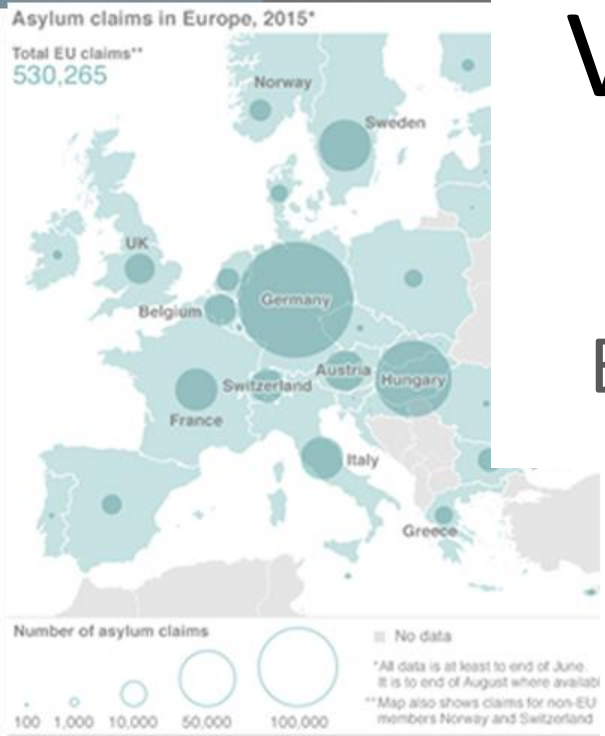
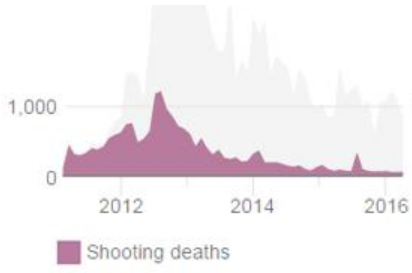
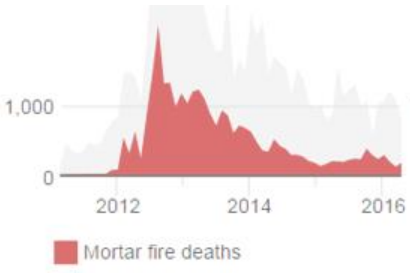
Visualising data

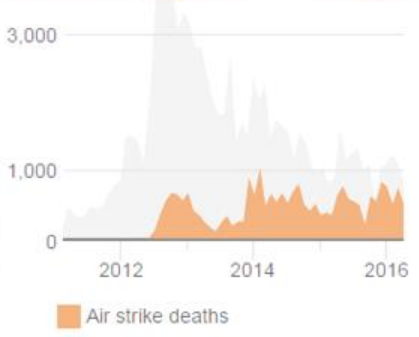
Christine Jeavans

BBC Visual Journalism







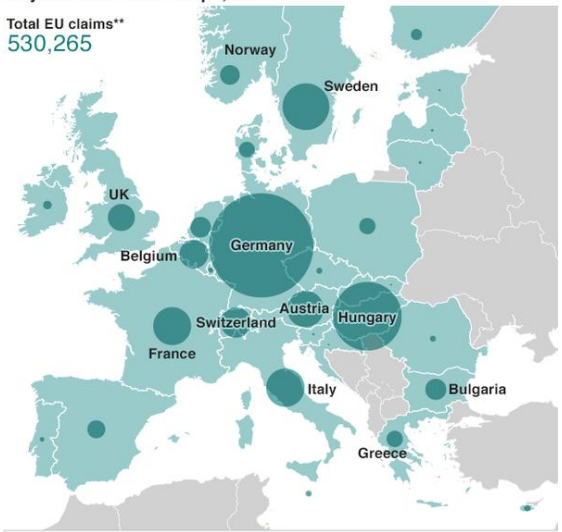


The price of food

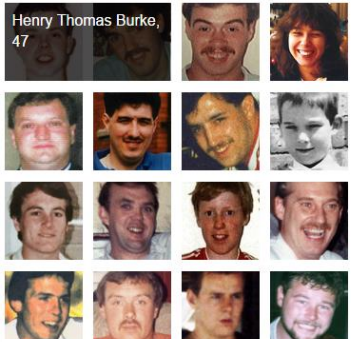
Percentage change — pre-war to 2016

Location	Bread	Milk	Rice
Deir al-Zour	+6,500%	+20,000%	+2,800%
Eastern Ghouta	+3,900%	+20,000%	+1,500%
Regime-held areas	+230%	+500%	+200-250%

Asylum claims in Europe, 2015*



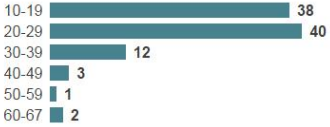
Source: Eurostat BBC



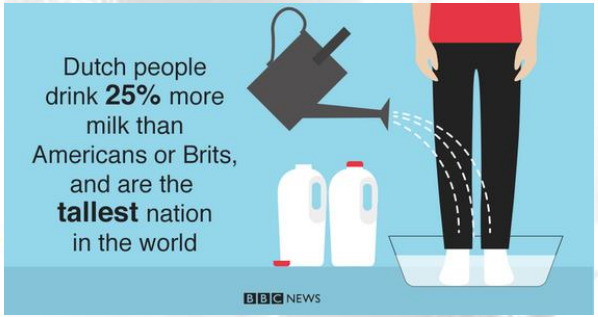
victim.

About the victims

Age group



Total victims 96 Males 89 Females 7

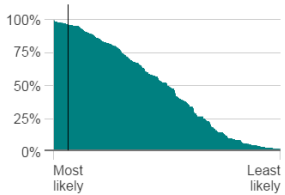


Receptionists

Likelihood of automation?
It's quite likely (96%)

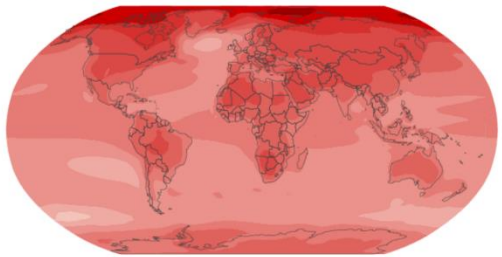
How this compares with other jobs:

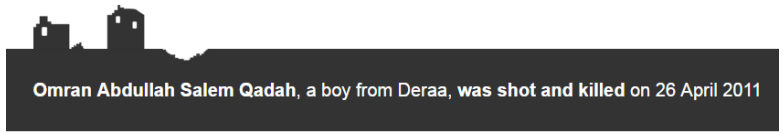
22nd of 366



Share my result

If greenhouse gas emissions continue to rise throughout the 21st century (RCP8.5)

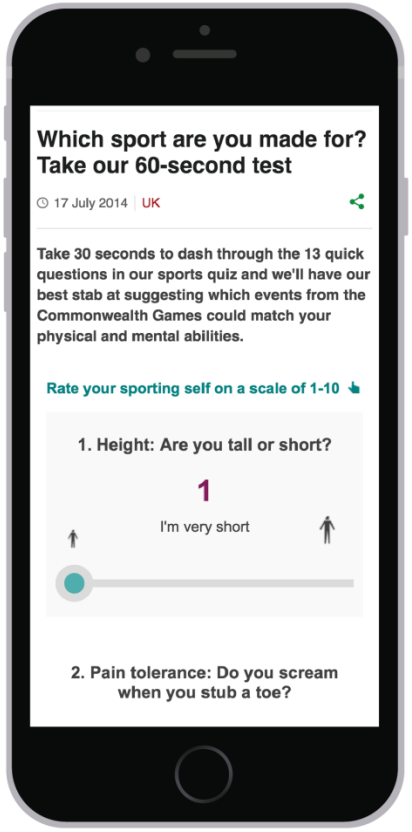




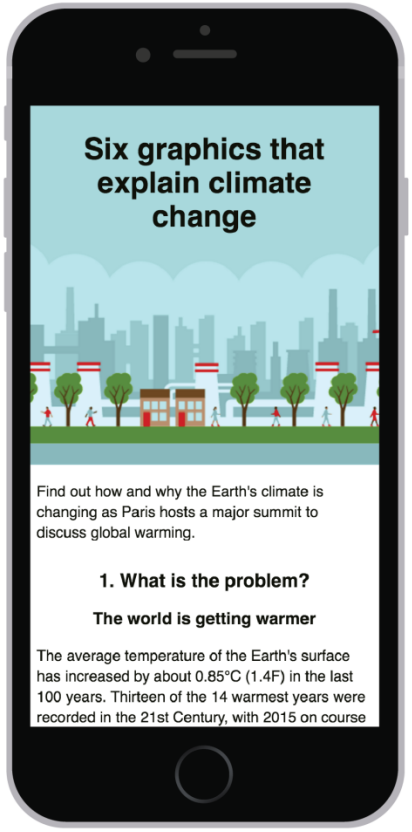
To see the names of all the children killed would take

over 19 hours

Who is your Olympic body match?
Enter your details below to find your Rio 2016 body match from our database of more than 10,000 athletes taking part in the Games
Height
Weight
cm ft/in
kg st/lb lb
Date of birth
DD
MM
YYYY
Match with athletes who are
Female
Male
Find your match


Which sport are you made for? Take our 60-second test
17 July 2014
UK
Take 30 seconds to dash through the 13 quick questions in our sports quiz and we'll have our best stab at suggesting which events from the Commonwealth Games could match your physical and mental abilities.
Rate your sporting self on a scale of 1-10
1. Height: Are you tall or short?
1
I'm very short
2. Pain tolerance: Do you scream when you stub a toe?

Search for state
Close Map
Size shows electoral votes per state
Clinton
Trump
Not yet called
Why are Electoral votes important?


Six graphics that explain climate change
Find out how and why the Earth's climate is changing as Paris hosts a major summit to discuss global warming.
1. What is the problem?
The world is getting warmer
The average temperature of the Earth's surface has increased by about 0.85°C (1.4F) in the last 100 years. Thirteen of the 14 warmest years were recorded in the 21st Century, with 2015 on course

Why do we visualise data?

"to affect through the eyes what we fail to convey to the public through their word-proof ears."

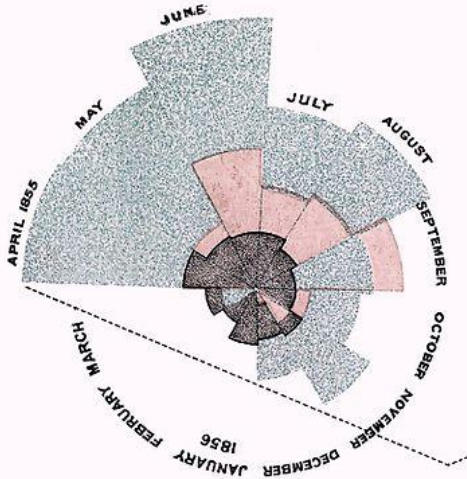
Florence Nightingale,
nurse and statistical pioneer
1820-1910

Crimean War 1853-56

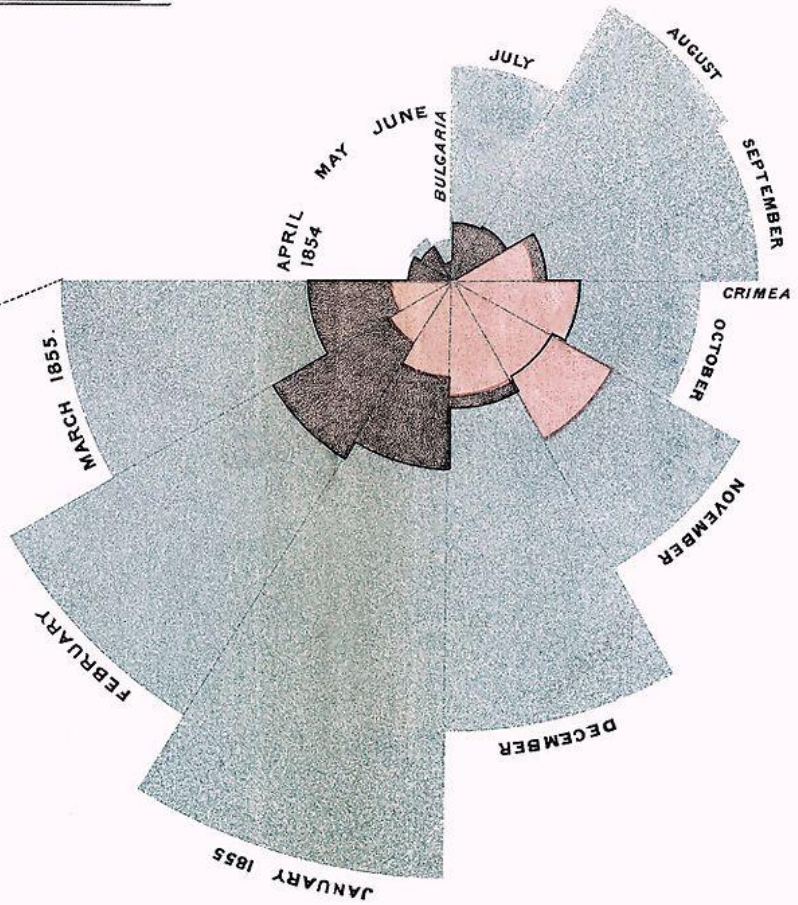
Florence Nightingale

DIAGRAM of the CAUSES of MORTALITY IN THE ARMY IN THE EAST.

2.
APRIL 1855 to MARCH 1856.



1.
APRIL 1854 to MARCH 1855.



The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.

The blue wedges measured from the centre of the circle represent area for area the deaths from Preventible or Mitigable Zymotic diseases, the red wedges measured from the centre the deaths from wounds, & the black wedges measured from the centre the deaths from all other causes.

The black line across the red triangle in Nov.r 1854 marks the boundary of the deaths from all other causes during the month.

In October 1854, & April 1855, the black area coincides with the red; in January & February 1856, the blue coincides with the black.

The entire areas may be compared by following the blue, the red & the black lines enclosing them.

What can we learn?

- Be relevant – know your audience
- Tell the story
- Visually interesting
- Data = people
- Be relevant – on a personal level

BEING RELEVANT:

DEEPER UNDERSTANDING OF BIG STORIES

24 June 2016

Brexit – the data story

EU REFERENDUM

Results

Share

UK votes to **LEAVE** the EU

Leave
51.9%
17,410,742 VOTES

Remain
48.1%
16,141,241 VOTES

0 results left to declare

LEAVE | UK votes to **LEAVE** the EU

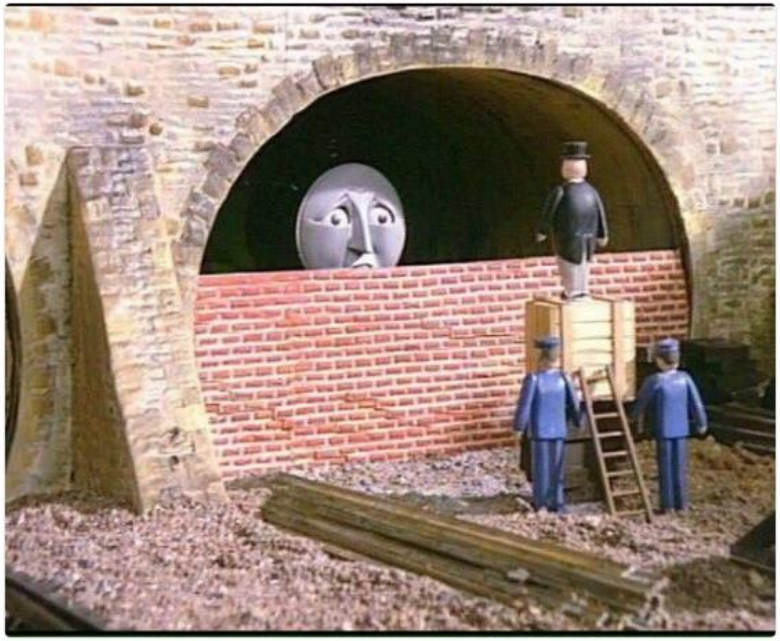
Electorate	46,501,241
Turnout	72.2%
Rejected ballots	26,033

How results are calculated

John Myers
@johnmyersteam

Follow

Live scenes from the Channel tunnel.

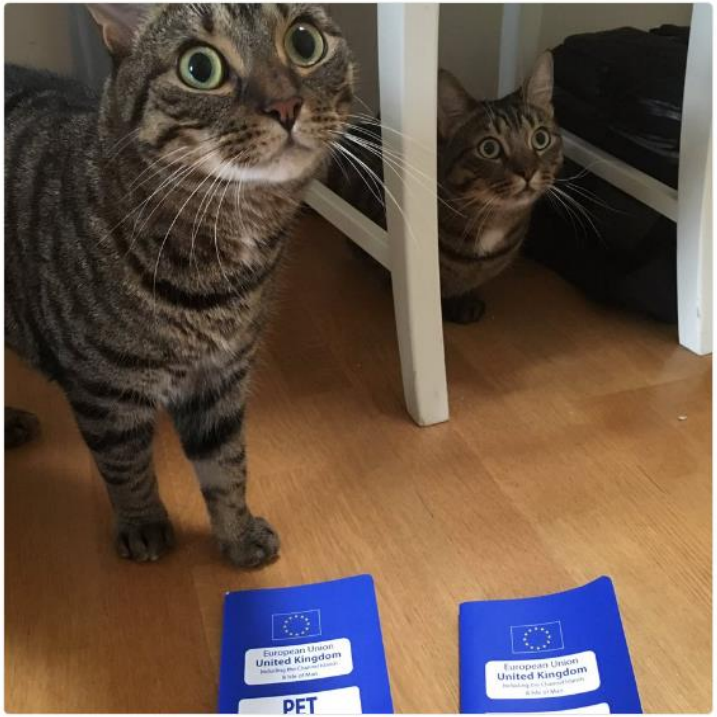


RETWEETS 9,862 LIKES 10,114

James Offer
@joffley

Following

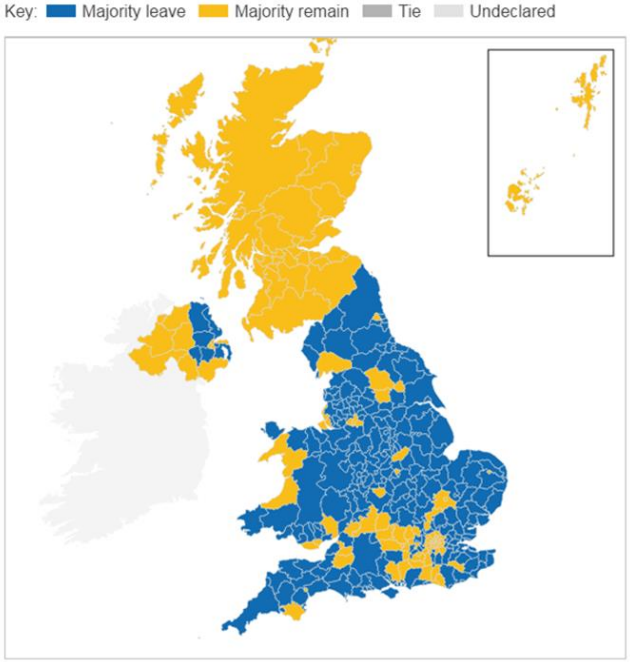
How do I tell them?? #Brexit



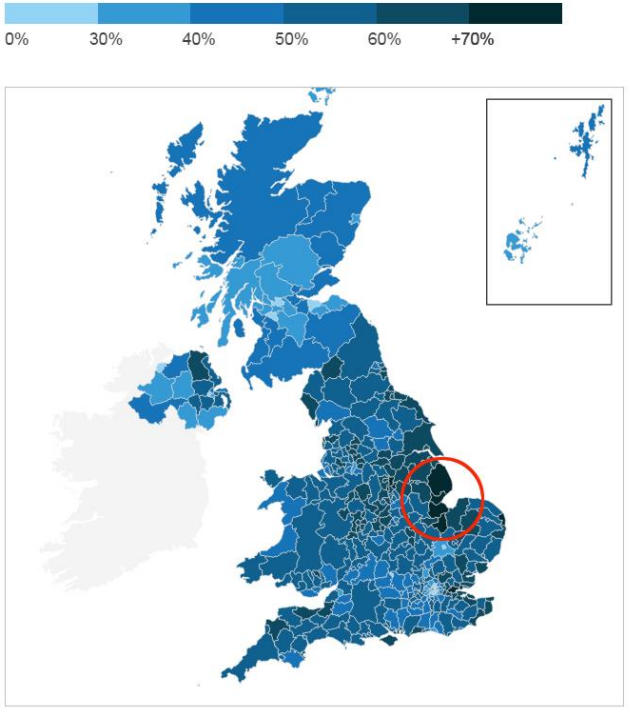
RETWEETS 47,555 LIKES 58,376

Mapping Brexit data

Main EU referendum results



Leave share of the vote



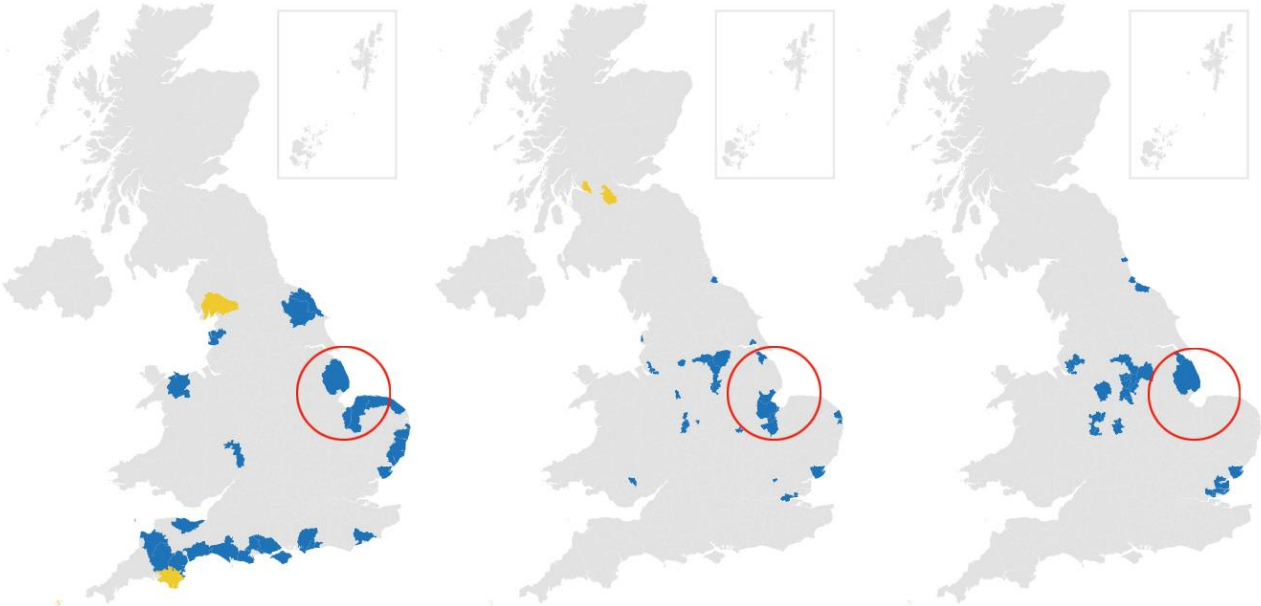
Mapping Brexit data

Of the 30 areas with the...

most elderly people,
27 voted Leave

fewest graduates,
28 voted Leave

most people identifying as English,
all 30 voted Leave



Source: Census 2011

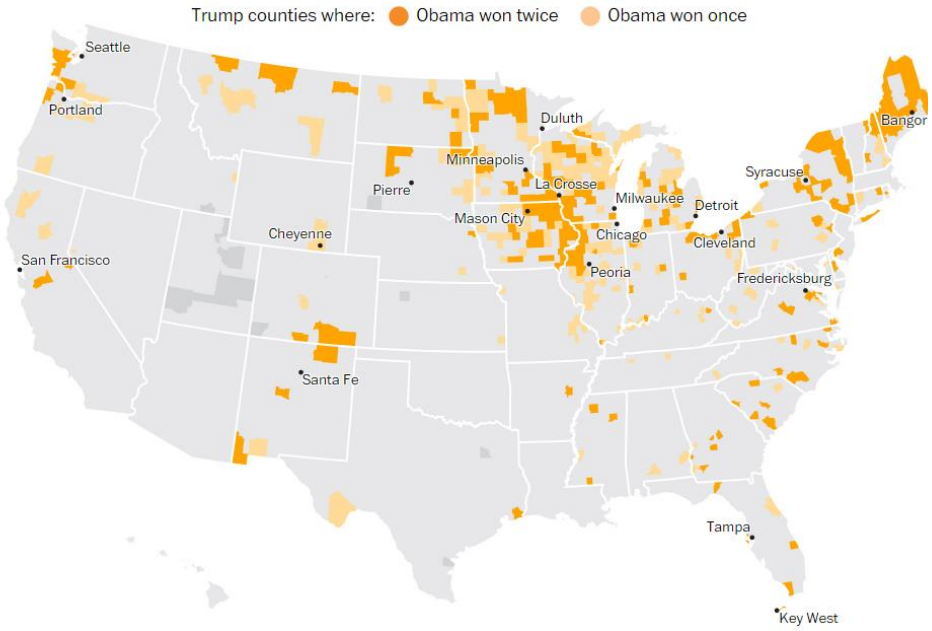
BBC

Washington Post

These former Obama strongholds sealed the election for Trump

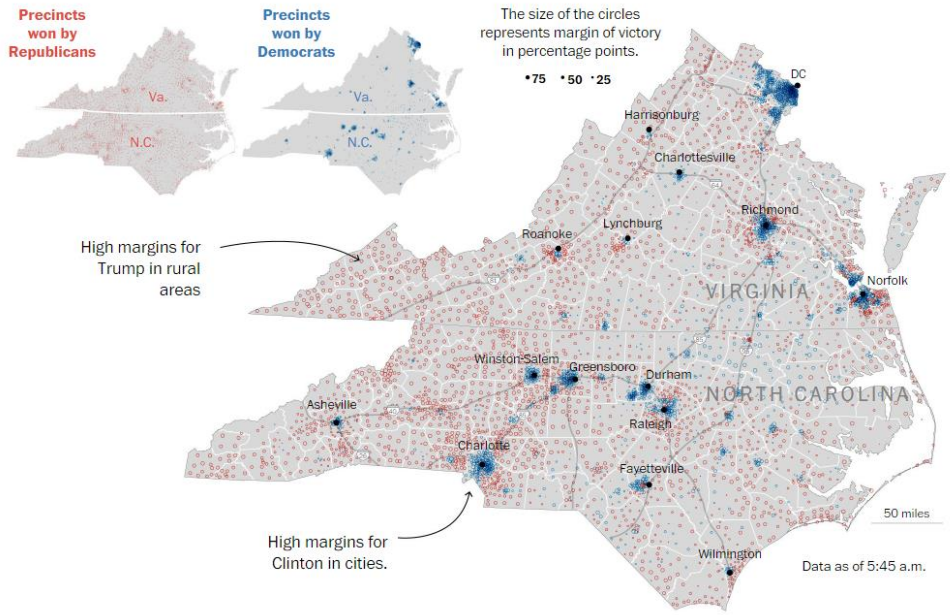
By Kevin Uhrmacher, Kevin Schaul and Dan Keating

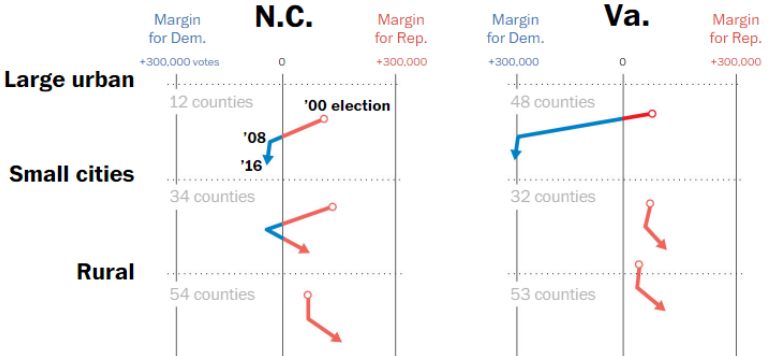
Nov. 9, 2016



Two swing states show why Clinton lost

Virginia and North Carolina both show the same pattern: Clinton taking major hits in rural areas without making up for it in cities.

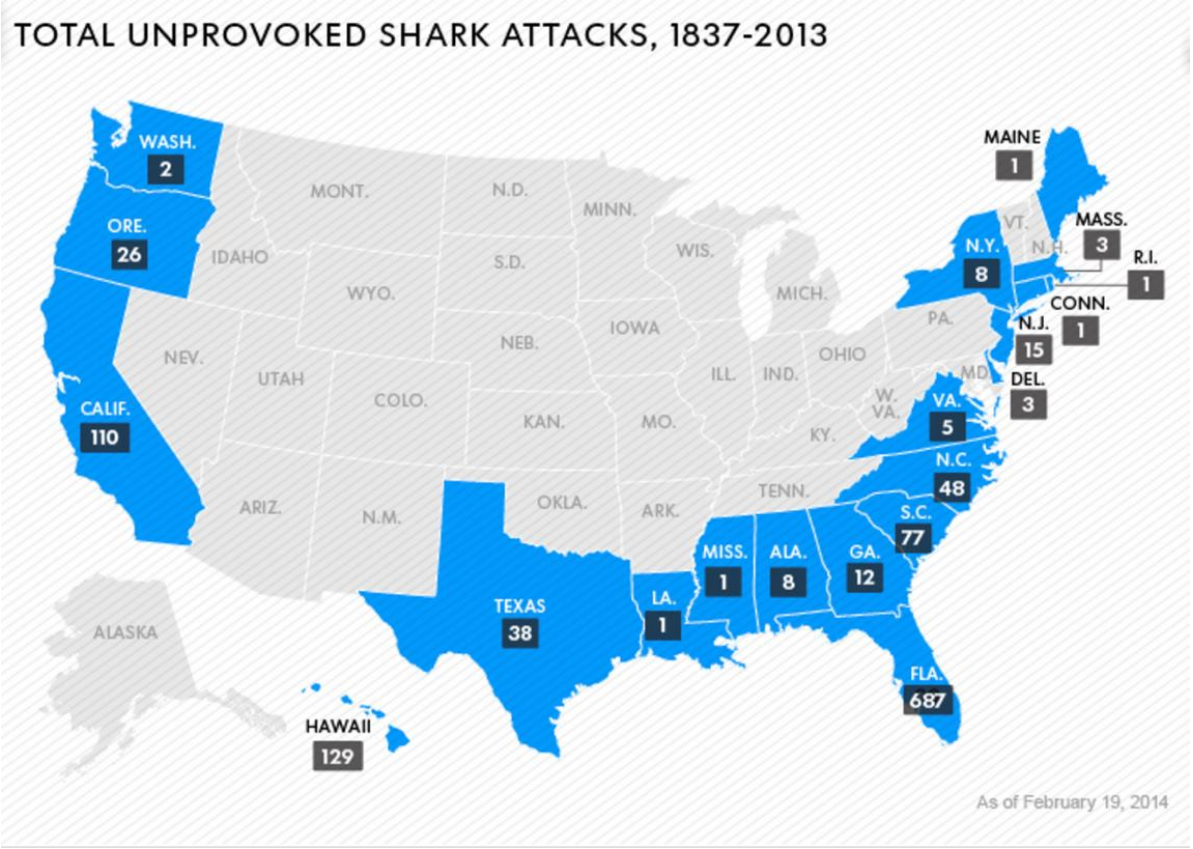




Maps are great because…

- They are familiar, users feel comfortable
- This means they can focus on the information
- Easy to spot patterns
- Bring in other data and knowledge
- “What is happening in my area?”

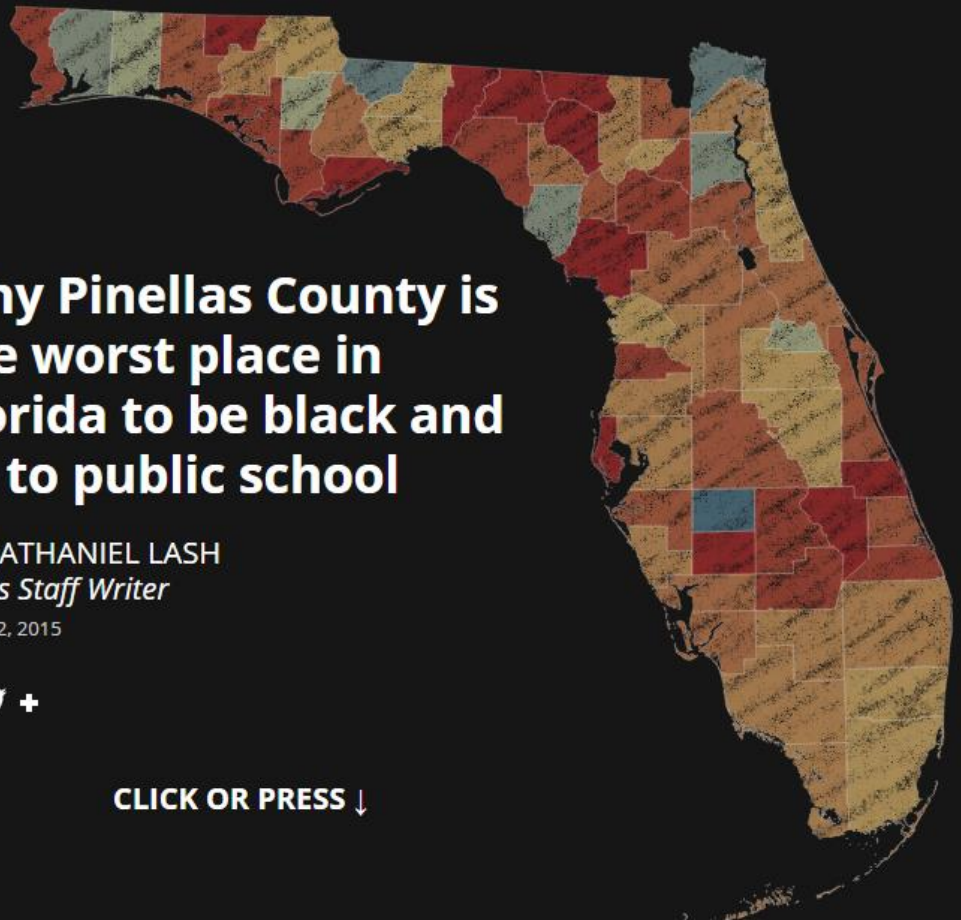
But not always



TELL THE STORY

DON’T MAKE THE USER DO ALL THE WORK!

Tampa Bay Times



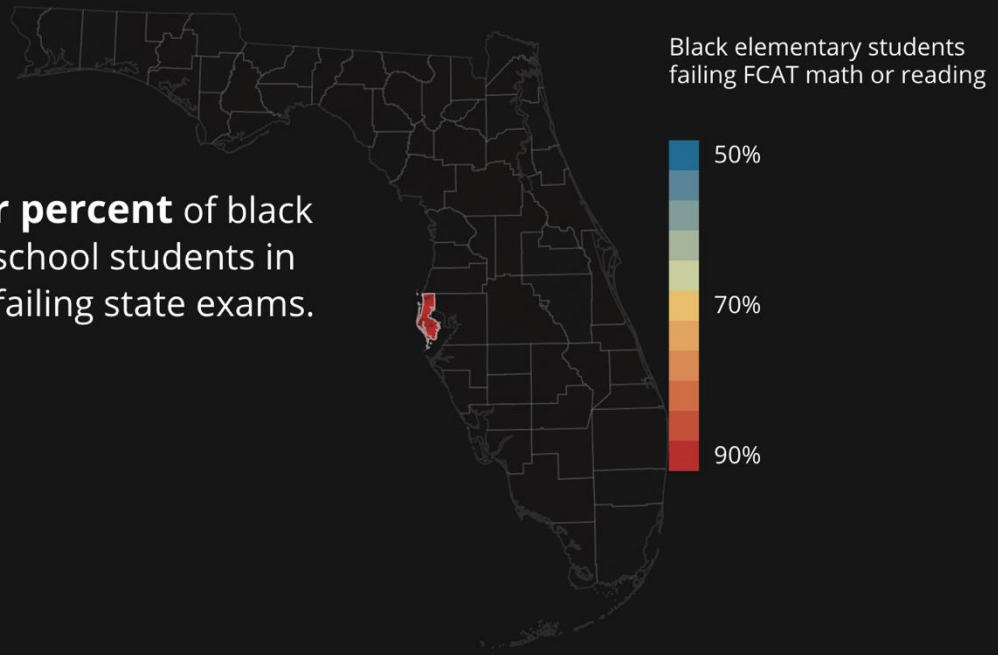
Why Pinellas County is the worst place in Florida to be black and go to public school

By NATHANIEL LASH
Times Staff Writer
AUG. 12, 2015

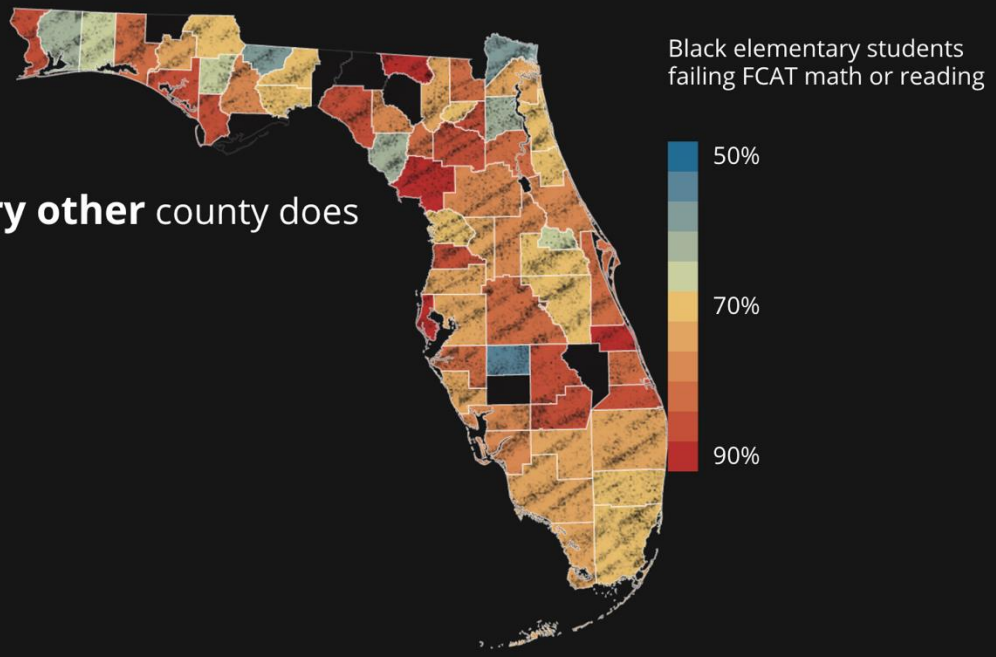
CLICK OR PRESS ↓

Tampa Bay Times

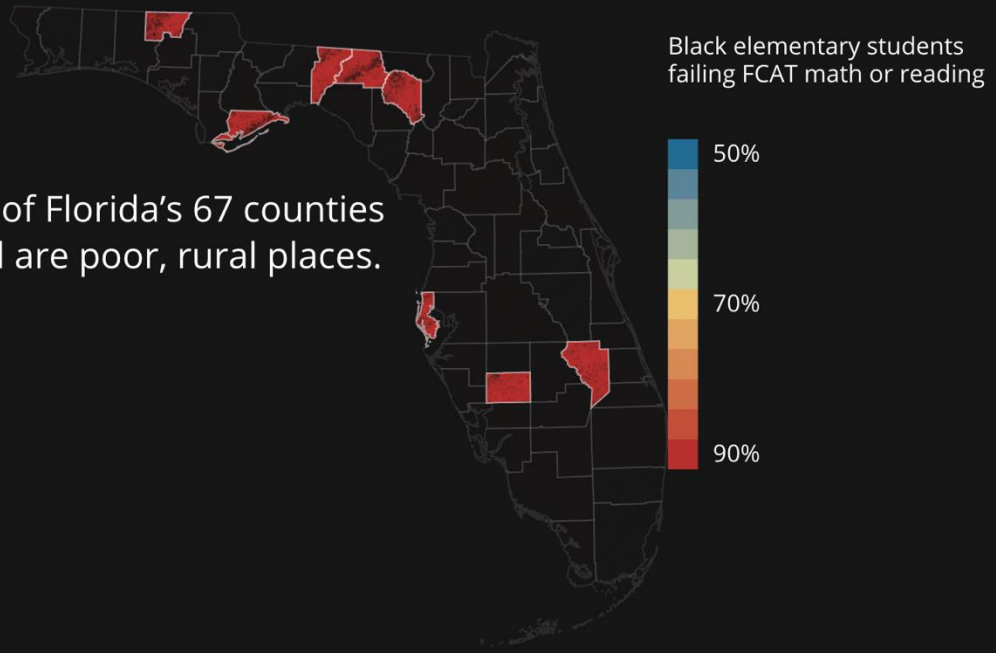
Eighty-four percent of black elementary school students in Pinellas are failing state exams.



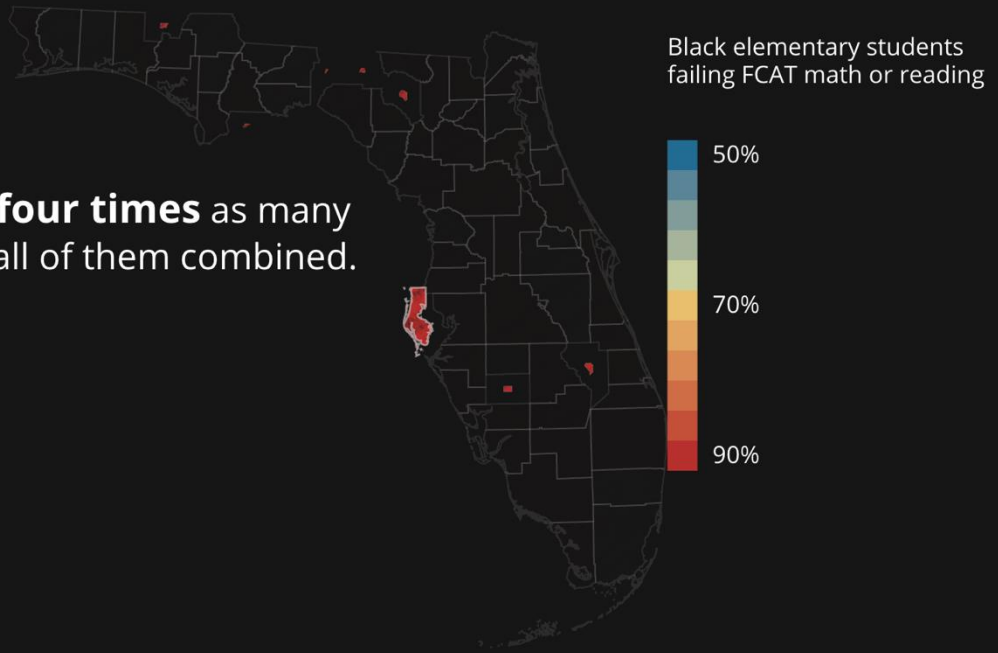
Almost **every other** county does better.



Only **seven** of Florida's 67 counties do worse. All are poor, rural places.

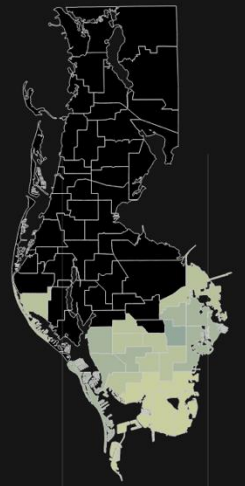


Pinellas has **four times** as many students as all of them combined.



Tampa Bay Times

Pinellas was much better off in 2007.
These lines show how **integrated** south county elementary schools used to be.



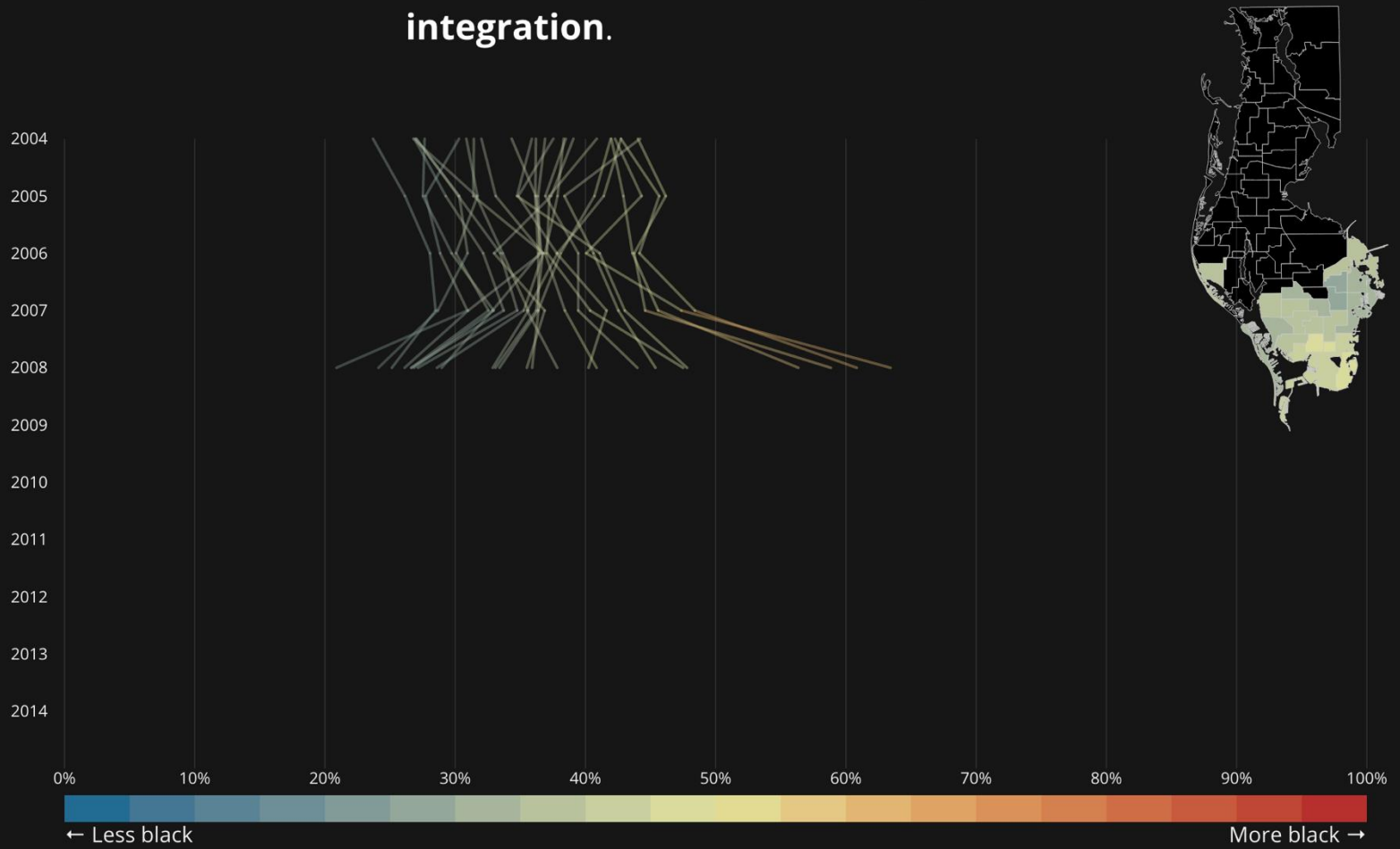
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

← Less black More black →

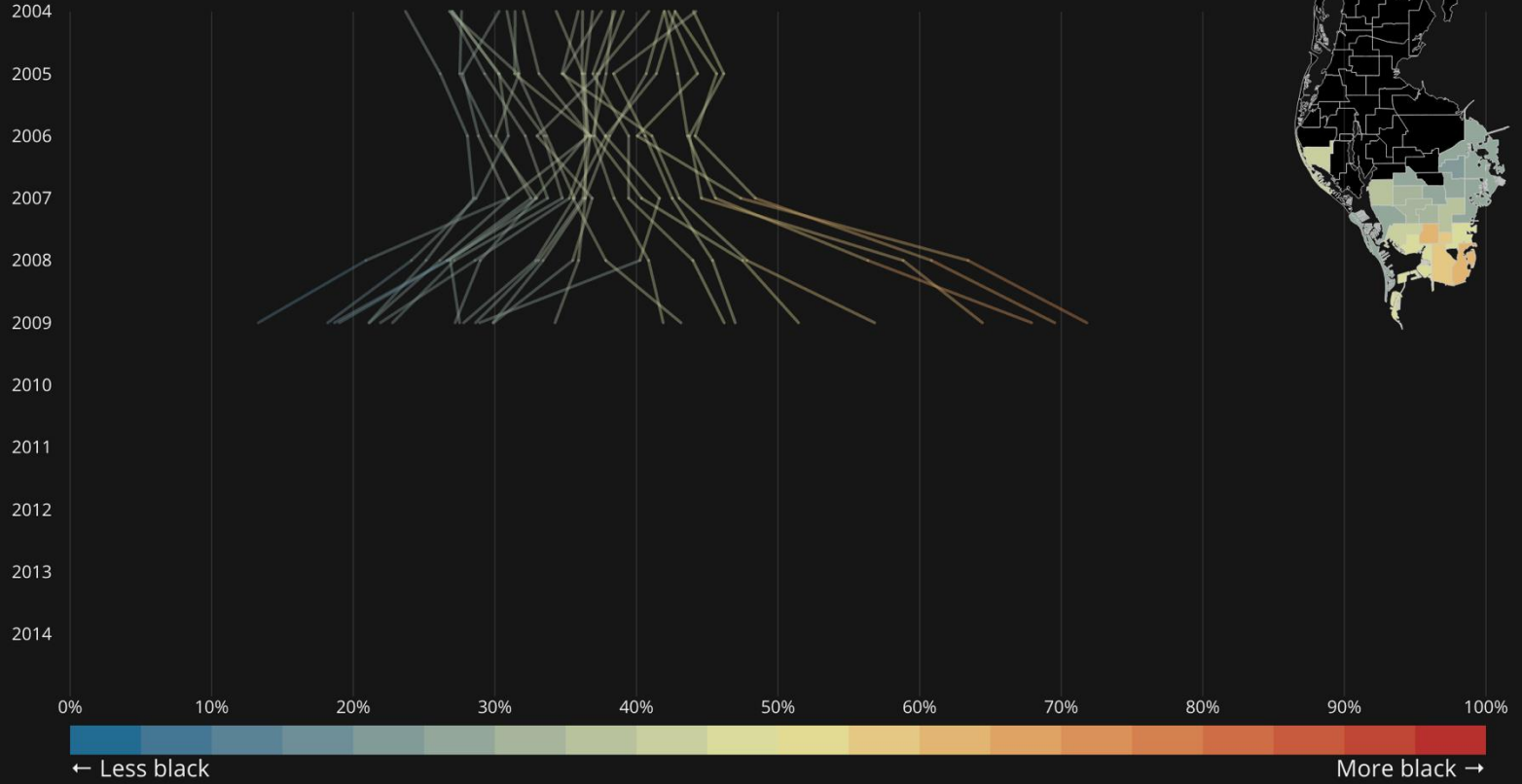
Tampa Bay Times

Then the School Board **abandoned integration**.



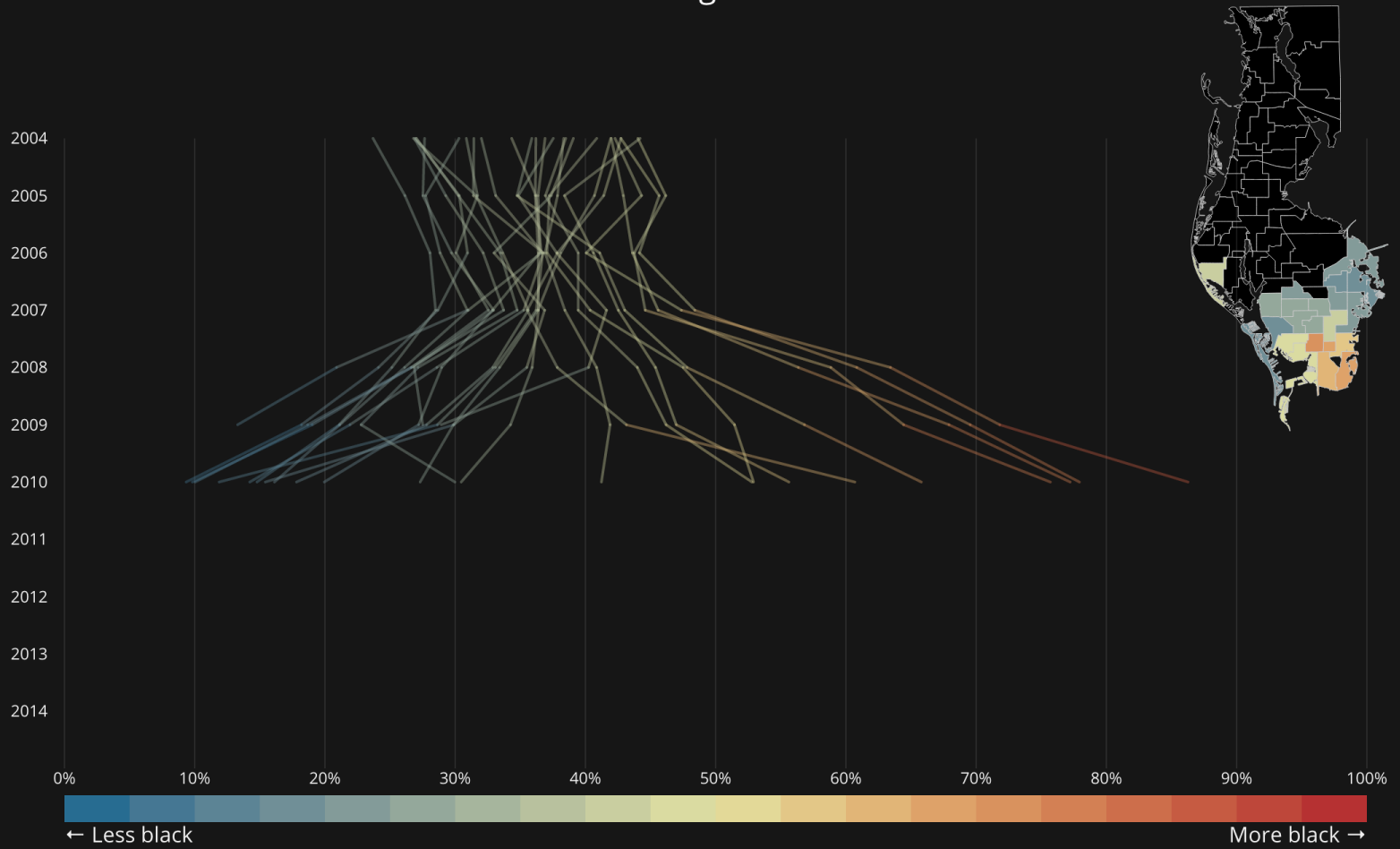
Tampa Bay Times

The schools in south Pinellas **started changing**.



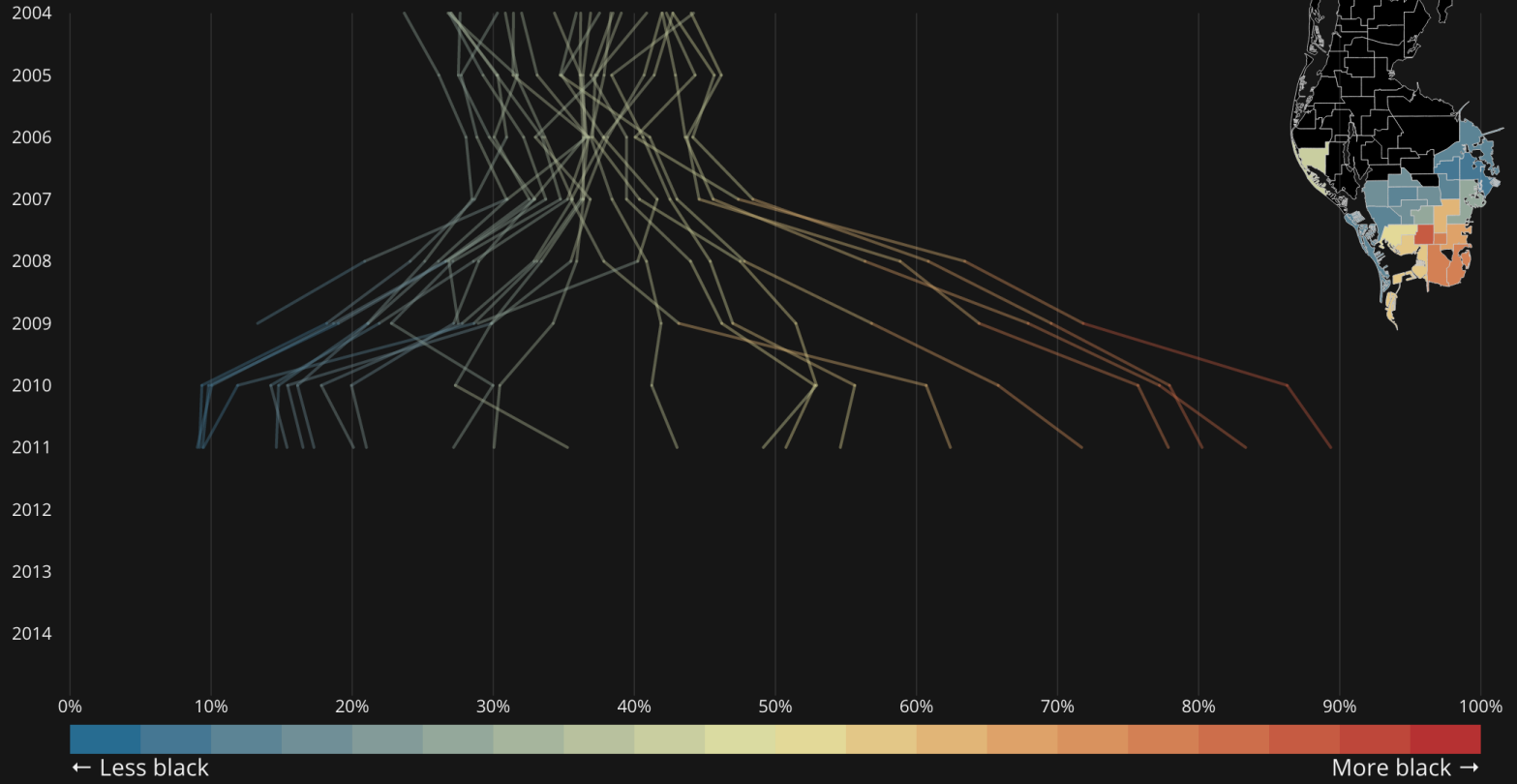
Tampa Bay Times

Five schools changed the most.



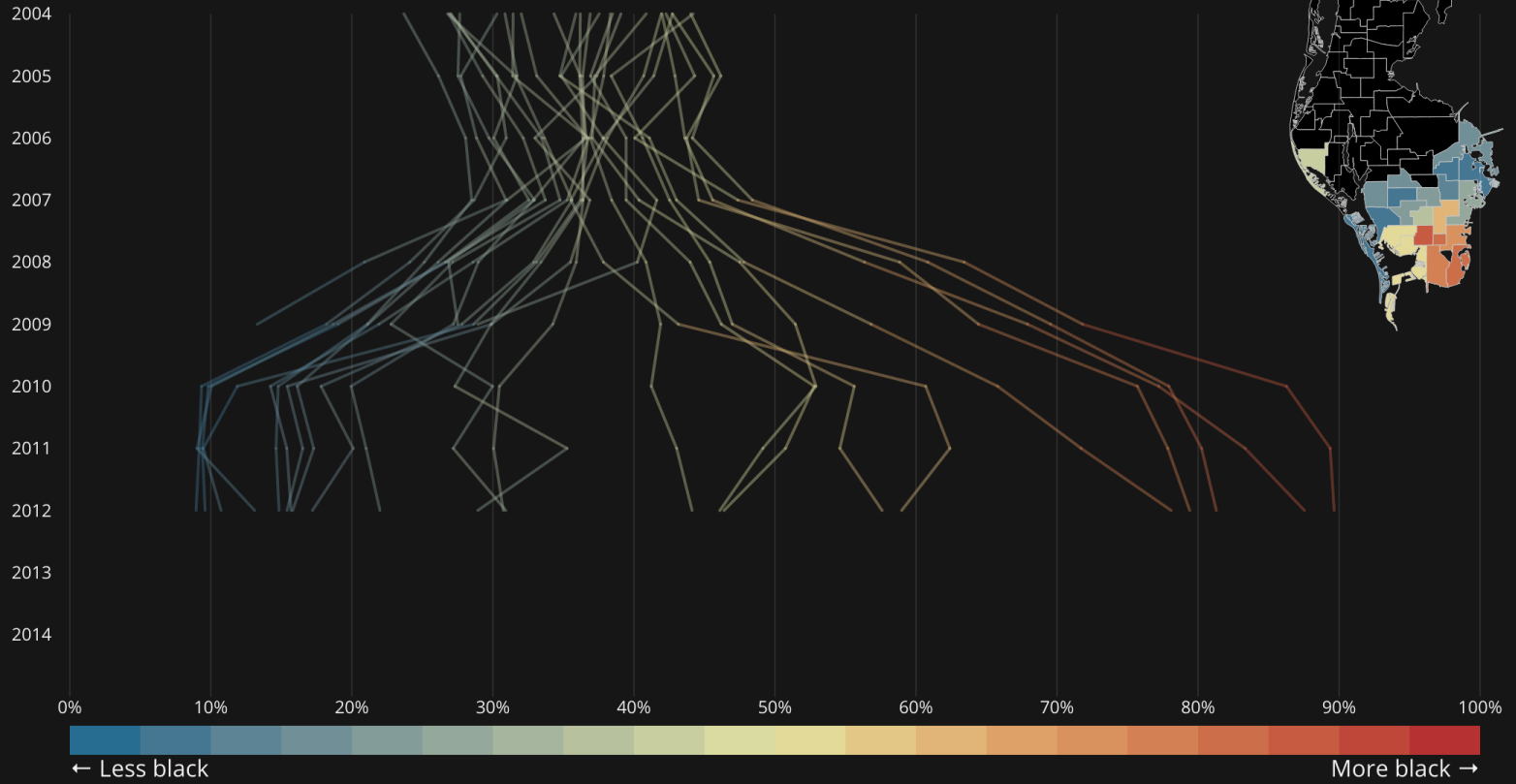
Tampa Bay Times

They became a **little more segregated**.



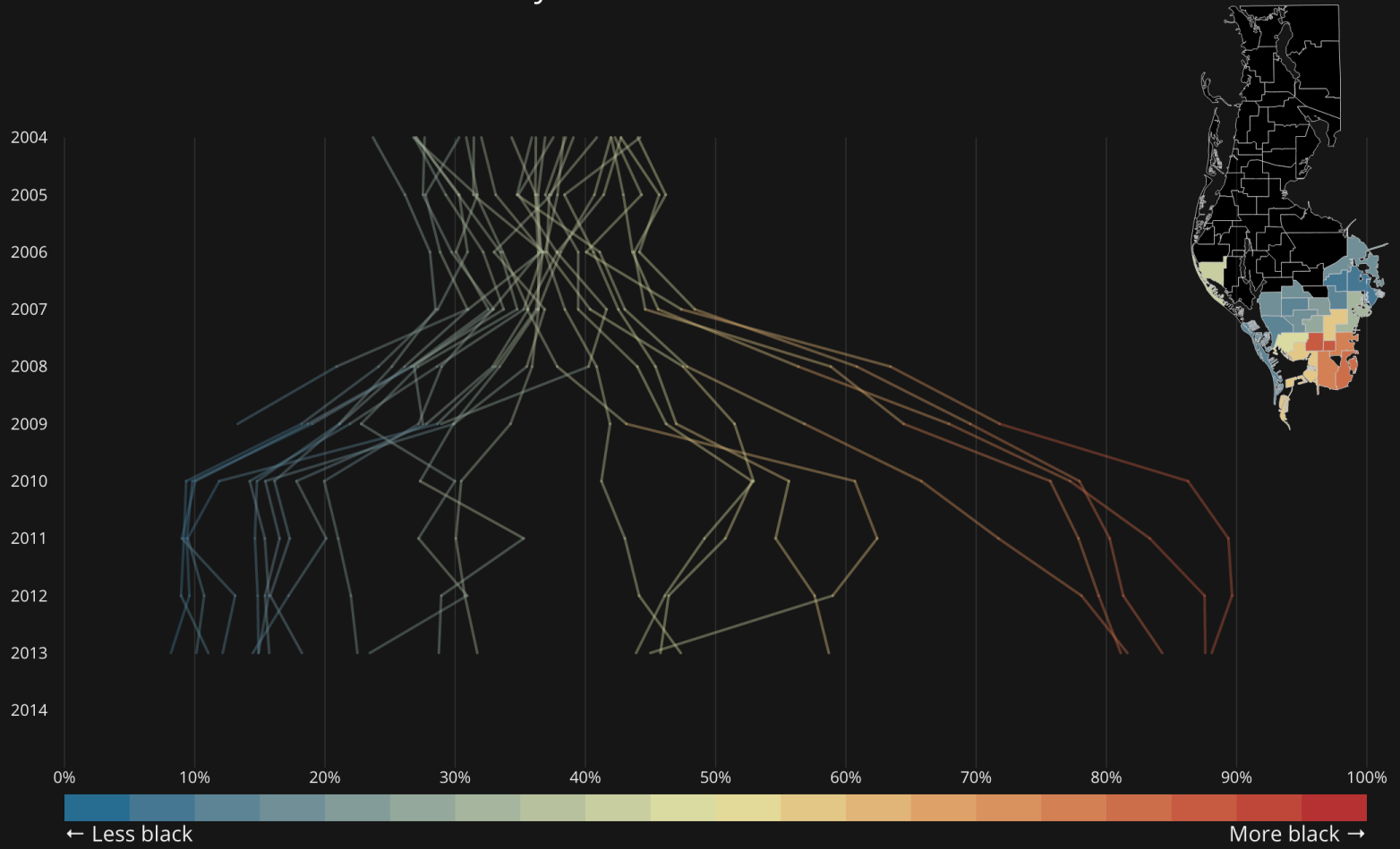
Tampa Bay Times

And a **little more segregated**.



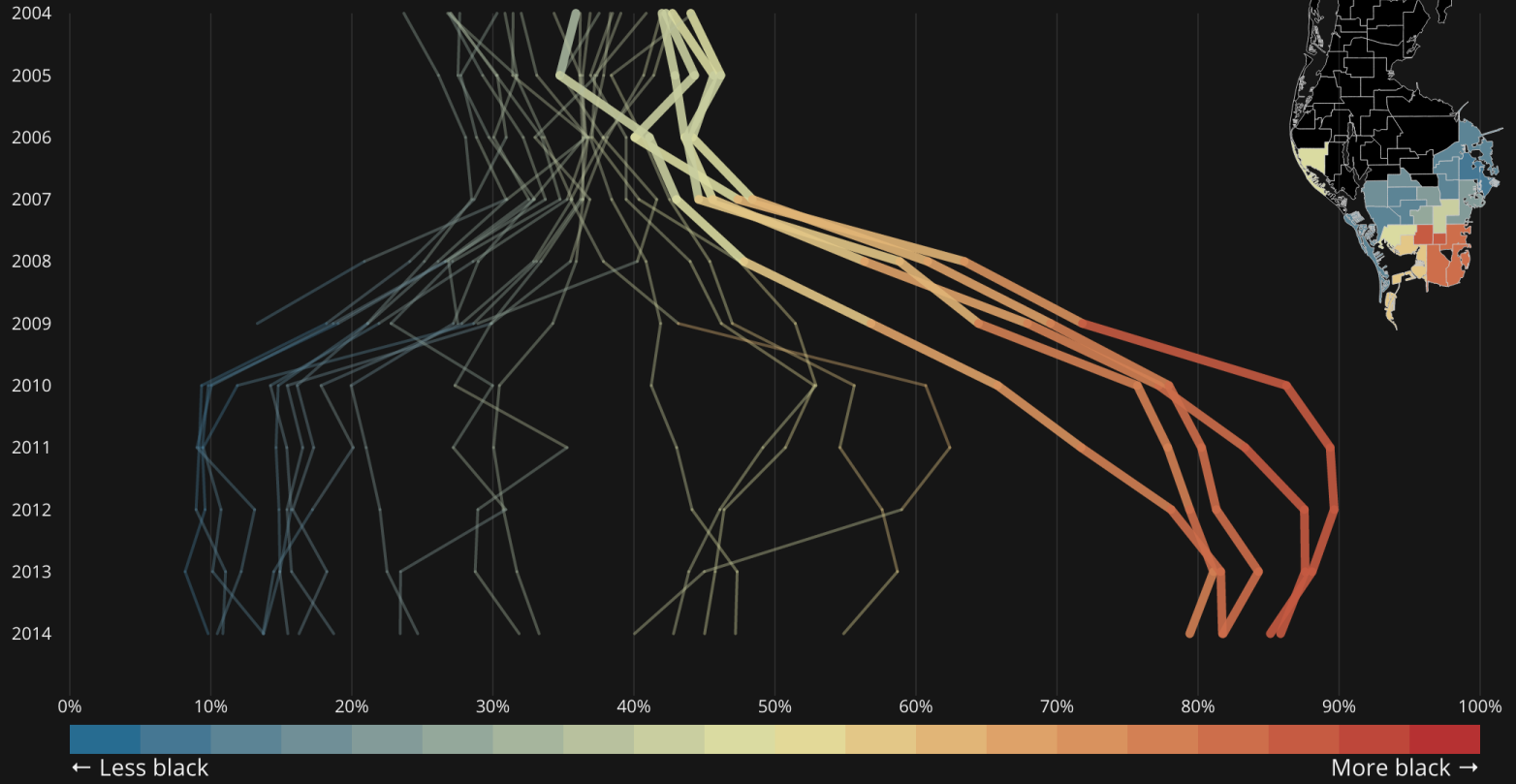
Tampa Bay Times

Until they became **extreme outliers**.



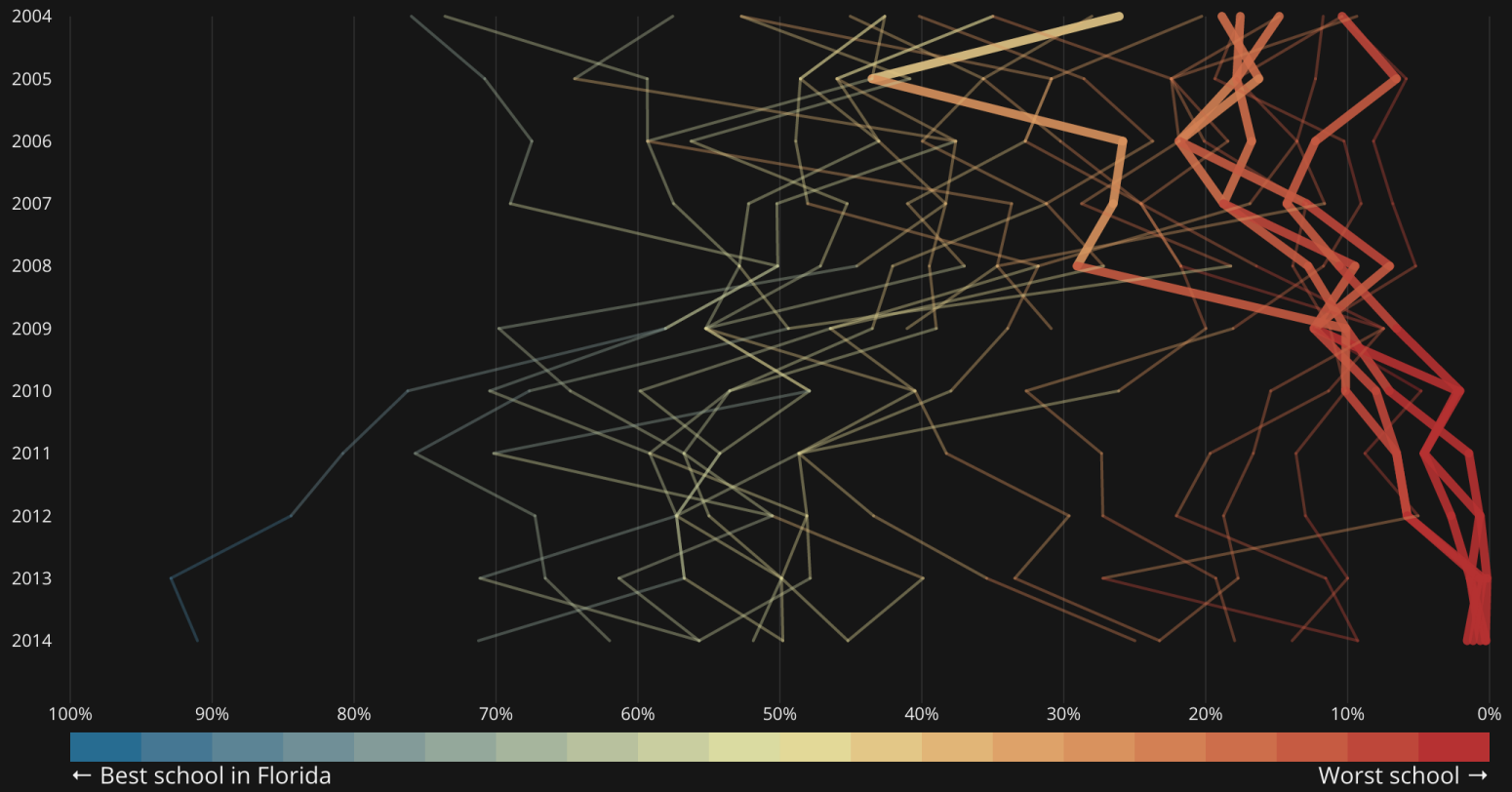
Tampa Bay Times

Today, Campbell Park, Fairmount Park, Lakewood, Maximo and Melrose are the **most segregated** schools in Pinellas.



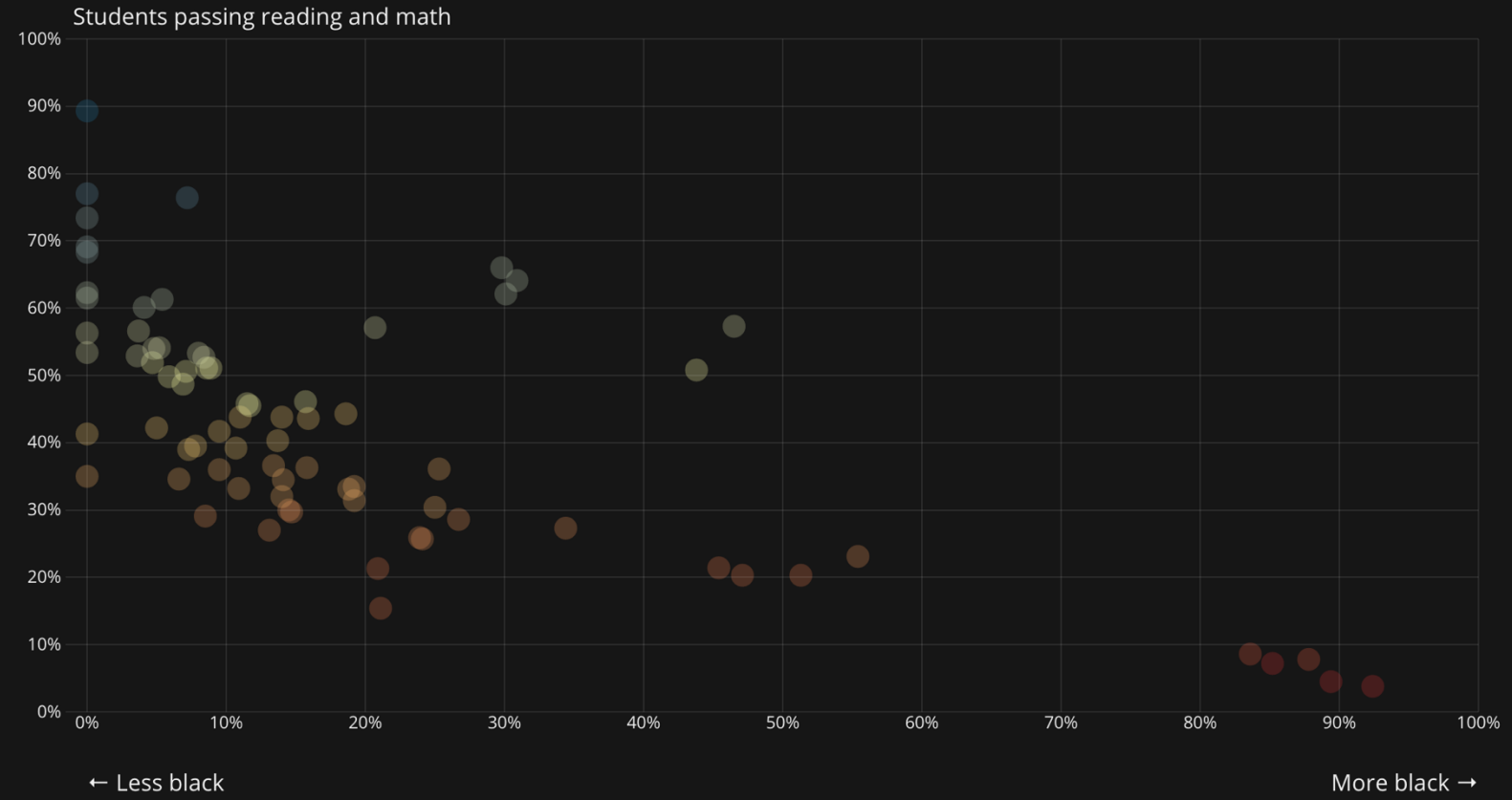
Tampa Bay Times

As the schools became **more separate**, they became **less equal**. Their test scores got steadily worse.



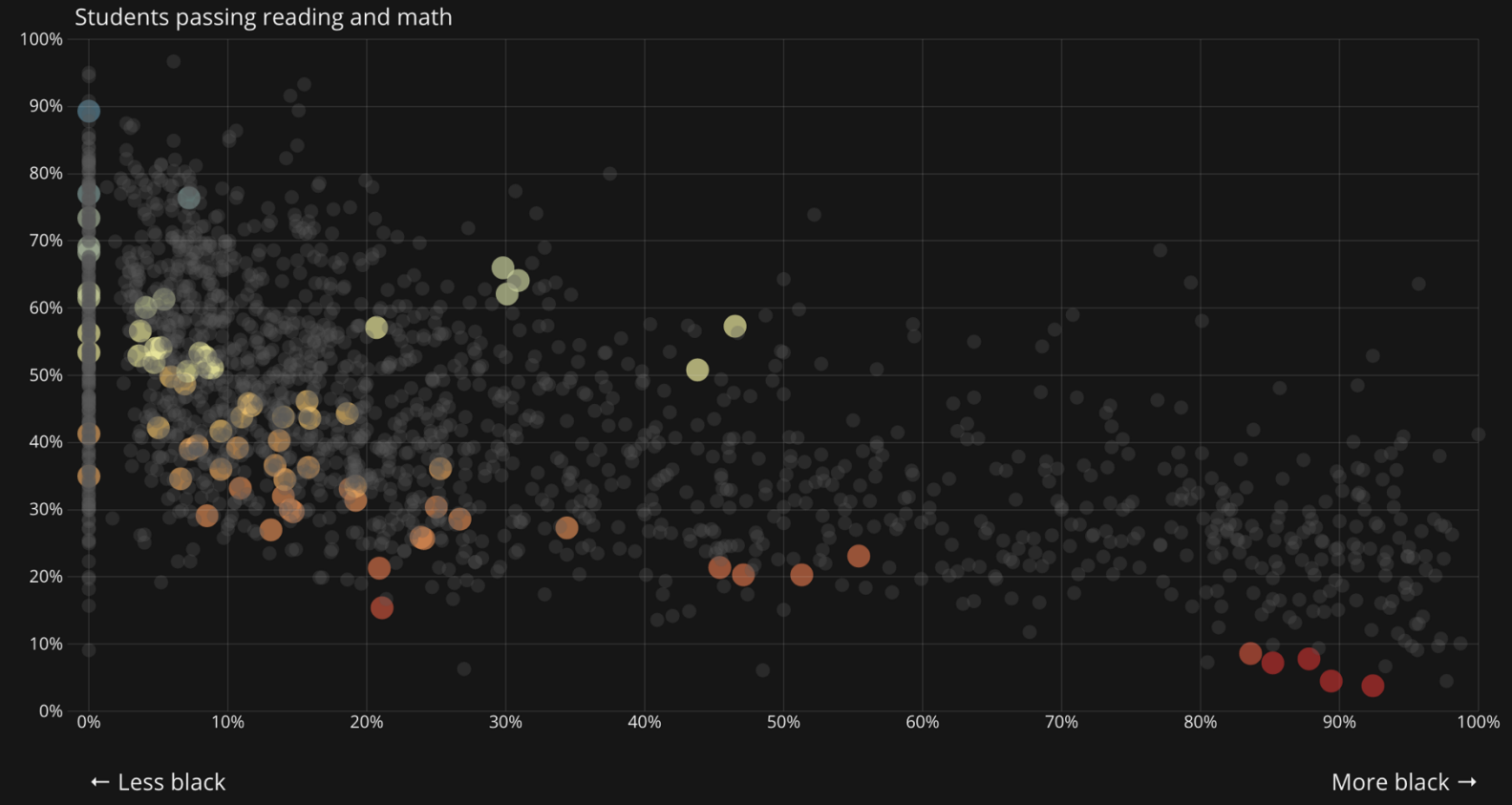
Tampa Bay Times

Today they score worse than any school in the **county**.



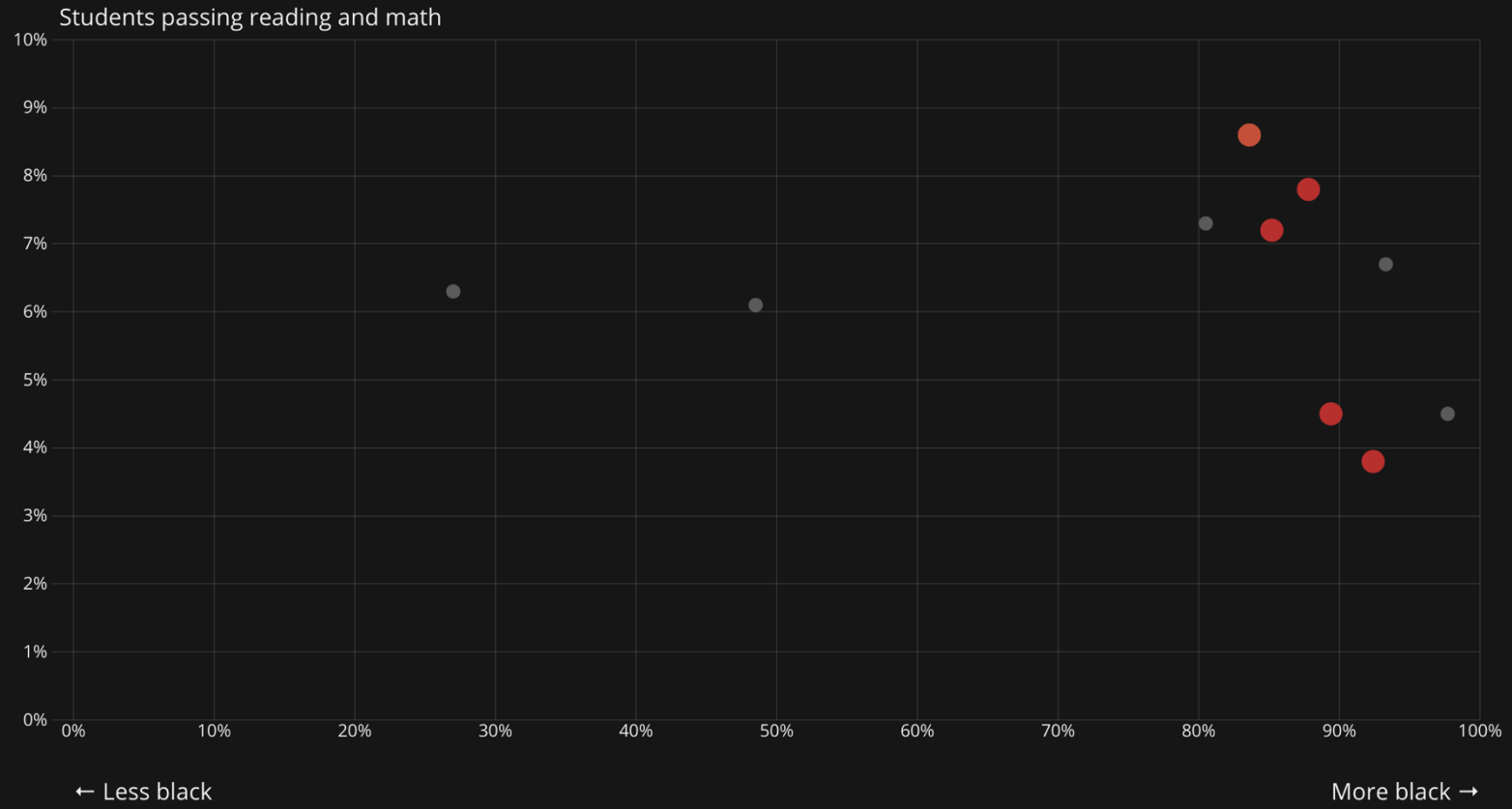
Tampa Bay Times

They score worse than almost any school in the **state**.



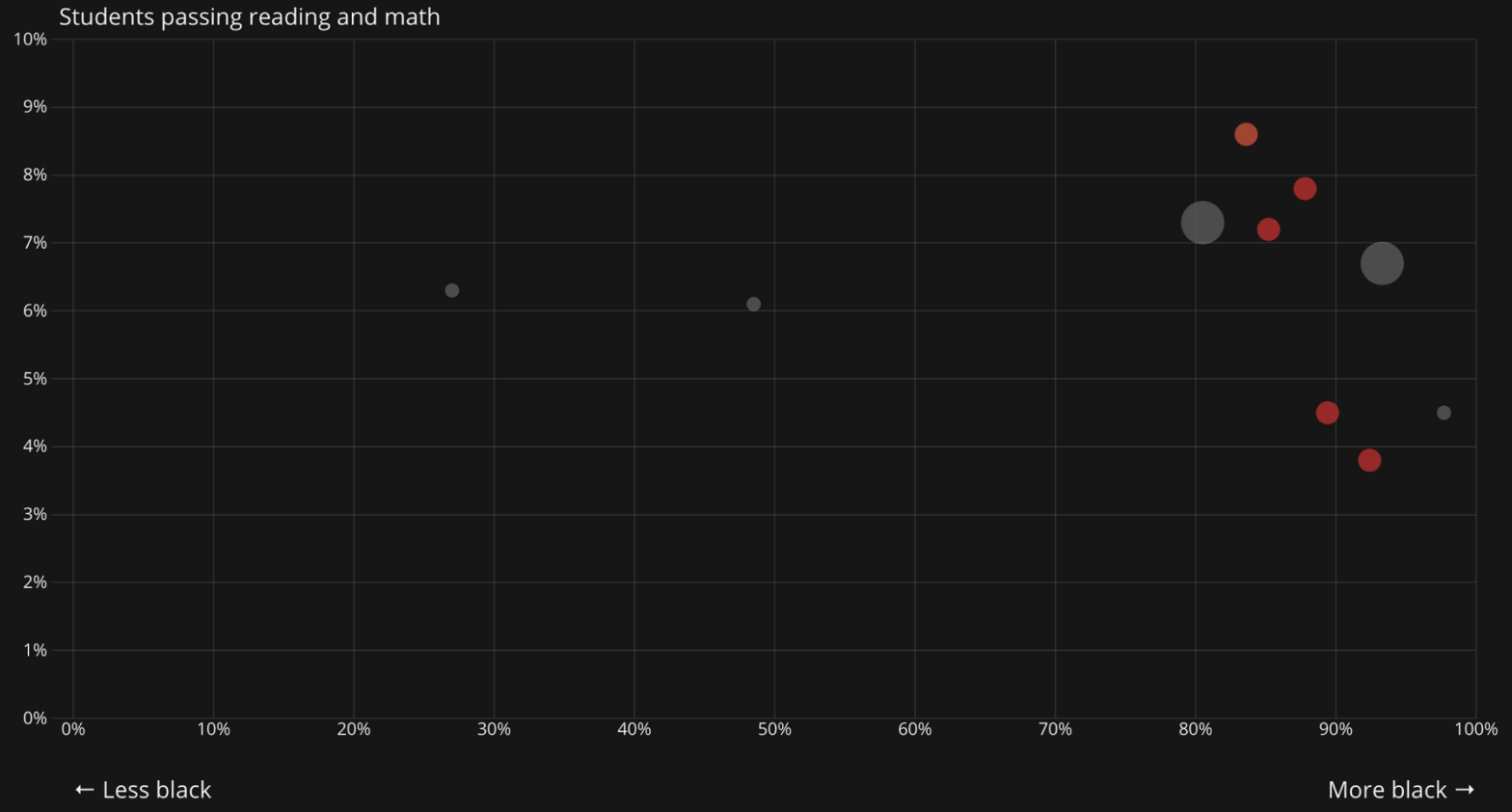
Tampa Bay Times

Ten Florida elementary schools have similar failure rates.



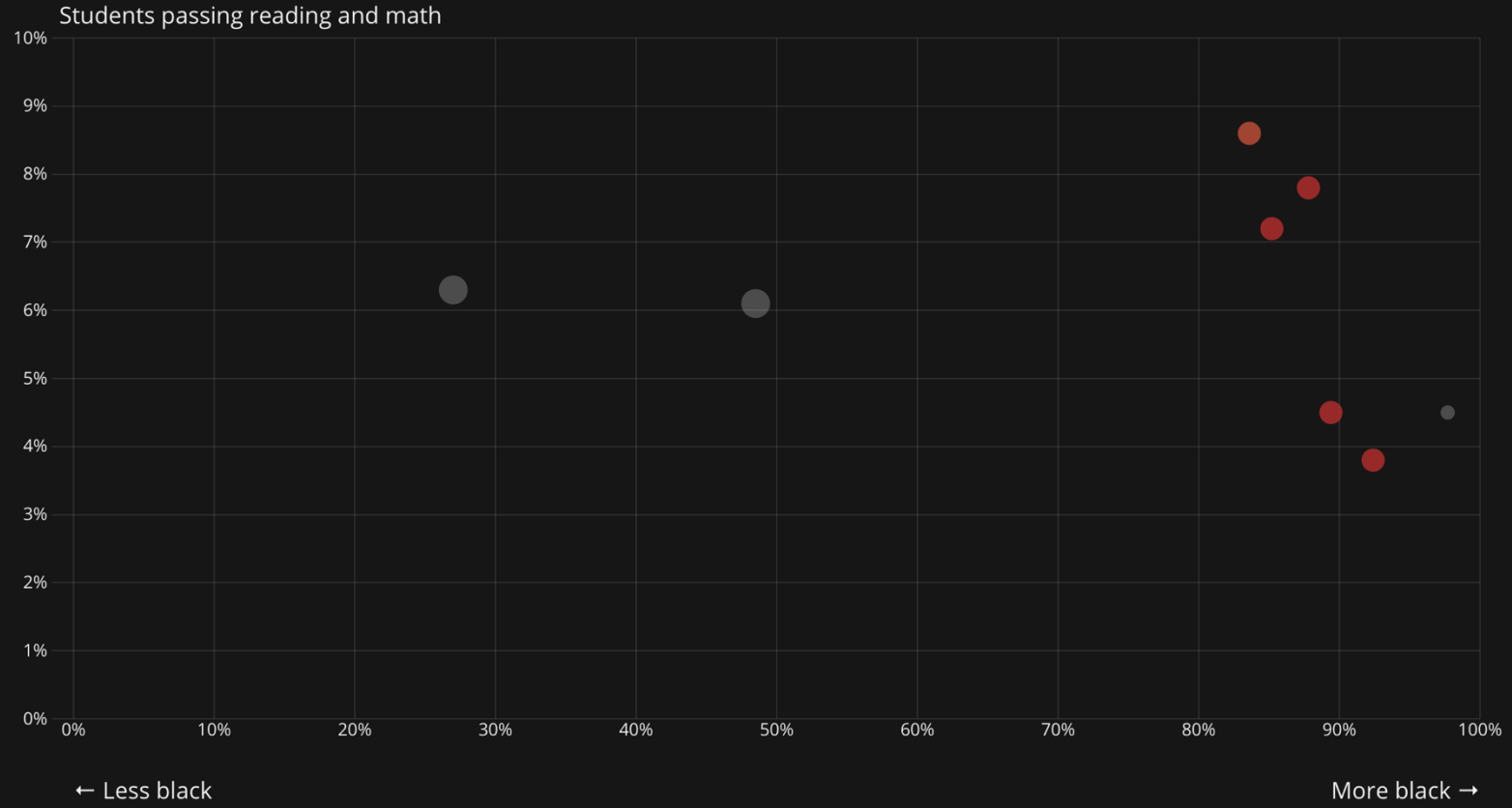
Tampa Bay Times

Take away privately run charter schools, and there are **eight**.



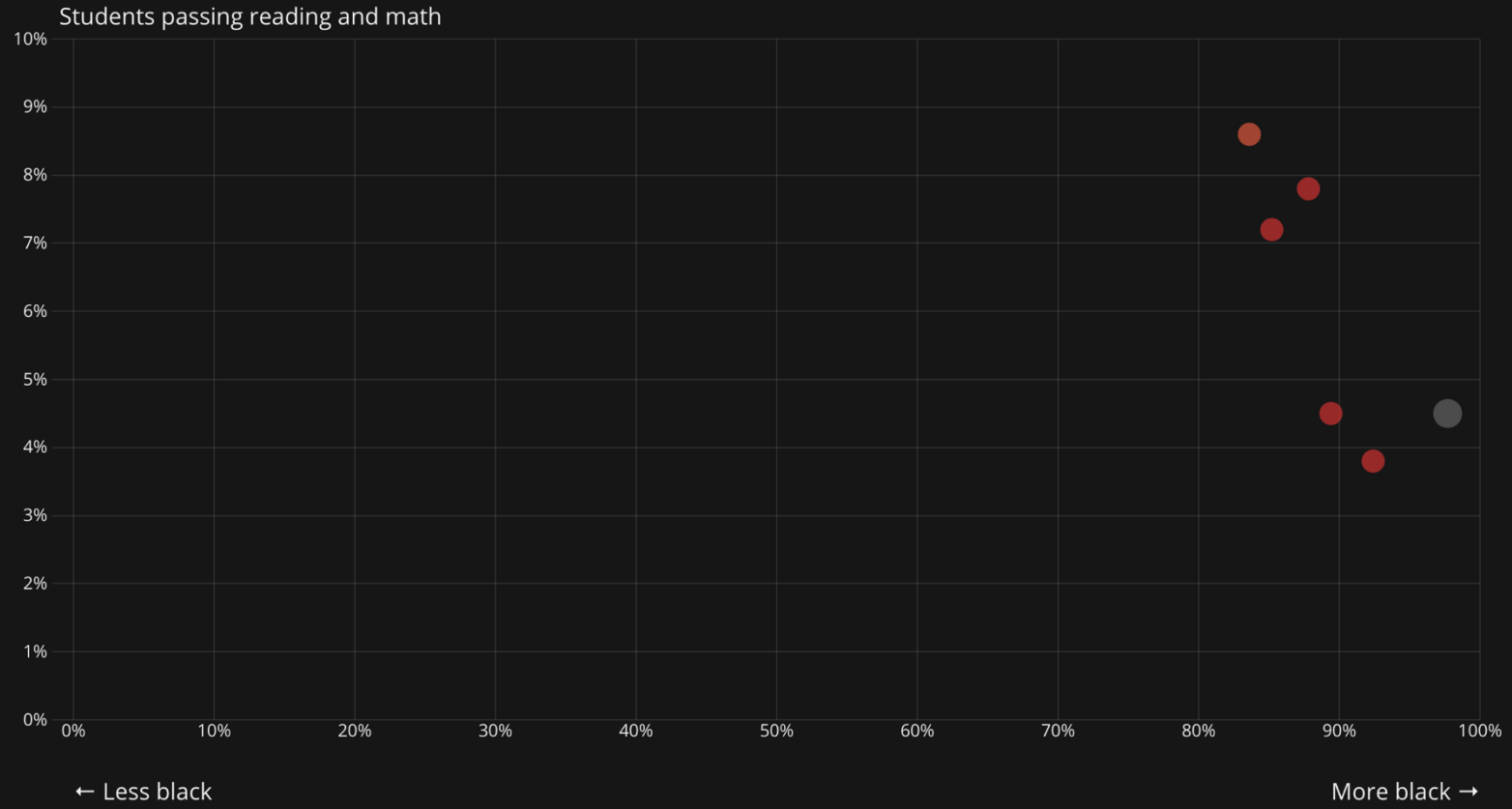
Tampa Bay Times

Take away schools for children with disabilities or behavior problems, and there are **six**.



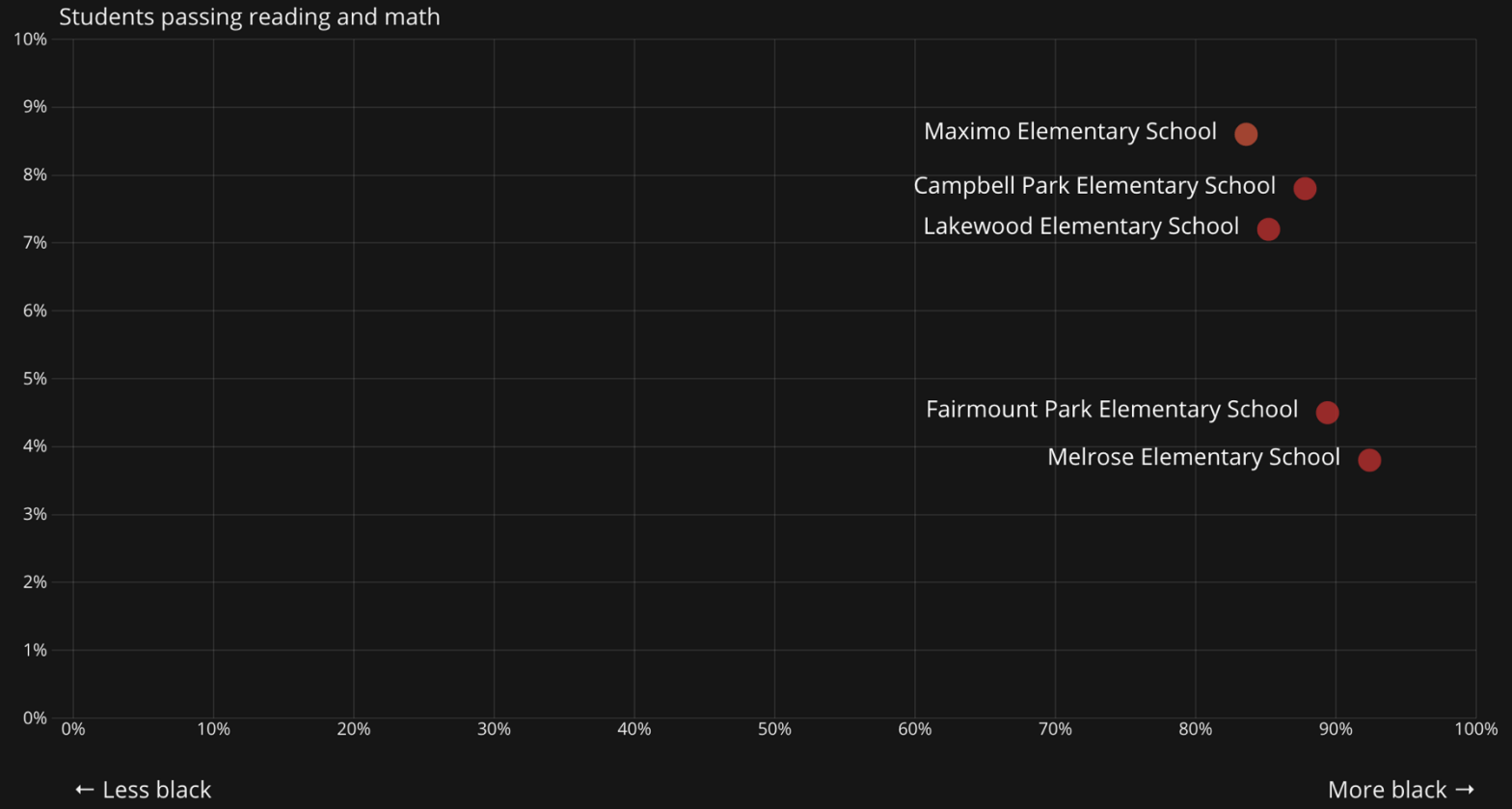
Tampa Bay Times

Take away a nontraditional early learning center, and **look what's left**.



Tampa Bay Times

The **five** elementary schools in Pinellas County's black neighborhoods.



Tampa Bay Times

Melrose is the **worst-performing** school in Florida. In 2014, **160 children** there took state exams.

Tampa Bay Times

154 failed reading or math.

Tampa Bay Times

Only **six** passed both.

Who is responsible?

Tampa Bay Times

Read #FailureFactories

A Tampa Bay Times investigation

Sign up for emails about this investigation.

email SUBMIT

We will not use your email address for any other purpose.

SOURCE: *Times* analysis of data from the Florida Department of Education and Pinellas County School District. Data is not available for student subgroups where fewer than 10 students took standardized tests. Pinellas school maps based on 2014 attendance boundaries.

Additional design by Martin Frobisher and Alexis N. Sanchez. Words by Michael LaForgia.

GATHERING YOUR OWN DATA

BBC World Service data project

- Jihadist attacks sadly reported every day but…
- How many people were killed?
- Who were they?
- Where?
- Who was responsible?
- Method used

Jihadism: Tracking a month of deadly attacks

11 December 2014 | World

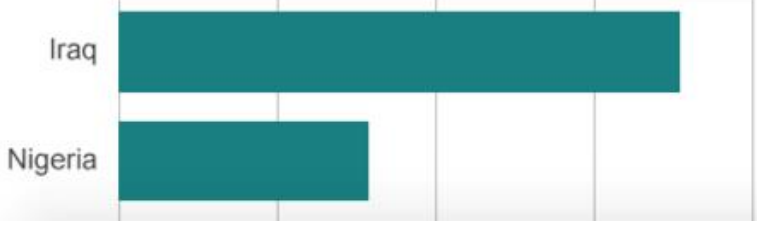
Share

Jihadist attacks killed more than 5,000 people in just one month, an investigation by the BBC World Service and King's College London has found.

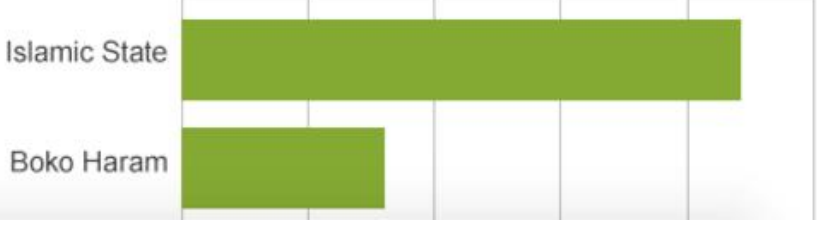
Civilians bore the brunt of the violence, with more than 2,000 killed in reported jihadist incidents during November 2014. Islamic State carried out the most attacks, adding to the spiralling death toll in Iraq and Syria. Explore the map to find out more.

Explore the worst-affected countries in detail

The most deadly countries

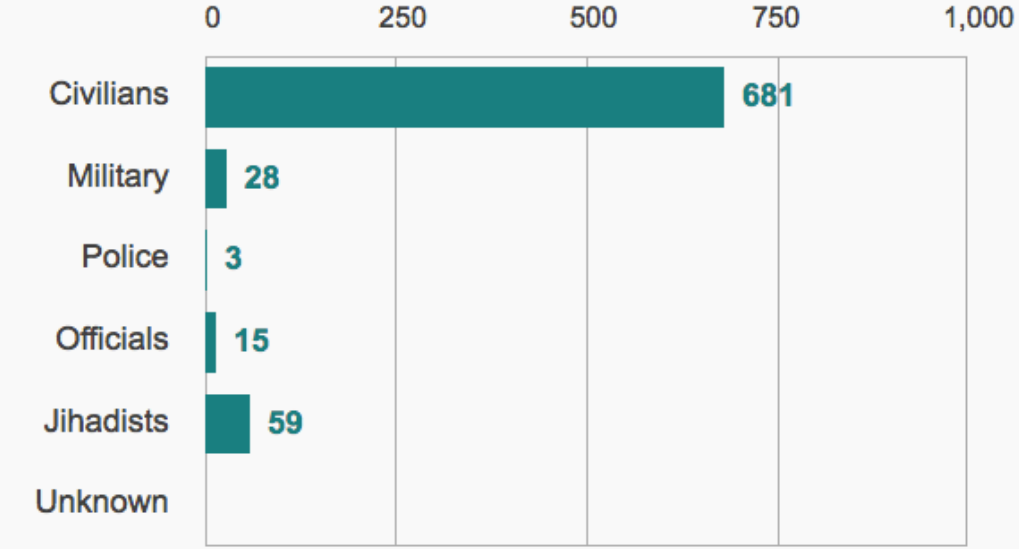


Groups killing the most people

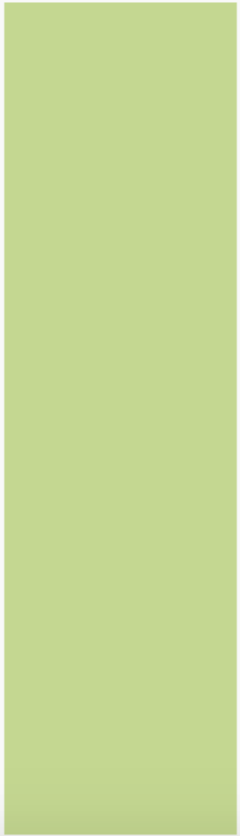


Nigeria

Deaths 786



Deaths by group



100%
Boko Haram

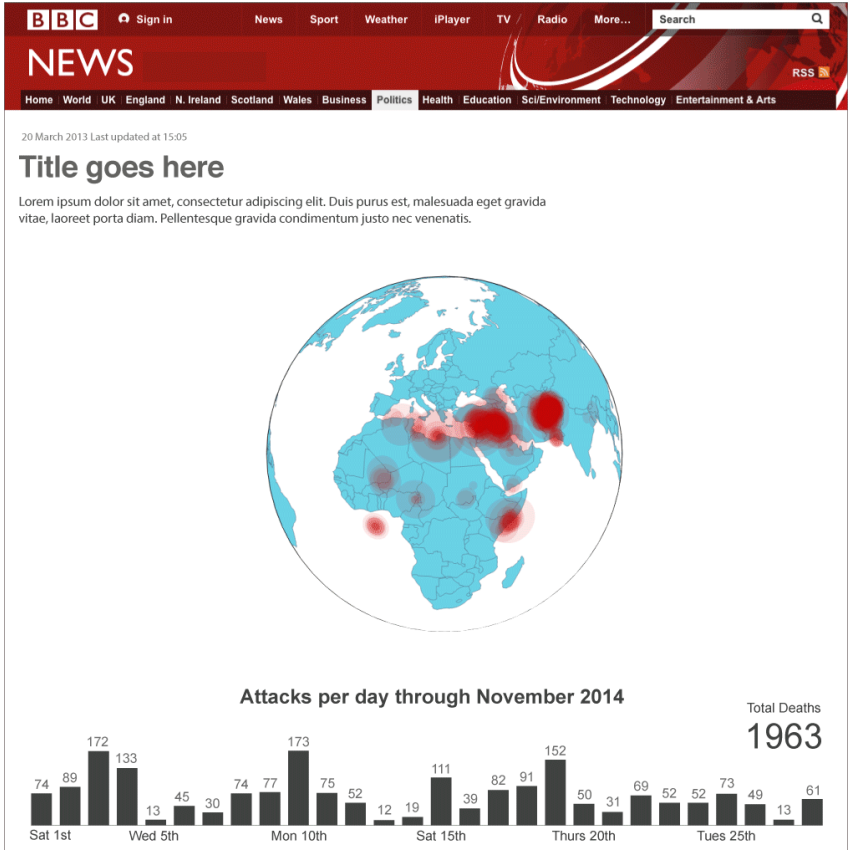
Most frequent types of attack

37%
Shooting

22%
Suicide bomb

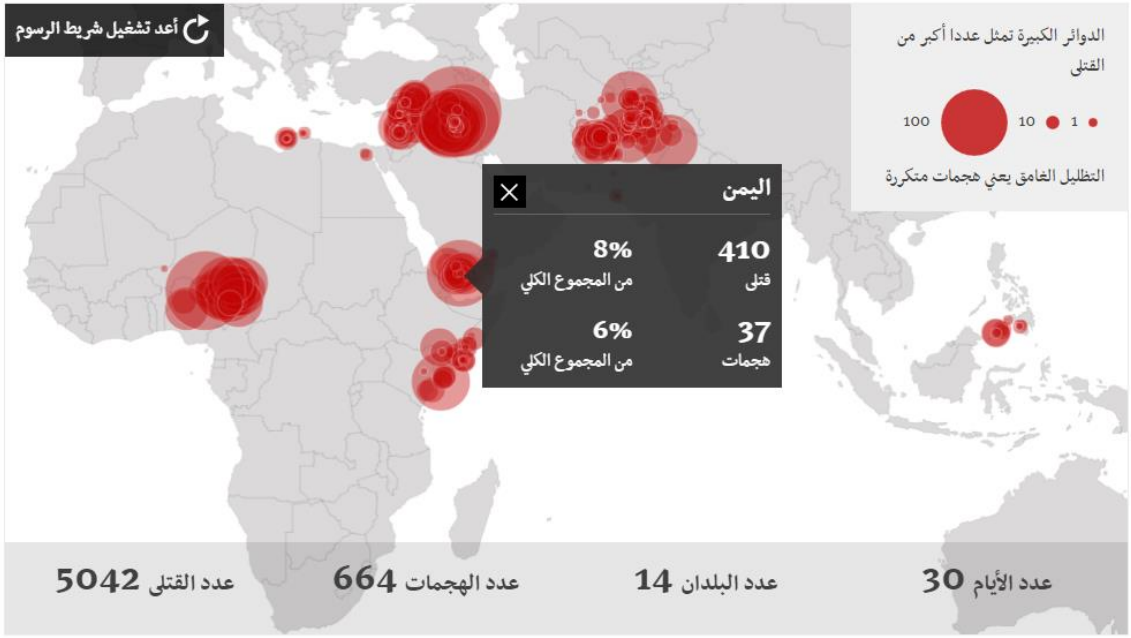
15%
IED

First designs



Languages

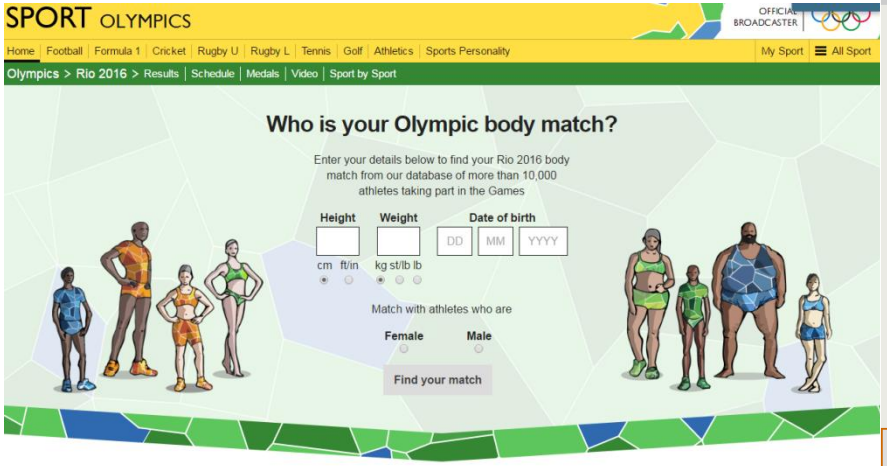
- Arabic
- Persian
- Urdu
- Hausa
- Pashto



‘WHERE DO I FIT IN?’

MAKING DATA PERSONAL

Personal relevance calculators



NHS Winter

This week's figures for England:

95%

target for patients seen in 4 hours at A&E

89.0% ▲

patients seen in 4 hours at major A&E hospitals

92.8% ▲

patients seen in 4 hours at all A&E units

The additional pressures of cold weather, norovirus and flu have an impact on all A&E departments across the UK. This tracker allows you to find out how the NHS is doing where you live.

England is the only place to publish weekly A&E data every week. Elsewhere it is published on a monthly or quarterly basis. To see how the health service is performing please submit your postcode below.

See how trusts running A&Es near you are doing:

Enter your postcode

Go

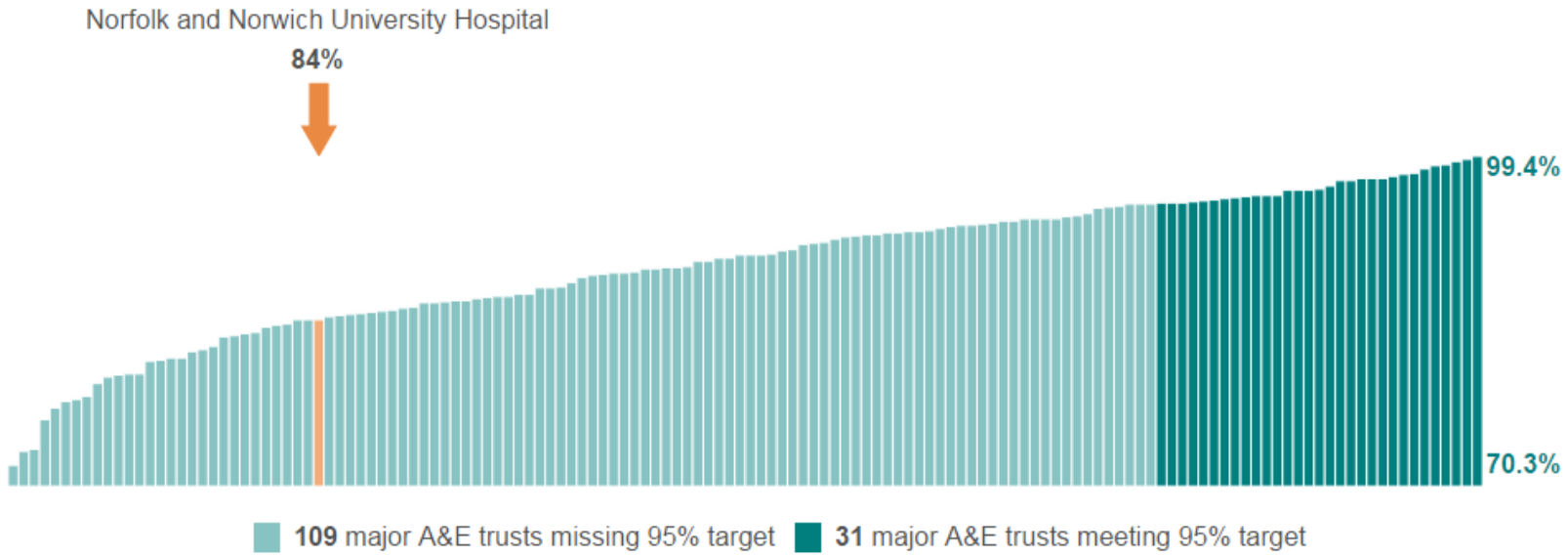
This week at

Norfolk and Norwich University Hospital

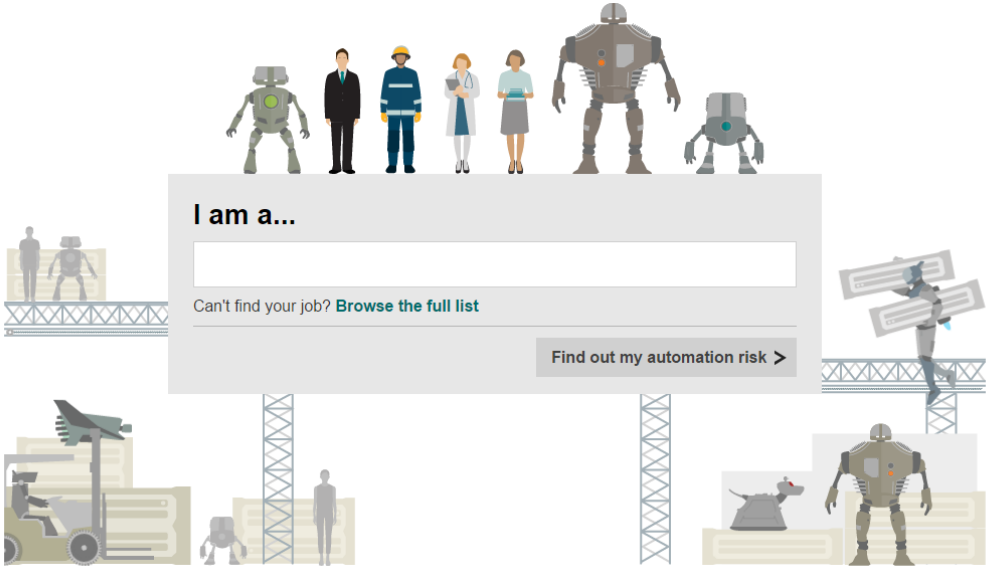
Data for Norfolk And Norwich University Hospitals NHS Foundation Trust

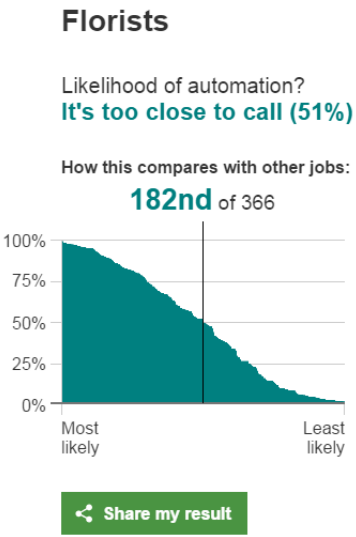
84%

Patients seen in 4 hours



Will a robot take your job?



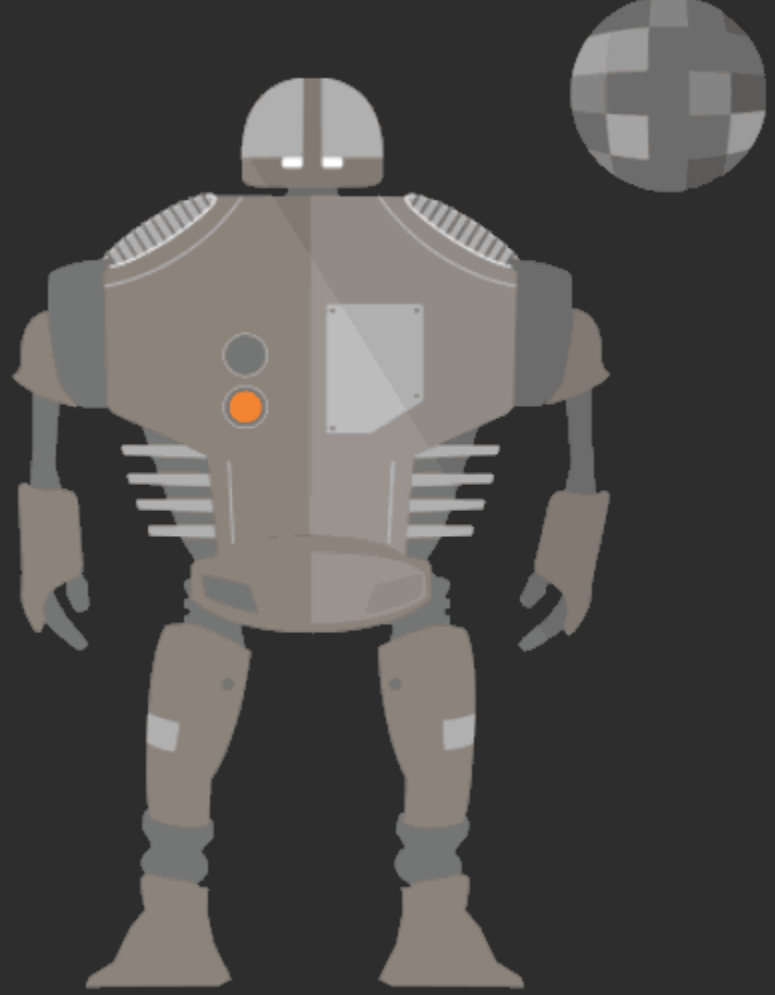


Engaging the audience

It is estimated that **cleaners** have a **57% chance** of their job being automated in the next 20 years.

BBC NEWS

It is estimated that **dancers** have a **13% chance** of their job being automated in the next 20 years.



BBC NEWS

Booze calculator: What's your drinking nationality?

8 January 2016 | Health

Share

How does your drinking measure up to the average in countries around the world? Find out below if you are similar to a boozy Belarusian or a teetotal Kuwaiti.

How much have you drunk in the past week?

Pints of beer 0

Glasses of wine 13

Single measures of spirits 0

Which country are you from?

United Kingdom

See how you compare >

If you drank like this every week, in a year you would consume:

676 pints

0 glasses of wine

0 shots

Based on these proportions and quantities:

You drink like you're from Namibia, which is the 33rd heaviest-drinking country in the world.

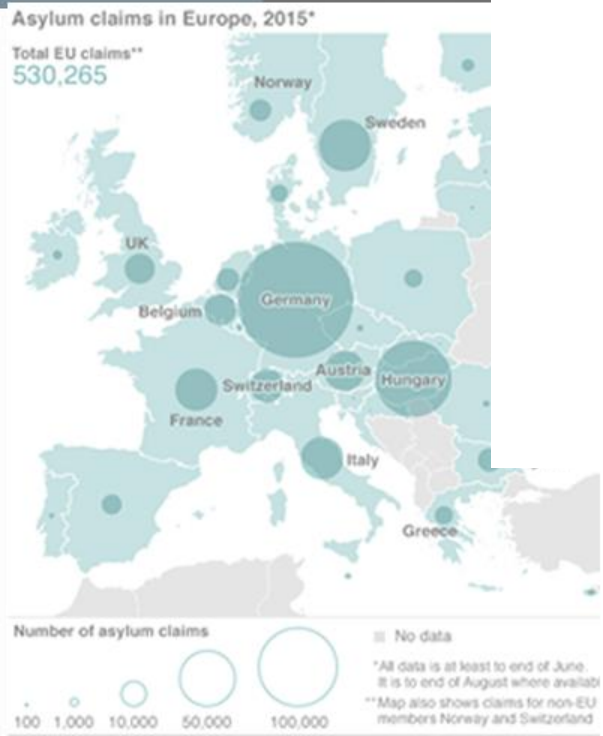
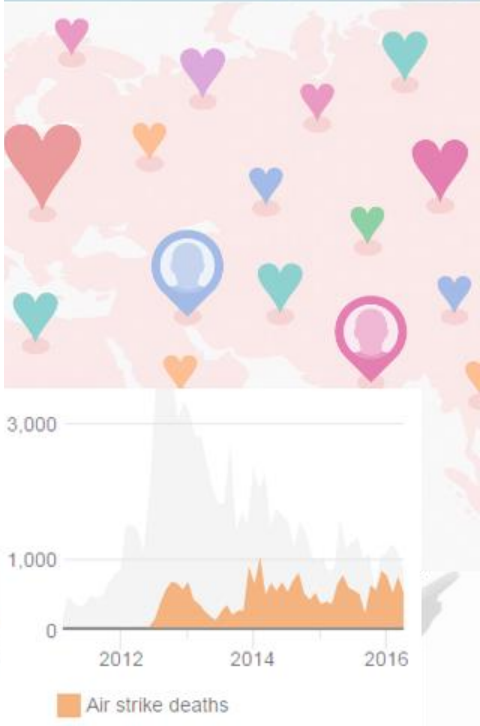
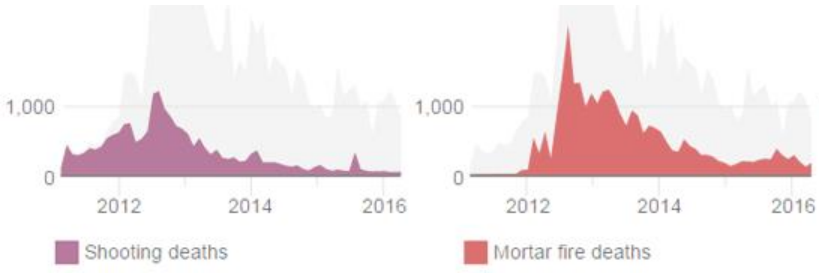
Share

Litres of pure alcohol consumed per person per year, by country

In summary

- Relevance – why audience interested?
- Story telling – lead through the data or show how to explore
- Visually interesting – clear, engaging, playful if appropriate
- Data = people
- Show users where they fit in

Thank you!

@bbcnewsgraphics

@chrisjeavans