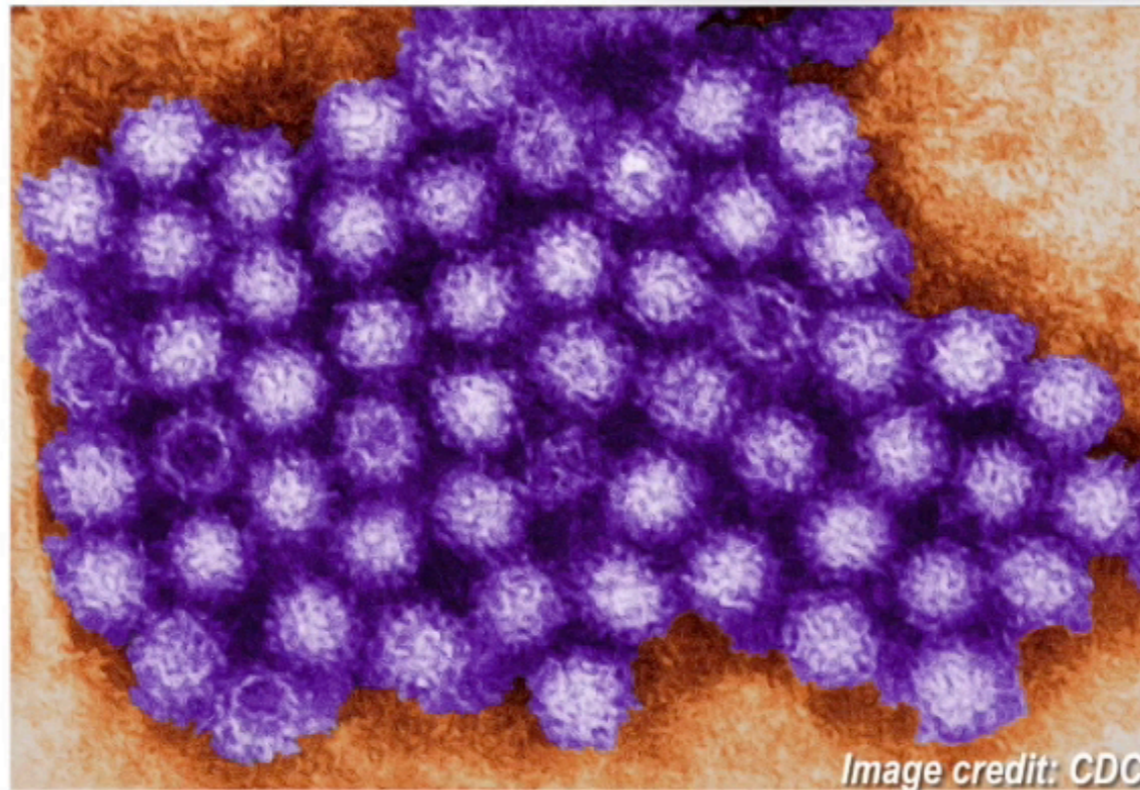


Image credit: CDC

SMALL ROUND STRUCTURED VIRUSES

Our
Media
Limelight

**DON'T WASH YOUR
CHICKEN!**

[eating and health](#)

Julia Child Was Wrong: Don't Wash Your Raw Chicken, Folks

by MARIA GODOY

August 23, 2013 8:48 AM ET

[Listen to the Story](#)

Morning Edition



2 min 34 sec

[+ Playlist](#)[+ Download](#)[- Transcript](#)



Site Home ▾

Search... >

**DON'T WASH YOUR
CHICKEN!**

VIDEOS & PHOTO NOVELLAS

RESOURCES

CONTACT US

DON'T WASH YOUR CHICKEN

Although raw chicken and turkey can carry bacteria on their surfaces, research has shown that washing raw poultry under running water in your kitchen sink is a bad idea.

If germs were visible to the naked eye, you would see that washing poultry just splashes bacteria all over you, your kitchen towels, your countertops, and any other food you have nearby, such as raw foods or salads. This can make people sick, especially young children, pregnant women, older adults and the immunocompromised.

Instead, just take raw poultry straight from the package into the cooking pan. The heat from the cooking process will kill any bacteria that are present. Then simply clean up any splashes and wash your hands with soap and hot water.

To learn more, explore the four [mini dramas](#) or the [photonovellas](#).

English
Spanish
Amharic
Hmong
Oromo
Somali
Vietnamese

Virtual Labs

Understanding Water Activity

Definition

Storing foods safely

Microbes and water

Binding Water & Salt

Binding Water & Sugar

Controlling a_w

Hazardous foods

Testing for accuracy

Conclusion

Credits

Which method would work best?
Choices: Refrigerate, Storage bag, Dry,
Add sugar, Add salt



 **Fresh** 
Strawberries



Refrigerate



Storage bag



Dry



Add sugar



Add salt

Understanding Water Activity

Definition

Storing foods safely

Microbes and water

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Binding Water & Sugar

Controlling a_w

Hazardous foods

Testing for accuracy

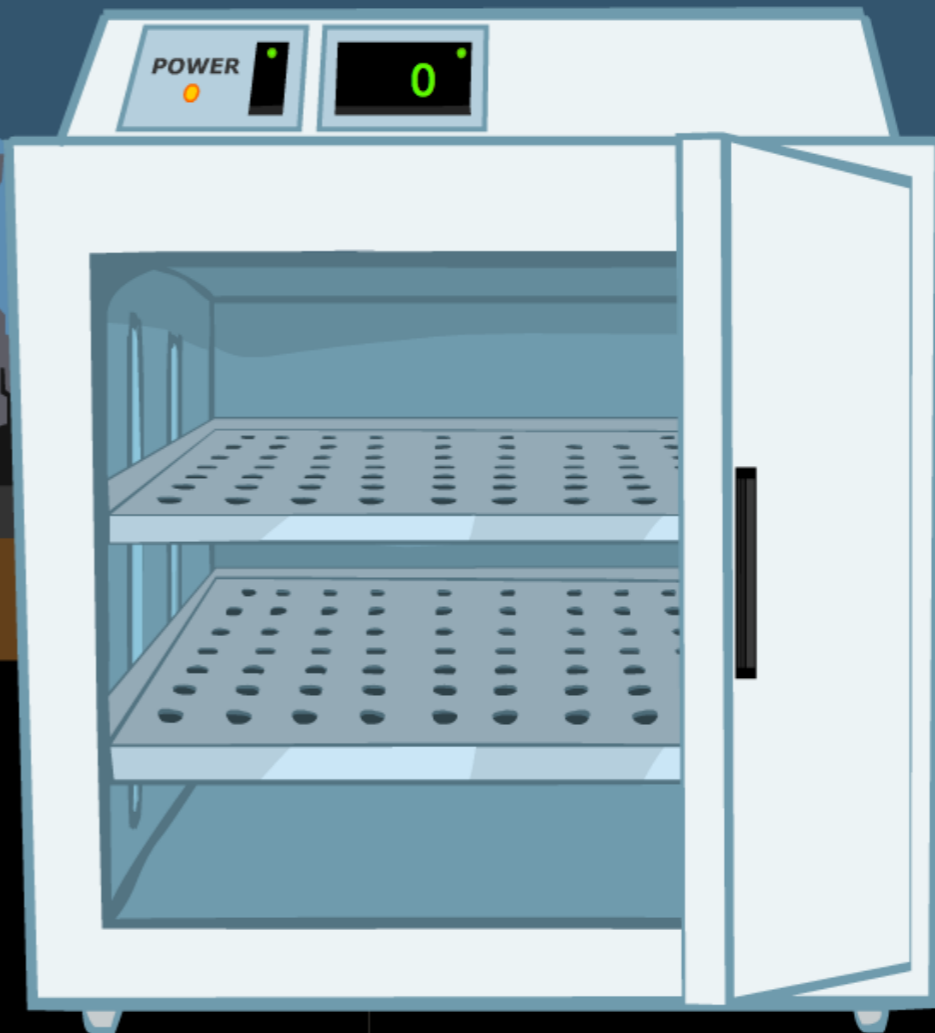
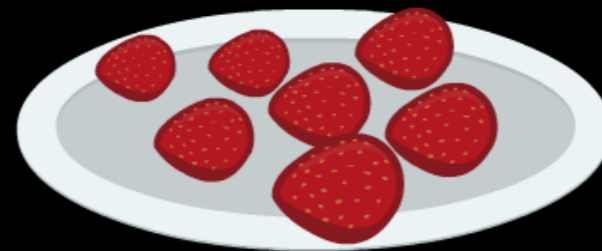
Conclusion

Credits

After drying for several hours the optimum a_w of dried strawberries is less than 0.6.



NEXT



Understanding Water Activity

Definition

Storing foods safely

Microbes and water

Binding Water & Salt

Binding Water & Sugar

Controlling a_w

Hazardous foods

Testing for accuracy

Conclusion

Now stir the strawberry concoction.



Credits



Rangelands, Zuni Tribe

Virtual Science Labs, North & South Dakota

HuNoV, North Carolina State U

Exergames Unlocked, West Virginia U

Tourism, US Commerce

Matrix, US Dept. of Education

Bone Health, Purdue

Elderly Care, Clemson

Fresh Produce, The Ohio State U

Iraq Communications, Texas A&M

Food Prep., Navajo Tribe

Just in Time Parenting, eXtension

Livestock Diseases, U of Hawaii

Parenting, CYFAR

Math Snacks, NSF

Child Care Safety, Michigan State U

Salmonella, Drexel

Spanish Videos, USDA-FSIS

Ninja Kitchen, Rutgers

Tread-sylvania, National 4-H

*Lobster Diver,
U of Maine*

Some of our partners

What ^{about} *placement?*

self-distribution

Brain POP

manages
partnerships &
placement

GlassLabs

PBS Media

MERLOT

Educade

Pearson
OLE

Edmodo

Playful
Learning

Kongregate

eSpark

Graphite

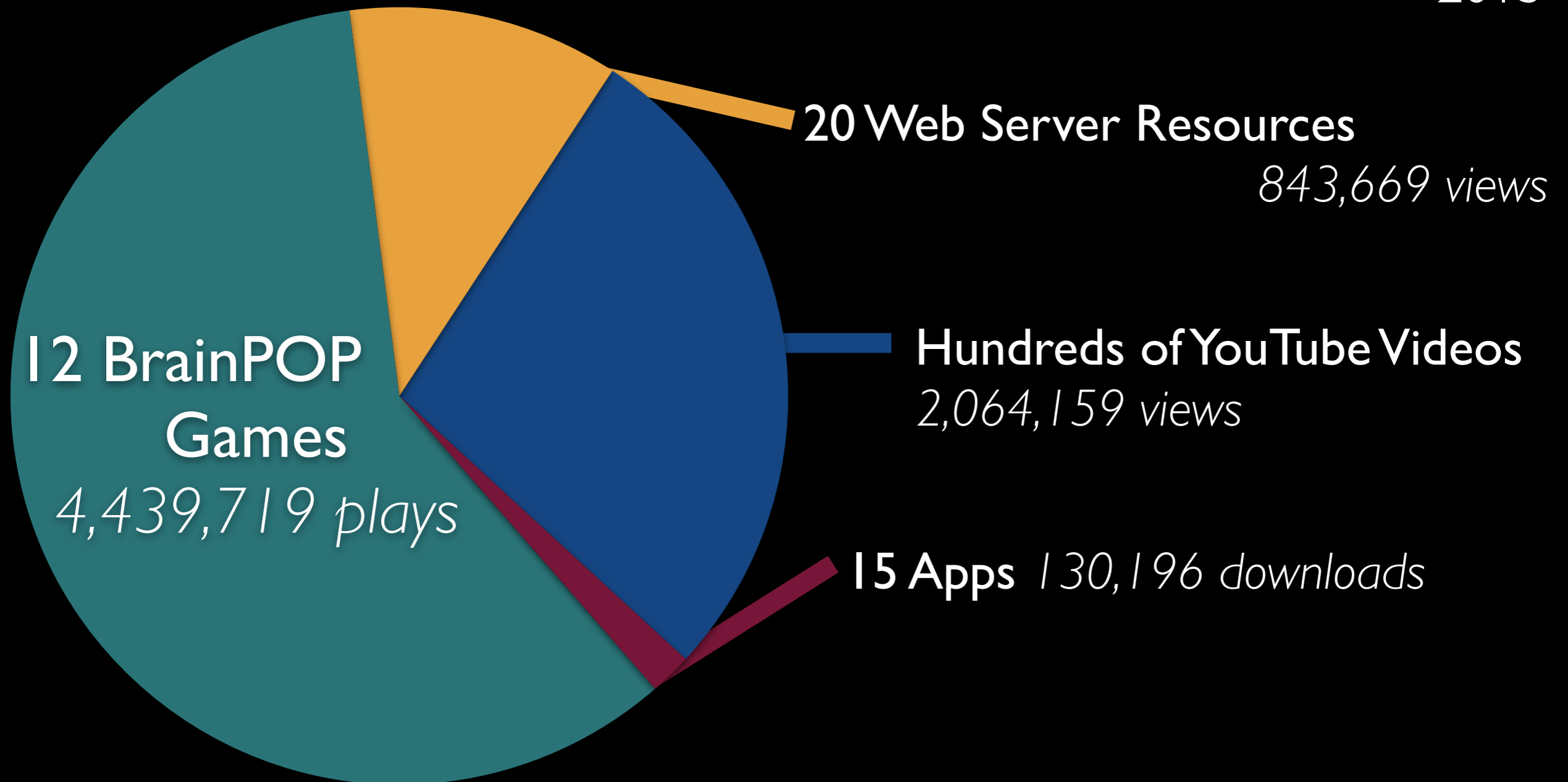
JayisGames

Serious Games
Directory

Clark Chart

_____ school in _____

How are people exposed to our learning tools? 2015



What

are we

working on

now?

for you





Potluck Panic Game

- convey risk, and other concepts related to food safety
- show complexity of outbreaks

Development and Assessment of an Educational Module for College Students for Conceptual and Attitudinal Changes towards Food Safety Systems
 Lead PD: Kali Kniel, University of Delaware

Grant # 2012-02732
 USDA Program officer: Antonio McLaren



photo by Matteo Bagnoli on Flickr

Cooking App for Kids & Families:

- Emphasize garden vegetables
- Get families cooking and eating together

Connecticut Fitness and Nutrition Clubs in Motion
Lead PD: Umekia Taylor, University of Connecticut

Grant # 2012-68001-19956
USDA Program officer: Diedra Chester



Apps for toddlers & their families

- better feeding and eating
- better core movement

Bridging Home and Preschool Environments to Promote Healthy Eating and Activity Behaviors and Prevent Obesity in Early Childhood
Lead PD: Laura Bellows, Colorado State University

Grant # 2015-68001-23240
USDA Program officer: Deirdre Chester



photo by Katherine Smith on Flickr

Water reclamation for agricultural production

- identify alternative water sources
- research reclamation
- educate producers & students

CONSERVE: A Center of Excellence at the Nexus of Sustainable Water Reuse, Food, and Health
Lead PD: Amy Sapkota, University of Maryland

Grant # 2016-68007-25064
USDA Program officer: James Dobrowolski



Zinkicide: A Nanotherapeutic for HLB

- share findings and recommendations with growers

Zinkicide: A Nanotherapeutic for HLB
Lead PD: Evan Johnson, University of Florida

Grant #: 2015-70016-23010
USDA Program officer: Tom Bewick



photo by Alain Bachellier on Flickr

SPECA Classroom Tools:

- teach math and language arts
- create online tools for 6th grade
- focus on food safety research

Advancing Adolescent Food Safety Education through Inquiry-Based STEM Instruction and Innovative Media Strategies

Lead PD: Jennifer Richards, University of Tennessee

Grant # 2015-38414-24223

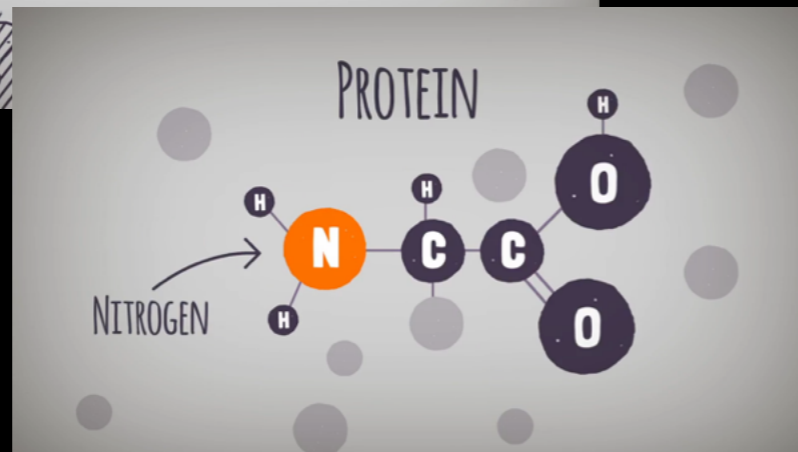
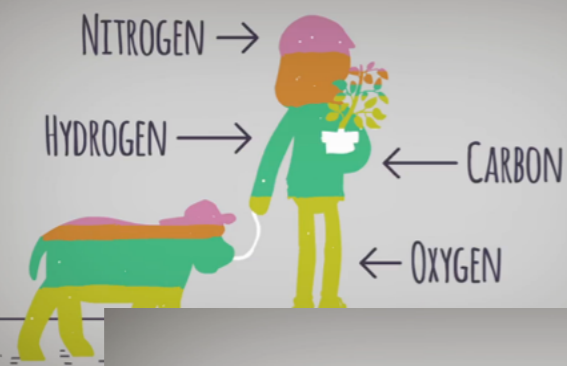
USDA Program officer: Katrena Hanks

Reaching Multicultural Audiences



Chemistry Tools for College Students:

- Help undergrad, Ag Science majors understand key chemistry concepts
- Add to existing ScienceofAgriculture.org



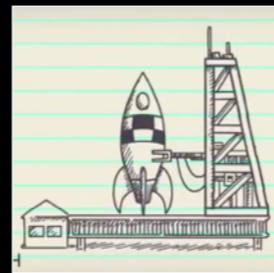
Raising the Gates Addressing Gaps in Students' Understanding of Math and Chemistry in the Animal and Plant Sciences
Lead PD: April Ulery, NMSU

Grant # 2014-38422-22089
USDA Program officer: Irma Lawrence

The Power of

Innovative Media

Work from NMSU's Media Productions & Learning Games Lab



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Barbara Chamberlin • bchamber@nmsu.edu •  [@bchamber](https://twitter.com/bchamber)