

CS160

USER INTERFACE DESIGN

FALL 2015



IN CLASS BRAINSTORM



PROG 02 : YOUR FAULT



OS - top of Q steps OS - top of TT steps



moto

10:10

Valparaíso, Chile
9461 km
4.3 M

Valparaiso, Chile
9461 km
4.3 M







moto

10:10

Ascensor Cerro Baron
lizaneda

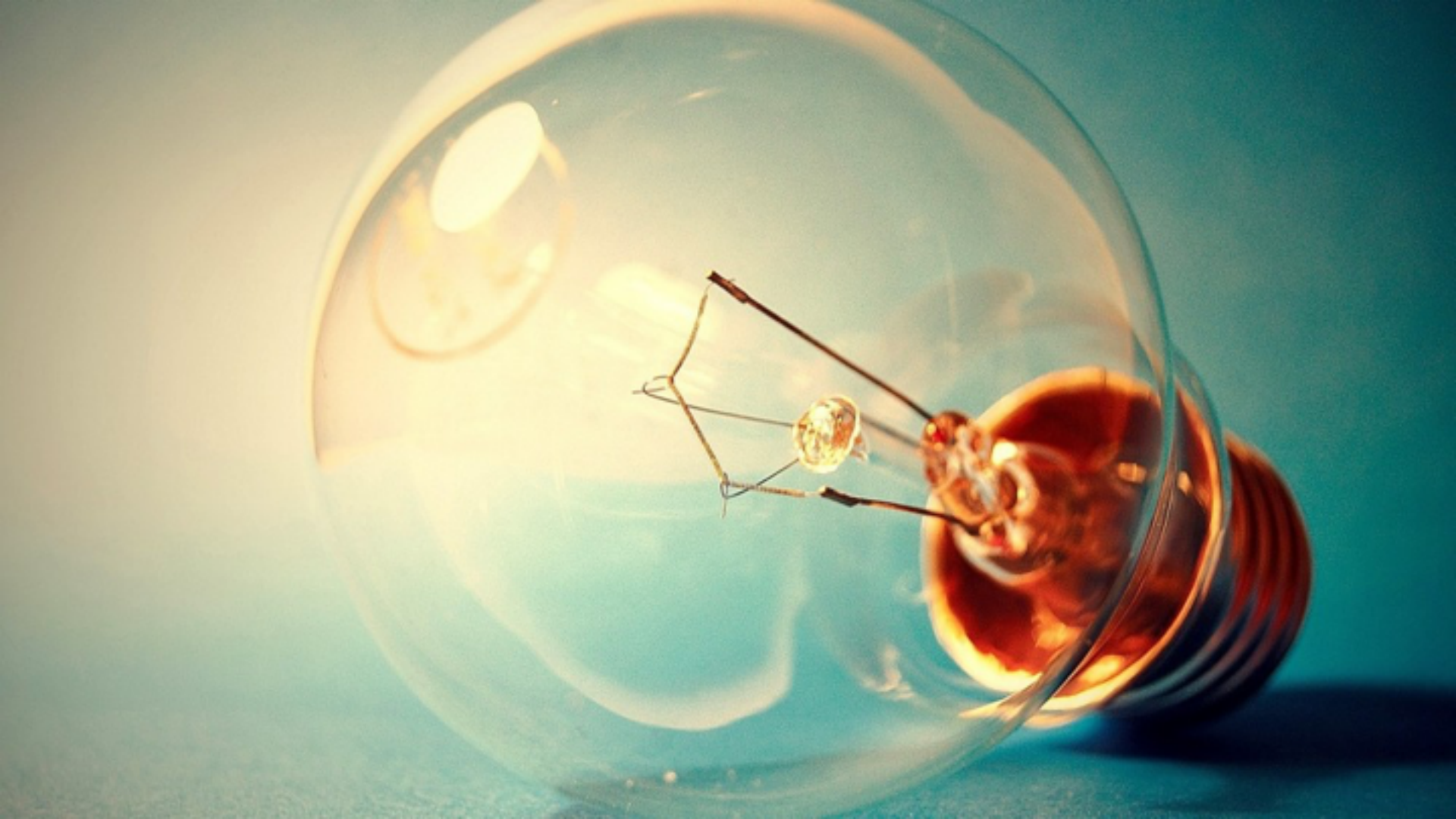








IN CLASS BRAINSTORM



Final Project

IDEO'S BRAINSTORMING RULES

1. Sharpen the Focus
2. Playful Rules
3. Number your Ideas
4. Build and Jump
5. The Space Remembers
6. Stretch Your Mental Muscles
7. Get Physical

Aim for quantity

Hope for quality

SHARPEN THE FOCUS

Posing the right problem is critical
– neither too narrow, nor too fuzzy

Not “bicycle cup-holders” but
“helping cyclists to drink coffee
without accidents”



NUMBER YOUR IDEAS

Obvious but very useful

Helps keep track of them when the brainstorm is successful (and 100 or more ideas are in play)

Allows ideas to take on an identity of their own

BUILD AND JUMP

Build to keep momentum on an idea:

“shock absorbers are a great idea; what are other ways to reduce coffee spillage on bumps?”

Jump to regain momentum when a theme tapers out:

“OK, but what about hands-free solutions?”

CONCEPT REFINEMENT

Premature idea rejection is a serious barrier to good design

Differentiator between good designers and great ones is the latter's ability to successfully develop unusual ideas

Requires a strong instinct to be able to distinguish fatal vs. minor flaws in an idea

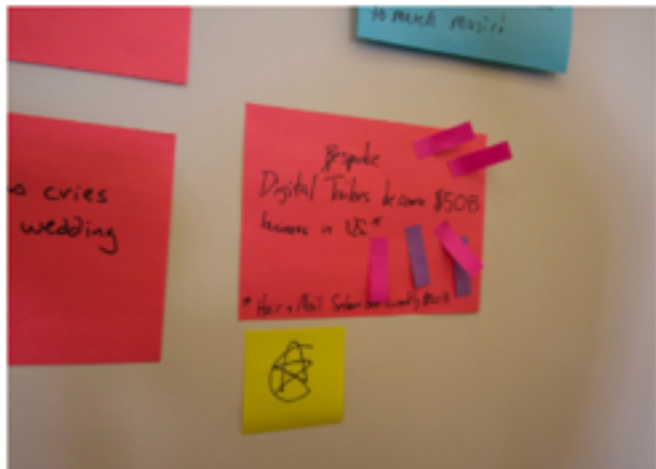
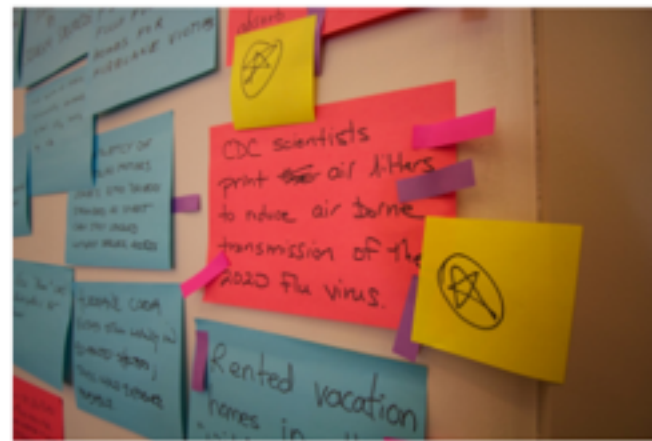
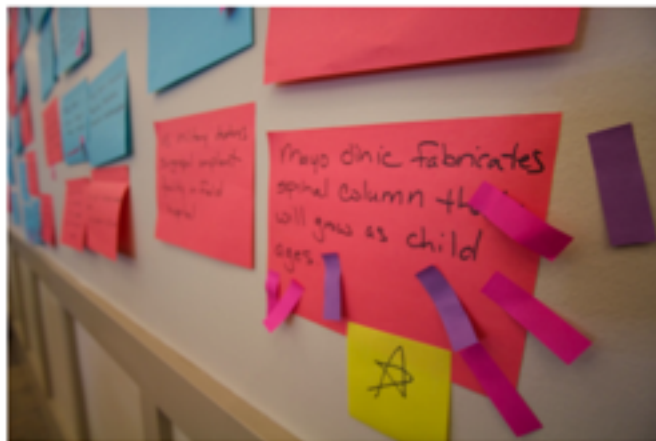
THE SPACE REMEMBERS

Covering whiteboards or papering walls with text is extremely useful in group work.

It's a very effective form of external (RAM) memory for group

Even better, its shared RAM. Helps group share understanding



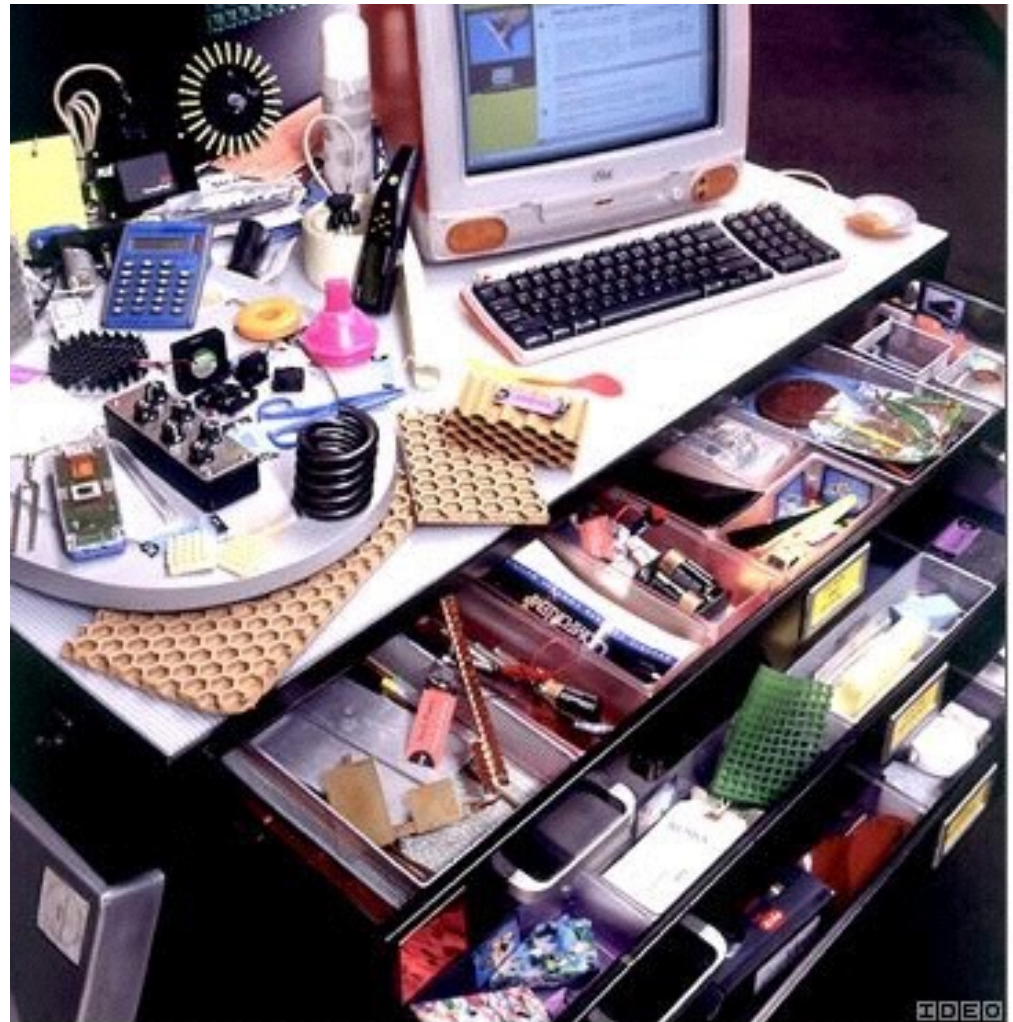


STRETCH YOUR MENTAL MUSCLES

Warm-ups: word games, puzzles

Get immersed in the domain: go visit the toy shop, or the bicycle shop, phone shop etc...

Props: Bring some examples of the technology to the brainstorm



GET PHYSICAL

Sketch

Make models

Act out



BRAINSTORMING RULES

DEFER JUDGEMENT

COURAGE WILD IDEAS

WILD ON THE IDEAS OF

ANY



BRAINSTORMING RULES

DEFER JUDGEMENT

ENCOURAGE WILD IDEAS

BUILD ON THE IDEAS OF OTHERS

STAY FOCUSED ON THE TOPIC

ONE CONVERSATION AT A TIME

BE VISUAL

GO FOR QUANTITY

JUDGEMENT

RAGE

WILD IDEAS

ON

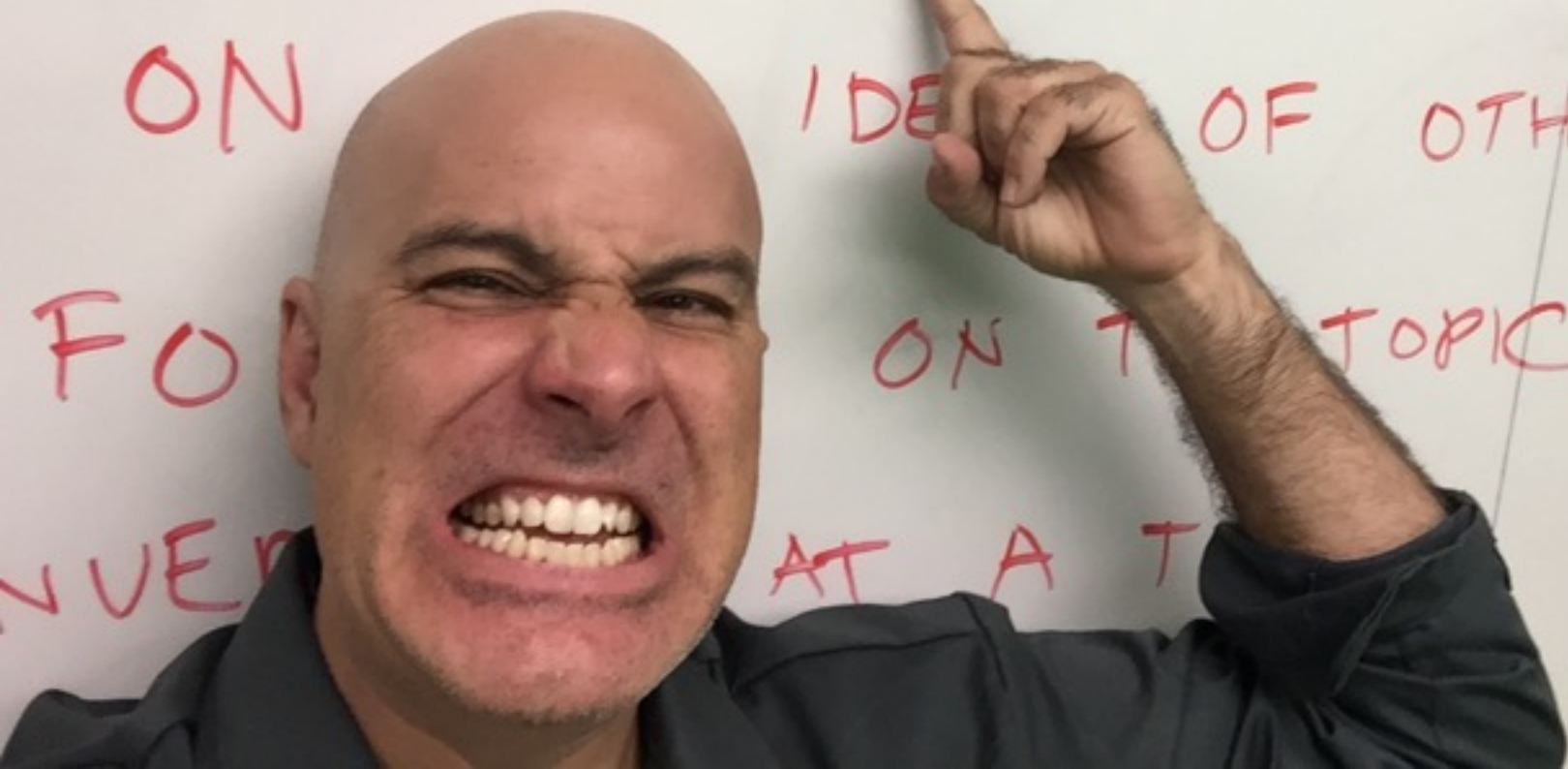
IDEA OF OTHERS

FO

ON THE TOPIC

INVER

AT A T



BRAINSTORMING RULES

DEFER JUDGEMENT

ENCOURAGE WILD IDEAS

BUILD ON THE IDEAS OF OTHERS

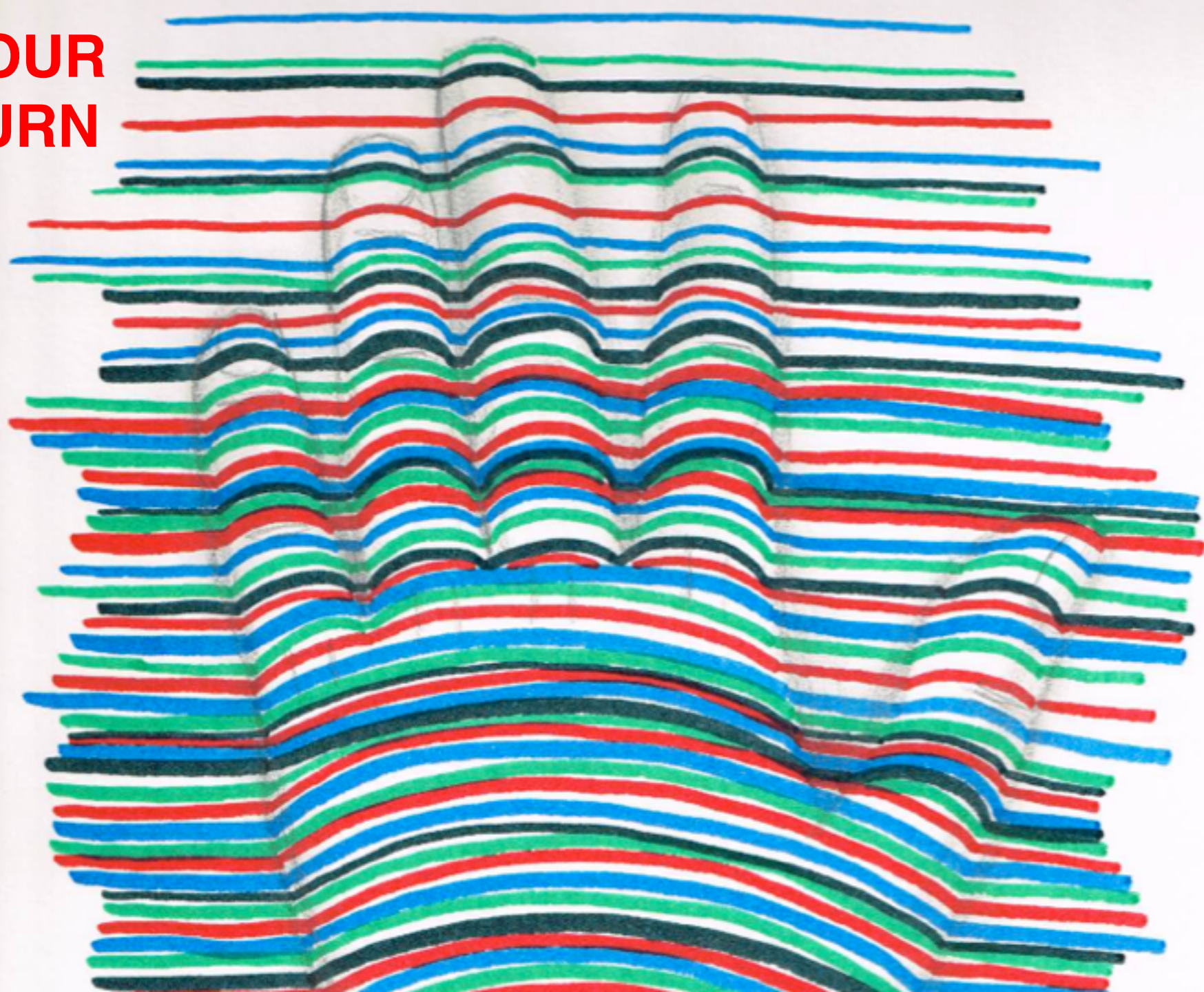
STAY FOCUSED ON THE TOPIC

ONE CONVERSATION AT A TIME

BE VISUAL

GO FOR QUANTITY

**YOUR
TURN**



FUTURE HEADLINES 10 YEARS FROM NOW







```
01001001 0011 10 1000
00101001 0010 0 1
00101001 0010 0 1
00101001 0010 010 101
00101001 0010 00 01
00101001 0010 010 101
00101001 0010 010 101
00101001 0010 010 101
00101001 0010 010 101
```

[thefacebook]

home search global social net invite faq logout

quick search go

My Profile [edit]
My Friends
My Groups
My Parties
My Messages
My Account
My Privacy

**Summer
Jewish
Adventure
New York City**



Brian Moore's Profile

Puget Sound

Picture



[Send Brian a Message](#)

[Poke Him!](#)

Connection

You are in a relationship with Brian.

Mutual Friends

You have 19 friends in common with Brian.

Access

Brian is currently logged in from a non-residential location.

Friends at Puget Sound



Kerala Hise



Jennifer
McFadden



Amy Graeber

Information

Account Info:

Name: Brian Moore
Member Since: May 21, 2005
Last Update: July 19, 2005

Basic Info:

School: Puget Sound '09
Status: Student
Sex: Male
Residence: Todd 311
Birthday: 09/02/1986
Home Town: Shorewood, WI 53211
High School: Shorewood HI '05

Contact Info:

Email: bmoore@ups.edu
Screenname: DoctaBu
Mobile: 414.702.7426
Websites: <http://www.doctabu.com>
<http://www.livejournal.com/users/doctabu>
<http://www.flickr.com/photos/doctabu>

Personal Info:

Looking For: Friendship
Interested In: Women
Relationship Status: In a Relationship with Rachel Buethe (Tiny Tykes Day Care)
Political Views: Very Liberal
Interests: Film, Graphic Design, Video Editing, Computers, Bowling, Dancing, Acting, Singing, Listening to Decent Music, Sleeping, Being Crazy
Favorite Music: Beck, The Beatles, They Might Be Giants, Phoenix, Paul Simon, OutKast, Avenue Q, Radiohead, Red Hot Chili Peppers, Steely

2005 5.5 million users



Address

Calc

Date Book

HotSync

Jot

Memo Pad

Prefs

Security

Skills

To Do List

Watch

Welcome

ABACUS



FINAL
SPORTS EXTRA

EXTRA



DAILY PRESS



Tonight
Sports Extra, News 10
Tomorrow
Sports Extra, News 10
Details, Page 2

YSL 2 NO. 2

NOV 1990 E173

**SMARTWATCH API
NOW COMPARABLE WITH
SMARTSHOE API**

Atom tests 'affected IQ'

NUCLEAR FALLOUT from the first atomic bomb test in New Mexico and, later, from tests in Nevada is directly responsible for a sharp decline in the intelligence of American youth, according to new research.

Radioactive iodine-131, which causes thyroid damage in the newborns, has impaired the mental development of a whole generation of American children. And the effects have been greatest in the far west of the United States, closest to the bomb test sites.



Bomb test sites, recorded a decline of 20 on the verbal test and 25 on the mathematical in 1974-8. Over the same period, Ohio - some 2,000 miles to the west of the test site - had a fall of the fallout clouds - had a fall of just two points on the verbal test, while maths scores rose by four points.

The effect has persisted into the 1980s. In 1982, test scores of the US as a whole rose. Eight states went against the trend. All were located in the west where iodine-131 was recorded from the first Chinese

WIFE-STEALING HORSE

By GEORGE EDWARDS
A HUSBAND gave his wife an ultimatum: "Either your horse goes, or I will."

The woman replied: "I'll never part with Fritz." Then she went out for a job.

And when she returned, her husband, Franz, had left for good.

Franz told a divorce court in Kaiserlautern, West Germany, that he gave the horse to his wife as a wedding anniversary.

"It was a bad mistake," he said.

about the animal. When she stayed all day at the stable and sometimes spent the night with Fritz.

Liesbeth no longer needed proper meals and became too fond for sex.

Franz added: "One night, while we were making love, she suddenly said: 'I forgot to give Fritz his birthday gift.'"

Franz got his divorce because of her "unpleasant

Pioneer heads for the unknown

AFTER 11 years in space, the American spacecraft Pioneer 10 will continue to leave the solar system. But when it will actually do so is far from certain and provides a nice opportunity for astronomical hair-splitting.

Last Tuesday Pioneer was as far from the sun as the so-called "outermost" planet, Pluto - a possible definition of leaving the solar system. But there is a catch. Pluto's orbit is highly eccentric and some of it

will be the last for the next 17 years. And Pioneer will not cross Neptune's orbit until June 19.

But will it cross then be out of the solar system? It will certainly not be clear of the heliosphere, the region of space affected by the million-mile-an-hour "wind" of discarded particles streaming out from the sun. The heliosphere extends to distances several times greater than Pioneer's present position. 2.8 billion miles from the sun. Further still





FINAL
SPORTS EXTRA

EXTRA



DAILY PRESS



Tonight
Sports Extra, News 50
Tomorrow
Sports Extra, News 50
Details, Page 2

Vol. 2 No. 2

NOV 2000 EXTRA

**MY.HEALTH SMARTWATCH
ALERT SYSTEM
NOW LEGALLY REQUIRED BY
ALL HEALTHCARE PROVIDERS**

Atom tests 'affected IQ'

NUCLEAR FALLOUT from the first atomic bomb test in New Mexico and, later, from tests in Nevada is directly responsible for a sharp decline in the intelligence of American youth, according to new research.



Radioactive iodine-131, which causes thyroid damage in the newborns, has impaired the mental development of a whole generation of American children. And the effects have been greatest in the far west of the United States, closest to the bomb test sites.

The effect has persisted into the 1980s. In 1982, test scores of the US as a whole were eight times lower than the trend. All were located in the west where iodine-131 was recorded from the first Chilean bomb test sites.

WIFE-STEALING HORSE

By GEORGE EDWARDS
A HUSBAND gave his wife an ultimatum: "Either your horse goes, or I will."

The woman replied: "I'll never part with Fritz." Then she went out for a school.

And when she returned, her husband, Franz, had left for good.

Franz told a divorce court in Kaiserstein, West Germany, that he gave the horse to his wife as a wedding anniversary.

"It was a bad mistake," he said.

about the school. When she replied all day at the school and sometimes spent the night with Fritz.

Likewise, the judge asked proper meals and became too tired for sex.

Franz said his divorce because of her "unpleasant."

Pioneer heads for the unknown

AFTER 11 years in space, the American spacecraft Pioneer 10 will continue because the Soviet-made object to leave the solar system. But when it will actually do so is far from certain and provides a nice opportunity for astronomical hair-splitting.

Last Tuesday Pioneer was as far from the sun as the so-called "outermost" planet, Pluto - a possible definition of leaving the solar system. But there is a catch: Pluto's orbit is highly eccentric and some of it

will be the last for the next 17 years. And Pioneer will not cross Neptune's orbit until June 19.

But will it cross them be out of the solar system? It will certainly not be clear of the heliosphere, the region of space affected by the million-mile-per-hour "wind" of electrified particles streaming out from the sun. The heliosphere extends to distances several times greater than Pioneer's present position, 1.8 billion miles from the sun. Further still





FINAL
SPORTS EXTRA

EXTRA



DAILY PRESS



Tonight
Sports Extra, Page 10
Tomorrow
Sports Extra, Page 10
Sports, Page 10

Vol. 1 No. 1

NOV 1990 EXTRA

TEENAGER BUSTED BY HER OWN SMARTWATCH FOR UNDERAGE DRINKING

Atom tests 'affected IQ'

NUCLEAR FALLOUT from the first atomic bomb test in New Mexico and, later, from tests in Nevada is directly responsible for a sharp decline in the intelligence of American youth, according to new research.

Radioactive Iodine-131, which causes thyroid damage in the newborn, has impaired the mental development of a whole generation of American children. And the effects have been greatest in the far west of the United States, closest to the bomb test sites.



bomb test area, recorded a decline of 10 on the verbal test and 15 on the mathematical in 1974-6. Over the same period, Ohio - some 2,000 miles to the west of the test site and south of the fallout clouds - had a fall of just two points on the verbal test, while maths scores rose by four points.

The effect has persisted into the 1980s. In 1982, test scores Eight states west against the trend. All were located in the west where iodine-131 was recorded from the first Chinese

WIFE-STEALING HORSE

By GEORGE EDWARDS
A HUSBAND gave his wife an ultimatum: "Either your horse goes, or I will."

The woman replied: "I'll never part with Fritz." Then she went out for a job.

And when she returned, her husband, Franz, had left for good.

Franz told a divorce court in Kaiserlautern, West Germany, that he gave the horse to his wife Elisabeth for their first wedding anniversary.

"It was a bad mistake," he said.

about the animal. When she stayed all day at the stable and sometimes spent the night with Fritz.

Elisabeth no longer needed proper meals and became too fond for sex.

Franz added: "One night, while we were making love, she suddenly said: 'I forgot to give Fritz his birthday gift.'"

Franz got his divorce because of her "unpleasant

Pioneer heads for the unknown

AFTER 11 years in space, the American spacecraft Pioneer 10 will continue because the five-man-made object is leaving the solar system. But when it will actually do so is far from certain and provides a nice opportunity for astronomical hair-splitting.

Last Tuesday Pioneer was as far from the sun as the so-called "outermost" planet, Pluto - a possible definition of leaving the solar system. But there is a catch. Pluto's orbit is highly eccentric and some of it

will be the last for the next 17 years. And Pioneer will not cross Neptune's orbit until June 19.

But will it cross then be out of the solar system? It will certainly not be clear of the heliosphere, the region of space affected by the million-mile-an-hour "wind" of electrified particles streaming out from the sun. The heliosphere extends to distances several times greater than Pioneer's present position. 1.8 billion miles from the sun. Further still





FINAL
SPORTS EXTRA

EXTRA



DAILY PRESS



Tomorrow: Sports Extra, News 10
Friday: Sports Extra, News 10
Saturday: Sports Extra, News 10
Sunday: Sports Extra, News 10

Vol. 2 No. 2

NOV 1990 EXTRA

**DRIVE.ME SMARTWATCH APP
REQUIRED FOR CALIFORNIA
DRIVERS LICENSES STARTING IN 2025**

Atom tests 'affected IQ'

NUCLEAR FALLOUT from the first atomic bomb test in New Mexico and, later, from tests in Nevada is directly responsible for a sharp decline in the intelligence of American youth, according to new research.

Radioactive iodine-131, which causes thyroid damage in the newborns, has impaired the mental development of a whole generation of American children. And the effects have been greatest in the far west of the United States, closest to the bomb test sites.



bomb test area, recorded a decline of 25 on the verbal test and 25 on the mathematical in 1974-6. Over the same period, Ohio - some 2,000 miles to the west of the test site - had a fall of just two points on the verbal test, while maths scores rose by four points.

The effect has persisted into the 1980s. In 1982, test scores, eight states west against the trend. All were located in the west where iodine-131 was recorded from the first Chinese

WIFE-STEALING HORSE

By GEORGE EDWARDS
A HUSBAND gave his wife an ultimatum: "Either your horse goes, or I will."

The woman replied: "I'll never part with Fritz." Then she went out for a job.

And when she returned, her husband, Franz, had left for good.

Franz told a divorce court in Kaiserlautern, West Germany, that he gave the horse to his wife as a wedding anniversary.

"It was a bad mistake," he said.

about the subject. When she replied all day at the court and sometimes spend the night with Fritz."

Liesbeth, no longer needed proper meals and became too tired for sex.

Franz added: "One night, when we were making love, she suddenly said 'I forgot to give Fritz his birthday gift'."

Franz got his divorce because of her "unpleasant."

Pioneer heads for the unknown

AFTER 11 years in space, the American spacecraft Pioneer 10 will certainly become the first man-made object to leave the solar system. But when it will actually do so is far from certain and provides a nice opportunity for astronomical hair-splitting.

Last Tuesday Pioneer was as far from the sun as the so-called "outermost" planet, Pluto - a possible definition of leaving the solar system. But there is a catch. Pluto's orbit is highly eccentric and some of it

will be the last for the next 17 years. And Pioneer will not cross Neptune's orbit until June 19.

But will it cross them be out of the solar system? It will certainly not be clear of the heliosphere, the region of space affected by the million-mile-per-hour "wind" of electrical particles streaming out from the sun. The heliosphere extends to distances several times greater than Pioneer's present position, 2.8 billion miles from the sun. Further still





FINAL
SPORTS EXTRA

EXTRA



DAILY PRESS



Tonight
Sports Extra, Page 10
Tomorrow
Sports Extra, Page 10
Sports, Page 10

Vol. 2 No. 1

NOV 1990 EXTRA

**COOK.ALERT SMARTWATCH APP
REQUIRED BY ALL RESTAURANTS TO
COMPLY WITH NEW FOOD ALLERGY LAW**

Atom tests 'affected IQ'

NUCLEAR FALLOUT from the first atomic bomb test in New Mexico and, later, from tests in Nevada is directly responsible for a sharp decline in the intelligence of American youth, according to new research.

Radioactive iodine-131, which causes thyroid damage in the newborn, has impaired the mental development of a whole generation of American children. And the effects have been greatest in the far west of the United States, closest to the bomb test sites.



Bomb test sites, recorded a decline of 20 on the verbal test and 25 on the mathematical in 1974-8. Over the same period, Ohio - some 2,000 miles to the west of the test site - had a fall of just two points on the verbal test, while muscle scores rose by four points.

The effect has persisted into the 1980s. In 1982, test scores of eight states west against the trend. All were located in the west where iodine-131 was recorded from the first Chilean

WIFE-STEALING HORSE

By GEORGE EDWARDS
A HUSBAND gave his wife an ultimatum: "Either your horse goes, or I will."

The woman replied: "I'll never part with Fritz." Then she went out for a school.

And when she returned, her husband, Franz, had left for good.

Franz told a divorce court in Kaiserstein, West Germany, that he gave the horse to his wife Lisa for their first wedding anniversary.

"It was a bad mistake," he said.

about the school. When she stayed all day at the school and sometimes spent the night with Fritz.

Lisa said she no longer needed proper meals and became too tired for sex.

Franz added: "One night, while we were making love, she suddenly said: 'I have to give Fritz his anniversary gift.'"

Franz got his divorce because of her "unpleasant

Pioneer heads for the unknown

AFTER 11 years in space, the American spacecraft Pioneer 10 will continue because the five-man-made object is leaving the solar system. But when it will actually do so is far from certain and provides a nice opportunity for astronomical hair-splitting.

Last Tuesday Pioneer was as far from the sun as the so-called "outermost" planet, Pluto - a possible definition of leaving the solar system. But there is a catch. Pluto's orbit is highly eccentric and some of it

will be the last for the next 17 years. And Pioneer will not cross Neptune's orbit until June 19.

But will it cross then be out of the solar system? It will certainly not be clear of the heliosphere, the region of space affected by the million-mile-per-hour "wind" of charged particles streaming out from the sun. The heliosphere extends to distances several times greater than Pioneer's present position, 2.8 billion miles from the sun. Further still





FINAL
SPORTS EXTRA

EXTRA

DAILY PRESS



TODAY
Sports extra, page 2B

CONGRESSIONAL
News, page 1B

Details, Page 3

NOV 1986 5:15



Atom tests 'affected IQ'

NUCLEAR FALLOUT from the first atomic bomb test in New Mexico and later from tests in Nevada is directly responsible for a sharp decline in the intelligence of American youth, according to new research.

Radiation, which causes physical damage to the embryo, has impaired the mental development of a whole generation of American children. And the effects have been present in the far west of the United States, closest to the bomb test sites.



Those who were exposed to fallout of 30 or the highest level of 175 or the maximum level of 17544. Over the same period, one of the very low and worst of the fallout levels - had a fall of just two points on the verbal test, which made little sense by four years.

The effect has persisted since the 1950s. In 1962, two scores of 100 as a whole score. Eight years later, against the trend, "All were locked in the west where fallout [1] was recorded from the New Chinese nuclear test and fallout studies."

WIFE-STEALING HORSE

By GEORGE EDWARDS
A HUSBAND gave his wife an ultimatum: "Either your horse goes, or I will."

The woman replied: "I'll never part with Fritz." Then she went out for a picnic.

And when she returned, her husband, Fritz, had been taken.

about the husband. Fritz was taken all day at the county and something went the night with Fritz.

Livestock the neighbor cooked proper meals and became the first for sale.

Fritz had a divorce suit in California, West Germany, that he took the Fritz to his wife. Livestock for their food meeting anniversary.

"It was a bad mistake," he said.

Pioneer heads for the unknown

AFTER 11 years in space, the American spacecraft Pioneer 10 will certainly become the first man-made object to leave the solar system. But when it will actually do so is far from certain and provides a rare opportunity for astronomers to speculate.

Last Tuesday Pioneer was as far from the sun as the so-called "outermost" planet, Pluto - a possible definition of leaving the solar system. But there is a catch: Pluto's orbit is highly eccentric and some of it



Find your group
Introduce each other
Each group writes 5+ headlines on large sticky pads
(20 min)

GROUP 01 — 24
310 JACOBS

GROUP 25 — 31
210 JACOBS

GROUP 32 — 38
220 JACOBS