

# WHAT SHOULD THE PURPOSE OF SCHOOL BE AND WHAT OUTCOMES DO WE WANT FOR OUR STUDENTS?

MARCH 28, 2019

BOSTON

## WHAT SHOULD THE PURPOSE OF SCHOOL BE?

- We're going to think together about what the purpose of school should be. Finish this sentence:

The purpose of school should be to \_\_\_\_\_.

*What did you notice about people's purposes? Any similarities or differences jump out to you?*



## RATIONALE : WHY ARE WE HAVING THIS CONVERSATION?

- Our changing world – we need to explore how things are changing and how the changes impact the needs of our students.
- In the next 5 years, all of our schools will be newly designed to support ways of teaching and learning that match our changing world and meet the future needs of our students.
- We believe that participating in the METCO program and being a student in a diverse community leads to the development of critical competencies and skills that are essential for young people to thrive today and as adults in the future. We believe naming these skills, traits, or competencies is a crucial first step in creating a map to achieve these outcomes.
- We want to ask you the question: what do you think the skills, traits, or competencies are that children in the Lincoln Public Schools should gain as a result of learning in a METCO district?

# WHAT COMMUNITIES ARE PART OF THE LINCOLN PUBLIC SCHOOLS?

- Boston residents through METCO program
- Hanscom Air Force Base (all branches of military)
- Lincoln residents
  
- Students
- Families
- Educators and Staff
- Community members

# TODAY'S GOALS AND INVITATIONS FOR MINDSET

## GOALS

- We'll think about what traits/skills/knowledge you believe are essential for our students to thrive in the 21<sup>st</sup> century.
- We'll create artifacts of your thinking so that your voice and perspective is a part of our larger work to create a Profile of a Learner for our district.

## MINDSET

- **Jump in** -- it's group swim, not individual competition in any way
- **Share** your self, experiences, perspective -- even if it makes you feel a bit vulnerable
- **Step up and step back** -- be cognizant of how much air time you and your group-mates take
- **Try on ideas freely** -- car shopping, not buying
- **Embrace curiosity** to understand others -- everyone has an internal logic and sees the world differently
- **Be willing to be provoked** -- it might take you someplace interesting



# THE FUTURE

# THE FUTURE



What are the positive possibilities that technology could bring?

What worries you?

What are the implications for the skills, traits, or knowledge that you hope students have to mitigate your worries?

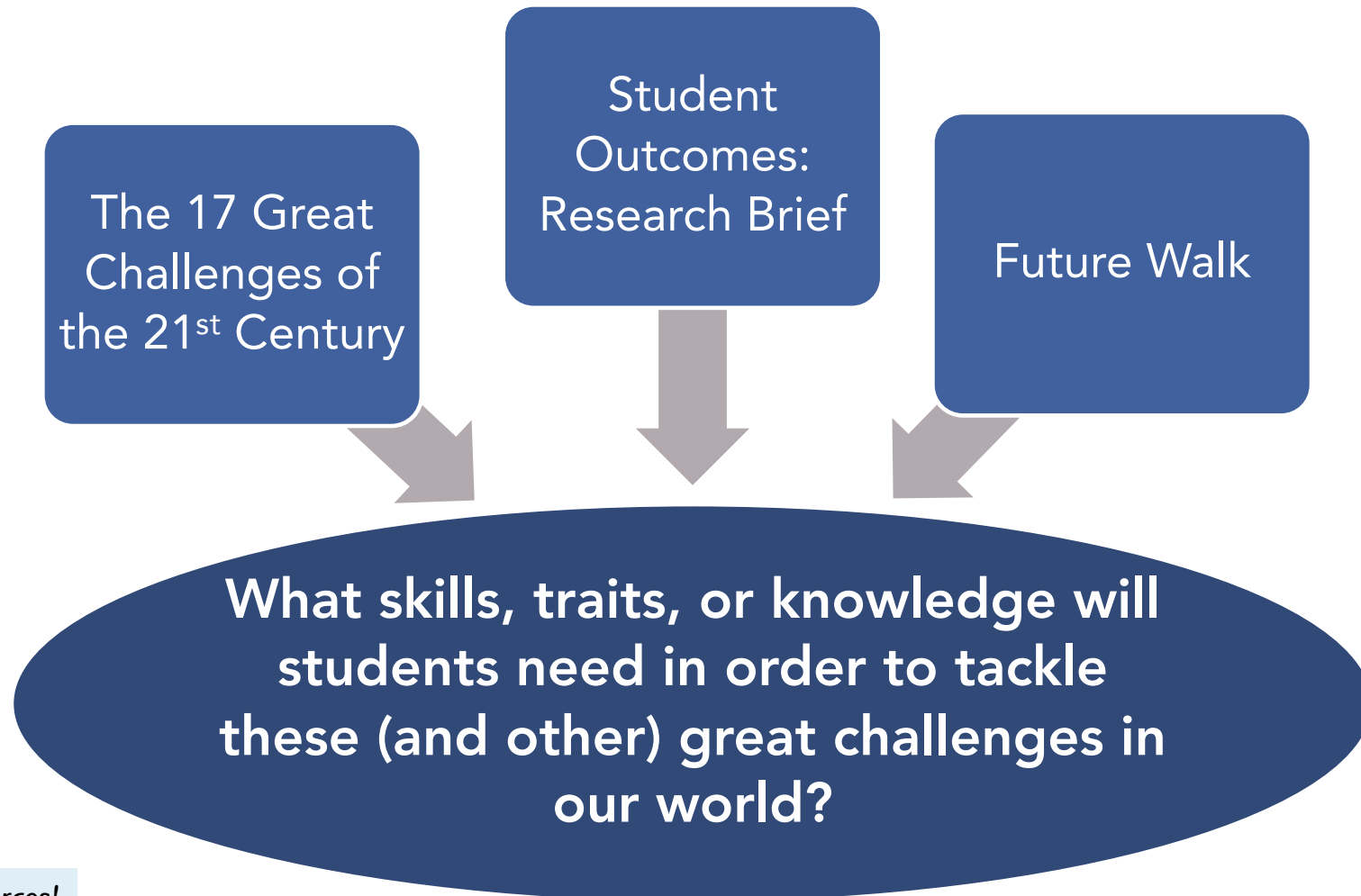
# WHAT WILL FUTURE JOBS LOOK LIKE?



“My biggest worry is that we’re creating a world where we’re going to have glittering technologies embedded in kind of a shabby society and supported by an economy that generates inequality instead of opportunity.”

--Andrew McAfee


# FUTURE CHALLENGES, FUTURE NEEDS



# 17 GREAT CHALLENGES OF THE 21<sup>ST</sup> CENTURY: JAMES MARTIN

1. Saving the Earth
2. Reversing Poverty
3. Steadying Population Growth
4. Achieving Sustainable Lifestyles
5. Preventing All-Out War
6. Dealing Effectively with Globalism
7. Protecting the Biosphere
8. Defusing Terrorism
9. Cultivating Creativity
10. Conquering Disease
11. Expanding Human Potential
12. The Singularity
13. Confronting Existential Risk
14. Exploring Transhumanism
15. Planning an Advanced Civilization
16. Modeling the Planet's Systems
17. Bridging the Skill and Wisdom Gap

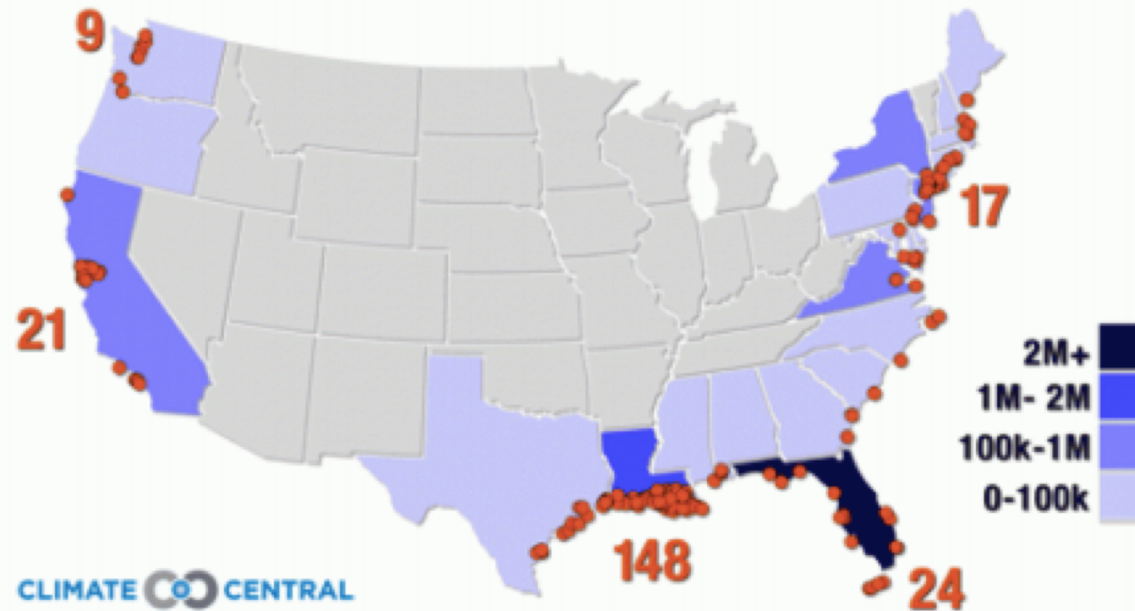




# **Climate Change on pace to occur 10 times faster than any change recorded in past 65 million years, Stanford Scientists say.**

Not only is the planet undergoing one of the largest climate changes in the past 65 million years, Stanford climate scientists Noah Diffenbaugh and Chris Field report that it's on pace to occur at a rate 10 times faster than any change in that period. Without intervention, this extreme pace could lead to a 5-6 degree Celsius spike in annual temperature by the end of the century. - Bjorn Carey, Stanford report, August 1, 2003

## Population below 4 ft: 4.9M Energy facilities below 4 ft: 287



The nearest term sea level projections I will share in inches may sound small, but they are dangerous. The key problem is that rising seas raise the launch pad for coastal storm surges, and tilt the odds toward disaster. Just a few extra inches could mean the difference to flood a family's basement - or New York City's subway system, disabling it for months. You might think of it this way: Raising the floor of a basketball court

would mean a lot more dunks. In the long term, we are likely to see many feet of sea level rise, and be forced to redraw the map of the United States. The high end productions for this century would be enough to turn Miami Dade County, Florida into a collection of islands. But in the near term, we will mainly experience sea level rise as more and more coastal floods, reach higher and higher - From 2012 US Senate Testimonial

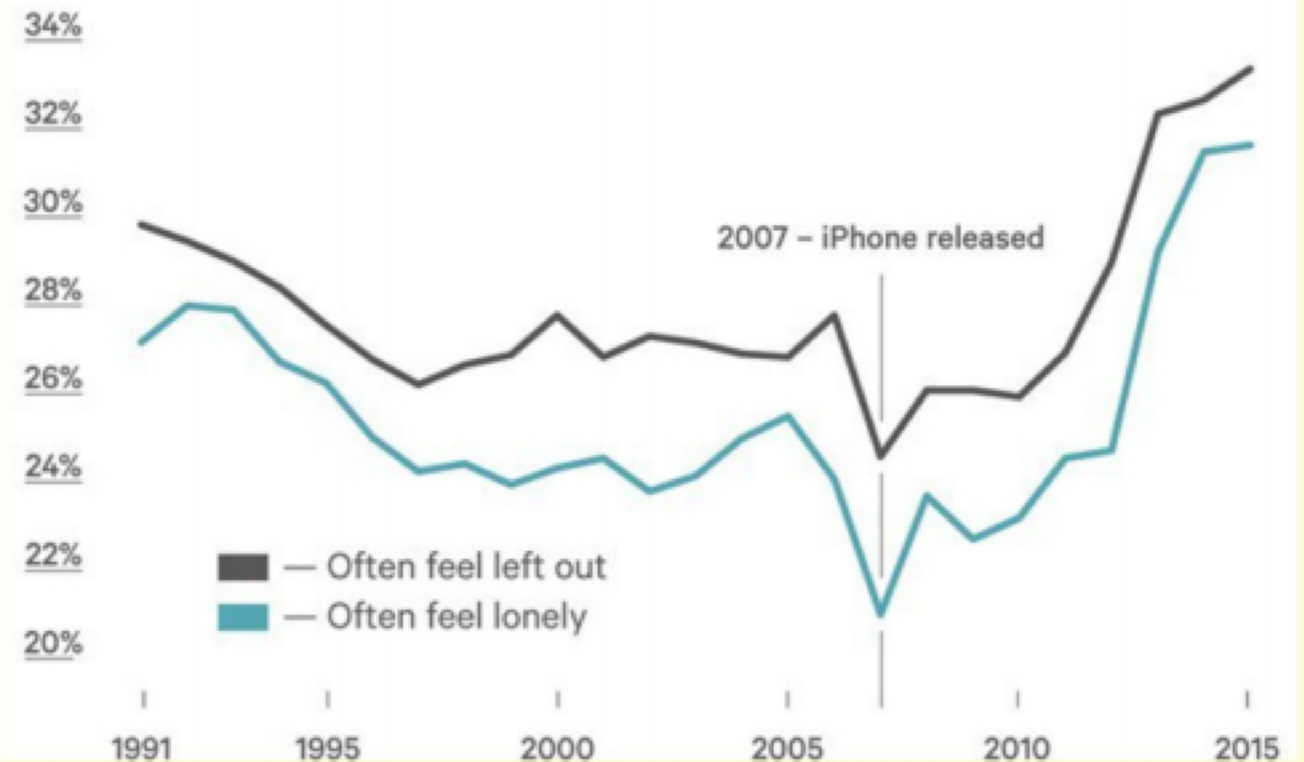


"There's not a single exception. All screen activities are linked to less happiness, and all nonscreen activities are linked to more happiness. Eighth-graders who spend 10 or more hours a week on social media are 56 percent more likely to say they're unhappy than those who devote less time to social media. Admittedly, 10 hours a week is a lot. But those who spend six to nine hours a week on social media are still 47 percent more likely to say they are unhappy than those who use social media even less."

From "Has the Smartphone Destroyed a Generation?"

## More Likely to Feel Lonely

Percentage of 8th-, 10th-, and 12th-graders who agree or mostly agree with the statement "I often feel left out of things" or "A lot of times I feel lonely"



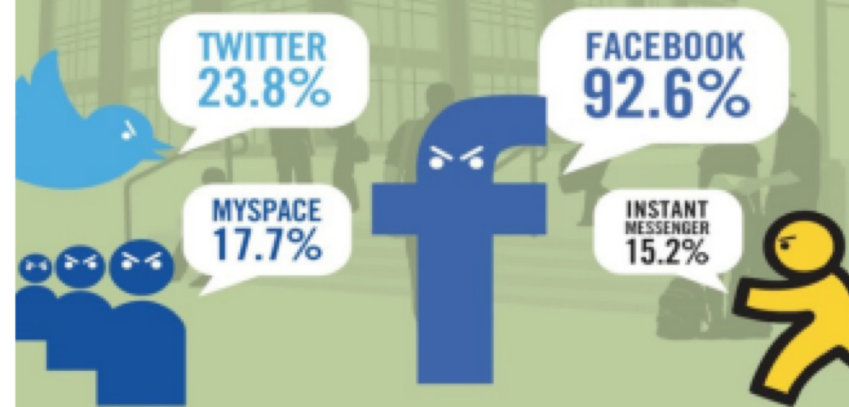
## BACK TO SCHOOL. TODAY'S TECHNOLOGY OPENS UP NEW RISKS

Back to school time is also a time when kids have to prepare to re-enter the intense social world they probably tuned out during the summer. As summer ends, parents should take the time to review the dangers of cyberbullying with them.

# CYBERBULLYING

SOCIAL MEDIA BECOMES THE NEW SCHOOL YARD FOR BULLIES

Teens say cruel behavior takes place on...



## WHEN BEING BULLIED

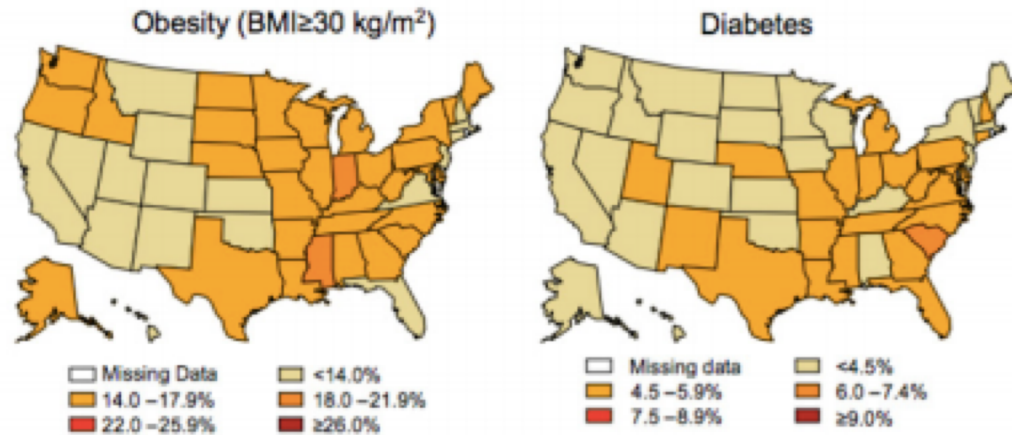


## PARENTS REMAIN OBLIVIOUS



## Age-Adjusted Prevalence of Obesity and Diagnosed Diabetes Among US Adults

1994

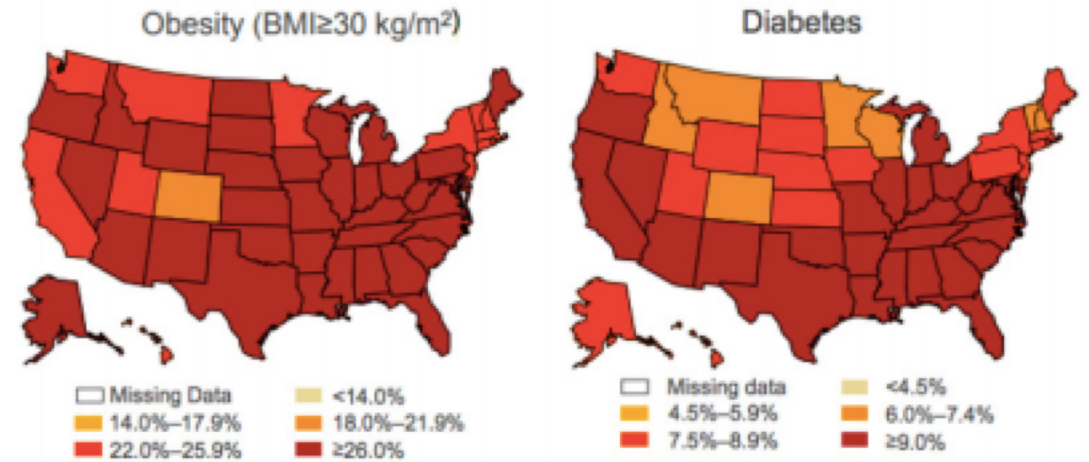


CDC's Division of Diabetes Translation, United States Diabetes Surveillance System available at <http://www.cdc.gov/diabetes/data>



## Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

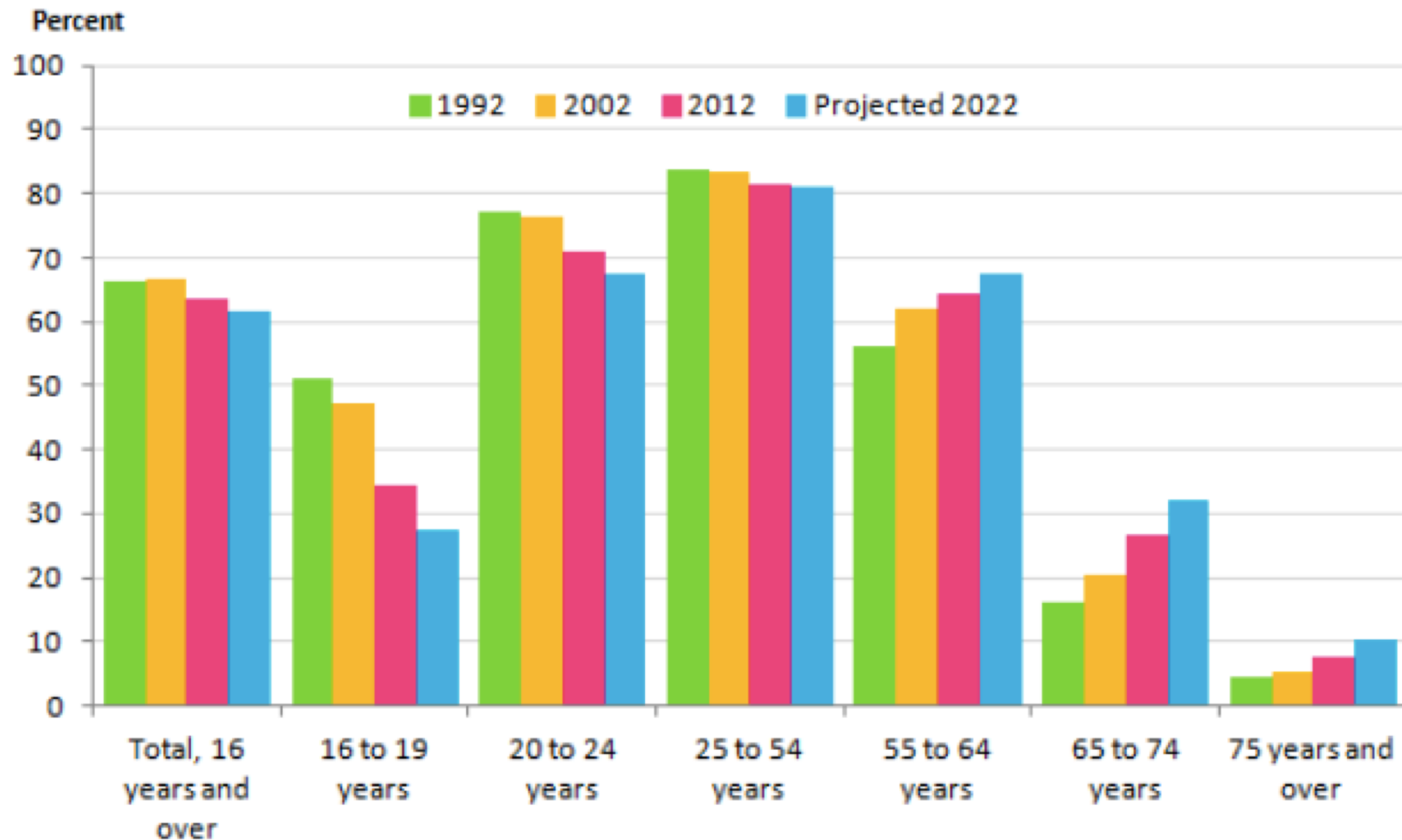
2015



CDC's Division of Diabetes Translation, United States Diabetes Surveillance System available at <http://www.cdc.gov/diabetes/data>



## Labor force participation rates in 1992, 2002, 2012, and projected 2022, by age



Source: U.S. Bureau of Labor Statistics.



Now we wear a FitBit and other devices that measure easily quantifiable data, but the future belongs to digestible and wearable sensors that can work like a thin e-skin. Biometric tattoos such as VivaLNK's eSkin Tattoo can transmit medical information discreetly. RFID or Radio Frequency Identification chips can be implanted under the skin and serve as an identification device.

These sensors will measure all important health parameters and vital signs from temperature, and blood biomarkers to neurological symptoms...sending alerts to medical systems when a stroke is happening real time. It will call the ambulance itself and sends all the related data immediately.



## **Fast Company talked to three futurists to find out what the hot jobs of 2025 could be, and here are some of their answers:**

PERSONAL WORKER BRAND COACHES AND MANAGERS - the fact that more and more employees are working "on demand" will result in an increased need for individuals to brand themselves to set them apart from the competition

FREELANCE PROFESSORS - as teaching moves into the on-demand realm.

URBAN FARMERS - We may see the return of local farming due to the number of people living in urban areas and the increasing awareness of the detrimental environmental impacts of industrial farming.

END-OF-LIFE PLANNER - By 2025, the World Health Organization predicts that 63% of the global population will live to over the age of 65—some well past their centenary

VIRTUAL REALITY EXPERIENCE DESIGNER - people who can design the best VR experiences will be in huge demand



## Catalogue of fears Economist.com

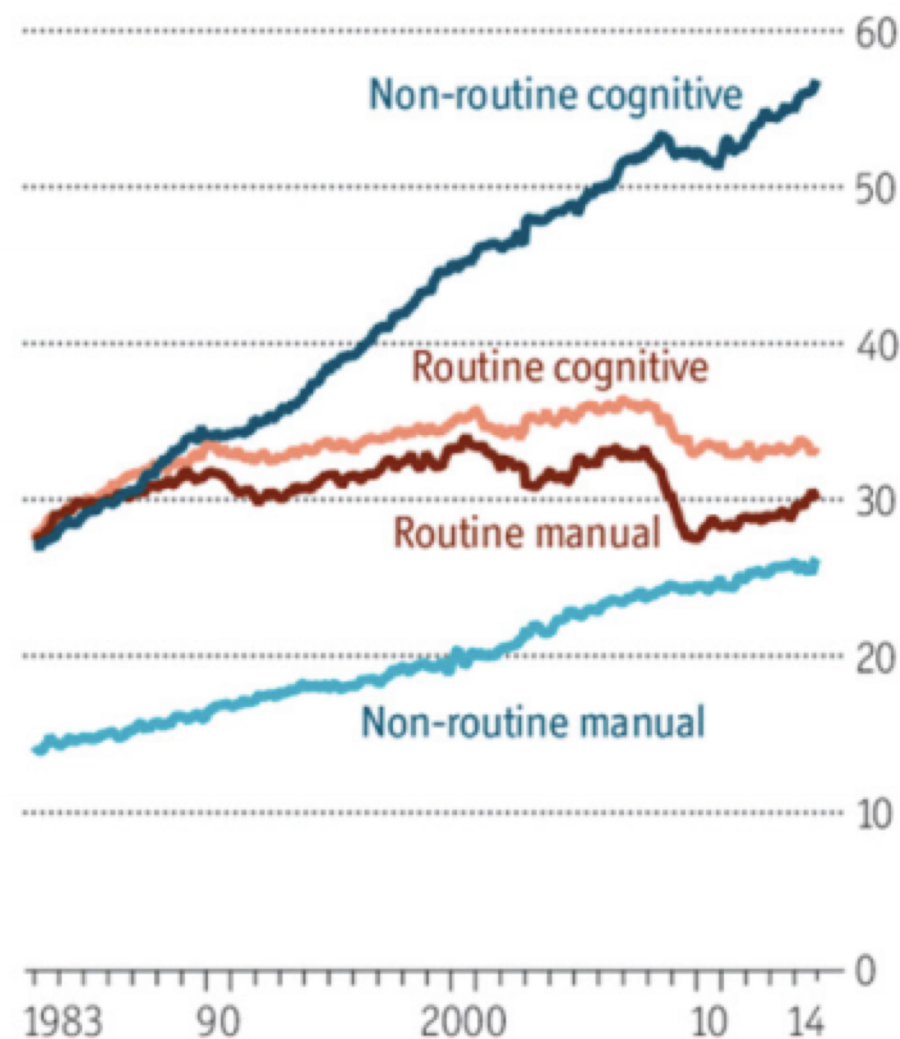
Probability of computerisation of different occupations, 2013  
(1 = certain)

| Job                         | Probability |
|-----------------------------|-------------|
| Recreational therapists     | 0.003       |
| Dentists                    | 0.004       |
| Athletic trainers           | 0.007       |
| Clergy                      | 0.008       |
| Chemical engineers          | 0.02        |
| Editors                     | 0.06        |
| Firefighters                | 0.17        |
| Actors                      | 0.37        |
| Health technologists        | 0.40        |
| Economists                  | 0.43        |
| Commercial pilots           | 0.55        |
| Machinists                  | 0.65        |
| Word processors and typists | 0.81        |
| Real-estate sales agents    | 0.86        |
| Technical writers           | 0.89        |
| Retail salespeople          | 0.92        |
| Accountants and auditors    | 0.94        |
| Telemarketers               | 0.99        |

Source: "The Future of Employment: How Susceptible are Jobs to Computerisation?", by C. Frey and M. Osborne (2013)

## Think

United States employment, by type of work, m



Sources: US Population Survey; Federal Reserve Bank of St. Louis



Financial Advising: Investment advisors will be replaced by “robo-advisors” using big data to understand markets and advise.



Medicine: There were only 1,000 robot-assisted surgeries performed in 2000. By 2014, that number was 570,000 — and it will continue to grow.



Service Industries: Robots currently can clean floors (Roomba) and serve drinks (the Robot above, Carl, is bartender in Germany). Many high-repetition tasks are on the docket.









At the Whitney, a protest against Dana Schutz' painting of Emmett Till: "She has nothing to say to the Black community about Black trauma."



This protest at the Whitney Biennial was in response to a white woman's painting of Emmett Till

# How is the **world's wealth** shared amongst its population?

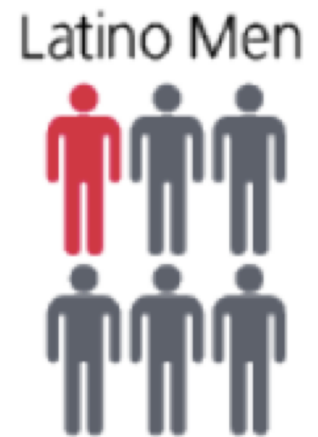
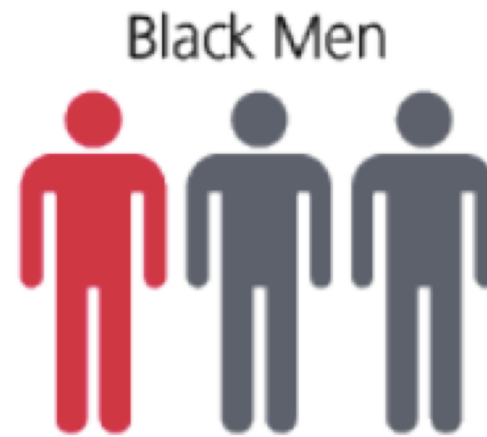
 % of the world's population     % of the world's wealth



\*Wealth\* is defined as the marketable value of financial assets plus non-financial assets (principally housing and land) owned by an adult, less debts  
Source: Global Wealth Report 2015, Zurich: Credit Suisse

Wealth (USD)

## Likelihood of Imprisonment in the U.S., 2001





# SOCIAL MEDIA and Unrest in #Egypt

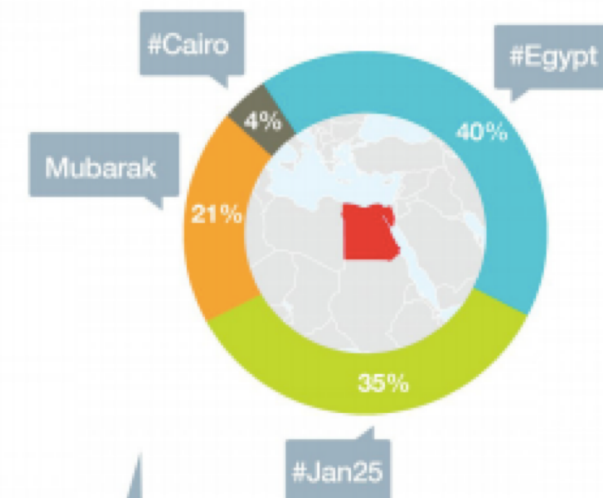


## SAMPLE TWEETS

- @wafoula**  
I managed to access #twitter from #Egypt via #HootSuite #Jan25
- @HootSuiteMan**  
If u can't log to twitter u can use HootSuite website its working for twitter and Facebook and more #Jan25 #Egypt
- @BarackObama**  
About to speak about the situation in Egypt. Watch live at 6:00pm ET. <http://vln.gov/live>.
- @HootSuite**  
They are ripping up banners to use as bandages. #Egypt
- @AlMansourTV**  
الوزير : اتكلم بلسان الشعب المصري. وان لم يكن بلسان الشعب المصريين المتحررين. #Jan25 #Egypt
- http://www.bbc.co.uk/1/health/2011/01/110125\_egypt\_unrest.shtml The army was ordered to use force against the people #Jan25 #Egypt*

## TRENDING HASHTAG VOLUME

Worldwide



## EGYPTIAN MESSAGE VOLUME via HootSuite

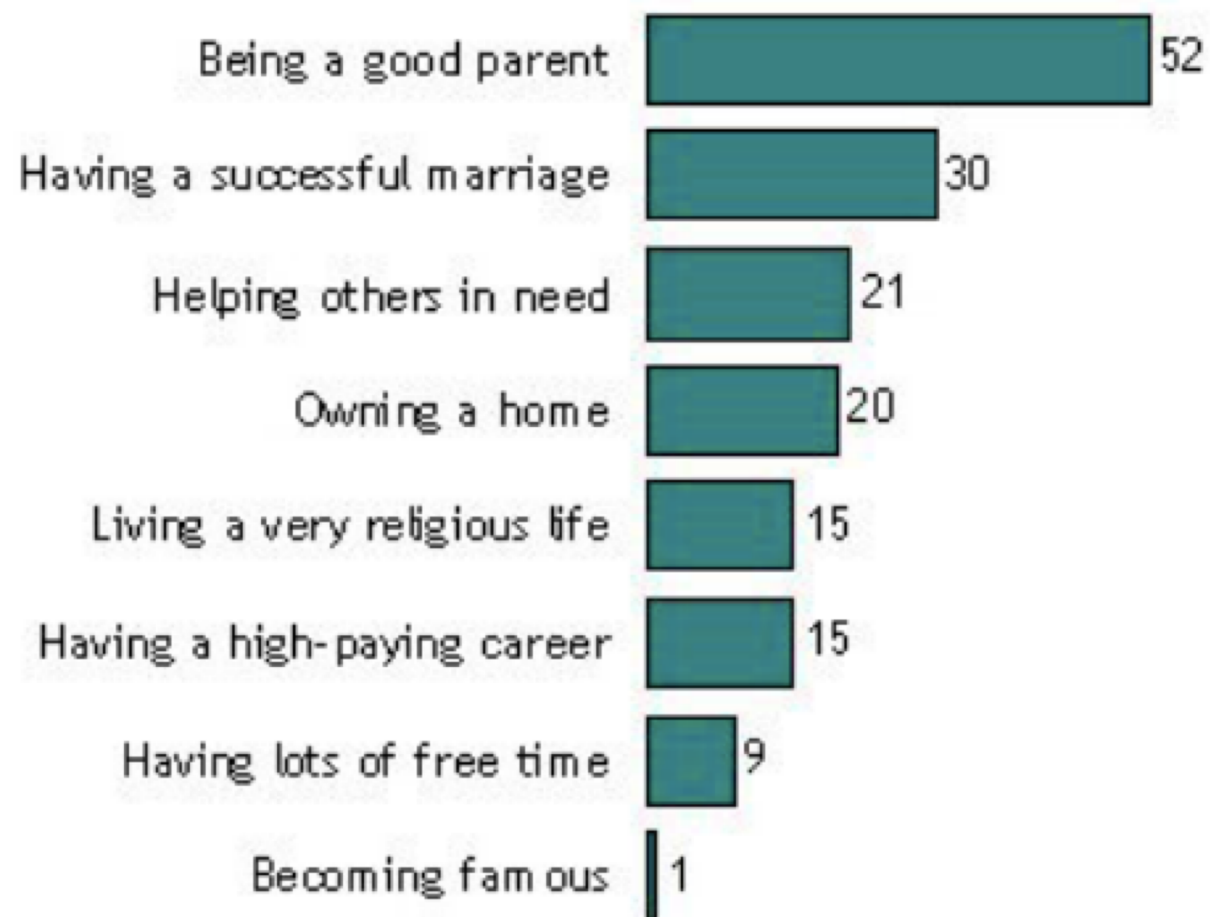


## EGYPTIAN User Registration



## Millennials' Priorities

% saying ... is one of the most important things in their lives



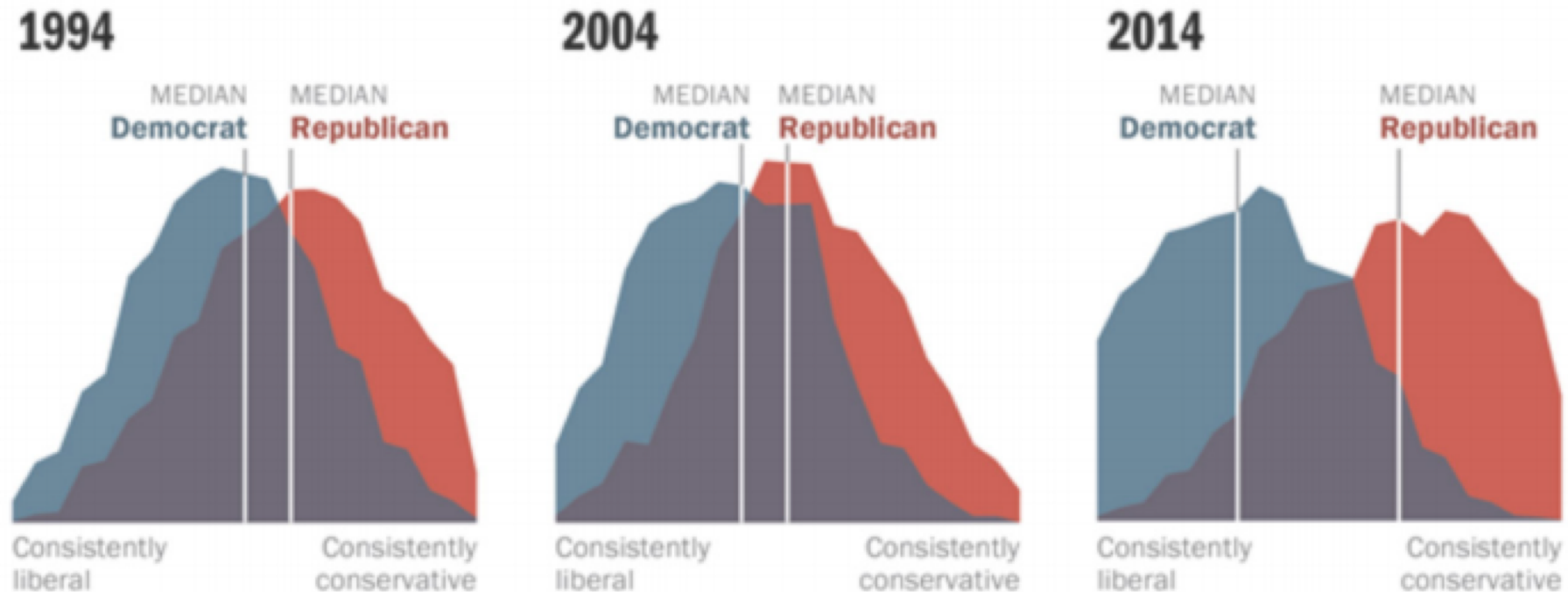
Note: Based on adults ages 18-29.



# Democrats and Republicans More Ideologically Divided than in the Past

## Democrats and Republicans More Ideologically Divided than in the Past

*Distribution of Democrats and Republicans on a 10-item scale of political values*

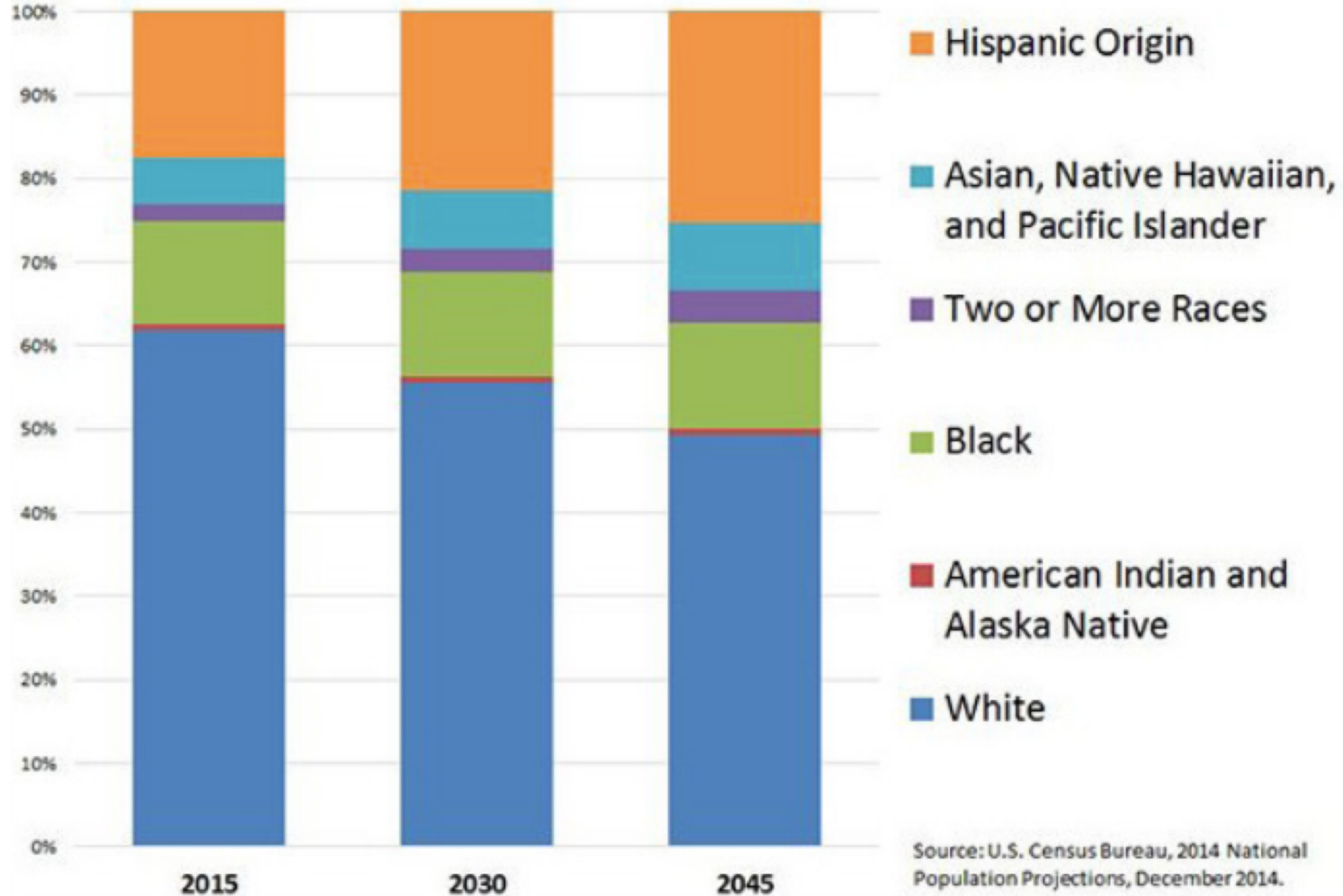


Source: 2014 Political Polarization in the American Public

Notes: Ideological consistency based on a scale of 10 political values questions (see Appendix A). The blue area in this chart represents the ideological distribution of Democrats; the red area of Republicans. The overlap of these two distributions is shaded purple. Republicans include Republican-leaning independents; Democrats include Democratic-leaning independents (see Appendix B).

PEW RESEARCH CENTER

## U.S. Population Will Become Increasingly Diverse







# POTENTIAL IMPLICATIONS FOR STUDENT OUTCOMES

| Domain                            | Key Takeaways   | Potential Implications for Student Outcomes   |
|-----------------------------------|---|---|
| Labor Market                      | <ul style="list-style-type: none"> <li>“The globalizing economy and technological change... place an increasing premium on a more highly skilled labor force.” (<a href="#">source</a>)</li> <li>Wage growth hit 2.6%, the highest it has been since the Great Recession—with jobs in technology, healthcare, and financial sectors seeing the highest growth. (<a href="#">source</a>)</li> <li>In 2015, there were “approximately 530,000 new business owners each month during the year.” (<a href="#">source</a>)</li> </ul>  | Adaptable, fast learner, continuous learner, tech-savvy, leader, entrepreneur, advocate, interdisciplinary, self-directed, analytical thinker, knows how to stand out and leverage strengths, resourceful |
| Environment and Natural Resources | <ul style="list-style-type: none"> <li>“In the developing world, 80 percent of water usage goes into agriculture, a proportion that is not sustainable.” (<a href="#">source</a>)</li> <li>“Sustained global economic growth, along with population increases, will drive a nearly 50 percent increase in the demand for energy over the next 15 years.” (<a href="#">source</a>)</li> <li>“An increasing number of cities will face the serious air and water quality problems that already are troubling in such urban centers such as Mexico City, Sao Paulo, Lagos, and Beijing.” (<a href="#">source</a>)</li> </ul> | Solutions-oriented, aware of environmental issues and their implications, innovative, environmentally responsible, resourceful  |
| Future Conflict                   | <ul style="list-style-type: none"> <li>Worldwide displacement hit an all-time record high in 2015: 65.3 million people forcibly displaced due to conflict, persecution, generalized violence, or human rights violations. (<a href="#">source</a>)</li> <li>“[T]errorist tactics will become increasingly sophisticated and designed to achieve mass casualties.” (<a href="#">source</a>)</li> <li>Over the next 15 years, the international system will adjust to changing power relationships in key regions: China, Russia, Japan, and India. (<a href="#">source</a>)</li> </ul>                                     | Politically aware, responsible consumer of information, strong communicator, open-minded, empathetic, perceptive, innovative, solutions-oriented, critical thinker, cross-cultural skills, collaboration  |



# THE PURPOSE OF SCHOOL

## TAKE A STAND

- STRONGLY AGREE
- SOMEWHAT AGREE
- SOMEWHAT DISAGREE
- STRONGLY DISAGREE

# PROVOCATIONS

---

STUDENTS SHOULD  
LEARN CURSIVE  
HANDWRITING.

---

ALL STUDENTS  
SHOULD LEARN ABOUT  
AMERICAN SLAVERY  
BEFORE HIGH SCHOOL.



---

THERE ARE FACTS OR  
KNOWLEDGE THAT EVERY  
STUDENT NEEDS TO KNOW  
(MEMORIZED/HAVE AT THE  
TIP OF THEIR TONGUE).

---

CONTENT IS IRRELEVANT SINCE  
STUDENTS CAN LOOK UP  
ANYTHING ONLINE. INSTEAD  
WE SHOULD JUST FOCUS ON  
TEACHING HOW TO LEARN.

---

GOING TO  
COLLEGE IS  
ESSENTIAL.

---

EVERY CHILD SHOULD HAVE  
A PERSONALIZED  
EDUCATION, INCLUDING A  
PERSONALIZED  
CURRICULUM.

---

ALL OF OUR STUDENTS  
SHOULD LEAVE OUR  
SCHOOLS AS LEADERS,  
NOT FOLLOWERS.

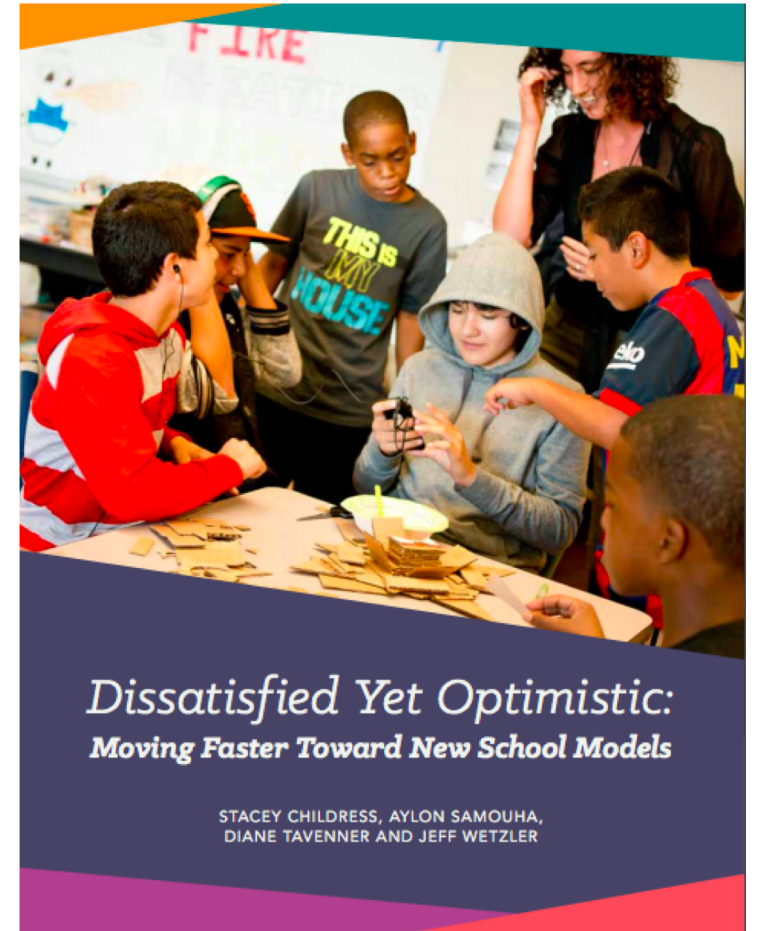
# HOW MUST SCHOOLS CHANGE?

The historical model:  
fit the individual to the  
system



The future model:  
fit the system to the  
individual

- Focus of school
- Expectations of children
- Role of students
- Delivery of instruction
- Role of educators
- Role of parents
- Nature of school community
- Technology



# WHAT SKILLS, TRAITS, OR KNOWLEDGE WILL OUR STUDENTS NEED IN ORDER TO THRIVE IN AND TRANSFORM THE 21<sup>ST</sup> CENTURY?



# GALLERY VIEWING

- Variety of portraits, visions, and frameworks from across the country
- Meant to spark ideas, not direct you to an outcome



# Vision of the Graduate

★ 2010 ★  
**ESTABLISHED**







# Katherine Smith School

DESIGNED FOR THE 21ST CENTURY LEARNER



## THINK

critically. Ask questions and use evidence to describe and support claims. Be flexible and innovative to design solutions to complex problems. Reflect and critique ideas.



## LEARN

continuously. Develop strong foundational skills to master significant content. Make mistakes. Build on knowledge and apply to new situations.



## WORK

intentionally. Be persistent and self-directed. Manage impulsivity and set goals. Strive for accuracy and apply effort to continuously improve. Take risks and create beautiful work.



## COMMUNICATE

effectively. Speak and write with clarity. Listen actively. Know your audience, understand the purpose, and choose precise language. If appropriate, incorporate media to enhance ideas.



## COLLABORATE

constructively. Take responsibility for yourself and your team. Listen with empathy and understanding with a commitment to shared success. Give and receive feedback.



## CONTRIBUTE

globally. Apply your work to real world situations to serve an authentic purpose. Be kind to others and empowered to make a difference. Recognize your place in the community.

THE 21<sup>ST</sup> CENTURY

# MOUNT VERNON MIND

## CREATIVE THINKER

- Challenges assumptions
- Suspends judgement
- Imagines, improvises, and adapts as new challenges and opportunities arise

## INNOVATOR

- Explores and experiments in a climate of change
- Builds resilience through risk-taking and setbacks
- Creates unique ideas/products with value and meaning

## COLLABORATOR

- Builds strong partnerships within a diverse team
- Teaches, coaches, and leads others by example
- Accepts feedback, implements decisions, and shares the credit

## SOLUTION SEEKER

- Formulates meaningful questions
- Inquires, evaluates, synthesizes, and discerns cross-disciplinary knowledge and perspectives
- Sets goals, develops a plan of action, and tests solutions







## ETHICAL DECISION-MAKER

- Exhibits integrity, honesty, empathy, fairness, and respect
- Demonstrates personal, social, and civic responsibility
- Develops understanding of emerging ethical issues regarding new technologies

## COMMUNICATOR

- Listens attentively, speaks effectively, and writes clearly
- Understands and expresses ideas with a variety of audiences, media, and formats
- Cultivates interpersonal skills



| <br>Learner  | <br>Communicator  | <br>Collaborator  | <br>Critical Thinker  | <br>Innovator  | <br>Advocate   |
|---|--|--|--|---|---|
| <ul style="list-style-type: none"> <li>• Be academically literate. (Reading, Writing, Math, Science and Social Studies)</li> <li>• Be self-directed.</li> <li>• Perseveres in difficult tasks and to overcome academic and personal barriers to meet goals.</li> <li>• Uses time and resources wisely to set goals, complete tasks, and manage projects.</li> <li>• Communicates effectively to make meaningful connections.</li> <li>• Demonstrates empathy, compassion, and respect for others.</li> <li>• Acts responsibly and ethically to build trust and lead.</li> </ul> | <ul style="list-style-type: none"> <li>• Respectfully <b>relates</b> to others on an emotional level in order to integrate multiple perspectives.</li> <li>• Employs <b>active listening</b> strategies to advance understanding.</li> <li>• <b>Speaks</b> in a purposeful manner to inform, influence, motivate, or entertain listeners.</li> <li>• Incorporates effective <b>writing skills</b> for various purposes and audiences to convey understanding and concepts.</li> <li>• Uses <b>technological skills</b> and contemporary digital tools to explore and exchange ideas.</li> <li>• <b>Expresses</b> thoughts, ideas, and emotions meaningfully and creatively.</li> </ul> | <ul style="list-style-type: none"> <li>• Respects divergent thinking to engage others in thoughtful discussion.</li> <li>• Demonstrates the ability to work interdependently within a group to promote learning, increase productivity, and achieve common goals.</li> <li>• Analyzes and constructs arguments and positions to ensure examination of a full range of viewpoints.</li> <li>• Seeks and uses feedback from others to adapt ideas and persist in accomplishing difficult tasks.</li> <li>• Accepts feedback, implements decisions, and shares the credit.</li> </ul> | <ul style="list-style-type: none"> <li>• Demonstrates open-ended thought to enhance the design/build process.</li> <li>• Evaluates ideas and information sources for validity, relevance, and impact.</li> <li>• Reasons through and weighs evidence to reach conclusions.</li> <li>• Challenges assumptions.</li> <li>• Has the ability to suspend judgements.</li> <li>• Applies skills to acquire knowledge and broaden perspectives.</li> <li>• Constructs arguments.</li> </ul> | <ul style="list-style-type: none"> <li>• Engages in problem solving, inquiry, and design of innovative solutions to overcome obstacles to improve outcomes.</li> <li>• Builds resilience through risk-taking and setbacks.</li> <li>• Creates new ideas/products with value and meaning.</li> <li>• Demonstrates open-ended and innovative thought to enhance the design/build process.</li> <li>• Uses information in novel and creative ways to strengthen comprehension and deepen awareness.</li> </ul> | <ul style="list-style-type: none"> <li>• Creates inclusive conditions for all.</li> <li>• Engages in healthy and positive practices to promote physical and mental well-being.</li> <li>• Voices the value of diversity and the interdependence of all people.</li> <li>• Engages in reflection for self-improvement and advocacy.</li> <li>• Acknowledges, understands, and takes action when considering local, national, and world issues.</li> <li>• Contributes to solutions that benefit the community.</li> <li>• Promotes environmental stewardship.</li> </ul> |



# CENTRAL NEW MEXICO GRADUATE PROFILE

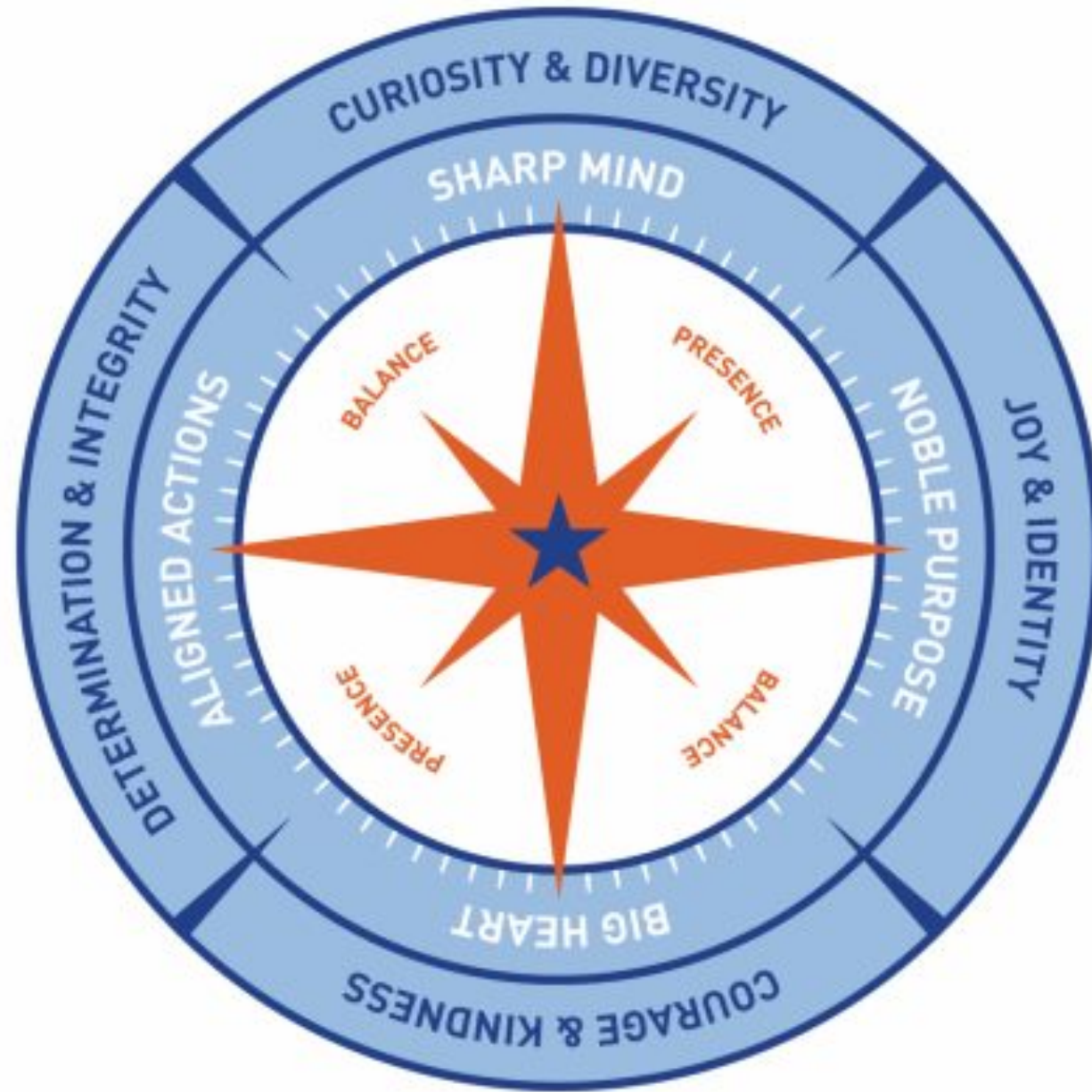




# PROFILE OF A RAMSEY GRADUATE







## CREATE OUR OWN

Sketch out an idea.

No pressure for it to be polished – we're just getting ideas down!

Please put your name on the back.

## WHAT'S NEXT

- All faculty
- Students
- Families
- Community members
- Data
- Replicate an experience like today with others
- Collect ideas, synthesize, share out, gather feedback, revise
- Finalize and use as the driver for our “how” work moving forward

## WHAT ADULTS CAN LEARN FROM KIDS

- Listening to students
- Trusting young people
- Reciprocal learning
- Supporting kids as leaders



“The goal is not to turn kids into your kind of adult but better adults than you have been...No matter your position or place in life it is imperative to create opportunities for children so that we can grow up to blow you away.”

--Adora Svitak