Program for International Student Assessment (PISA)

- Mathematics literacy
- Science literacy
- Reading literacy

- 15-year-old students
- Every 3 years since 2000

- Coordinated by the Organization for Economic Cooperation and Development (OECD)

Summary of U.S. PISA 2012 results

- U.S. ranked higher in reading than in mathematics or science
- Particularly poor results in mathematics:
  - Below average of industrialized (OECD) countries
  - Higher percentage with low proficiency than OECD average
  - Lower percentage with high proficiency than OECD average
- No measurable change in average scores in any subject
- Gap between highest and lowest socioeconomic background significant but similar to OECD average gap, in all subjects
- Gender gap in reading only

Program for International Student Assessment (PISA) 2012

- **65** participating education systems
  - 34 OECD countries, 31 partner economies
- 3 U.S. states: Connecticut, Florida, and Massachusetts

U.S. below OECD average in mathematics

Shanghai-China	613
Singapore	573
Hong Kong-China	561
Chinese Taipei	560
Korea, Republic of	554
Macao-China	538
Japan	536
Liechtenstein	535
Switzerland	531
Netherlands	523
Estonia	521
Finland	519
Canada	518
Poland	518
Belgium	515
Germany	514
Vietnam	511
Austria	506
Australia	504
Ireland	501
Slovenia	501
Denmark	500
New Zealand	500
Czech Republic	499
France	495
OECD average	**494**
United Kingdom	494
Iceland	493
Latvia	491
Luxembourg	490
Norway	489
Portugal	487
Italy	485
Spain	484
Russian Federation	482
Slovak Republic	482
United States	**481**
Lithuania	479
Sweden	478
Hungary	477
Croatia	471
Israel	466
Greece	453
Serbia, Republic of	449
Turkey	448
Romania	445
Cyprus	440
Bulgaria	439
United Arab Emirates	434
Kazakhstan	432
Thailand	427
Chile	423
Malaysia	421
Mexico	413
Montenegro, Republic of	410
Uruguay	409
Costa Rica	407
Albania	394
Brazil	391
Argentina	388
Tunisia	388
Jordan	386
Colombia	376
Qatar	376
Indonesia	375
Peru	368

MA 514 (*,**)

CT 506 (*)

FL 467 (*,**)

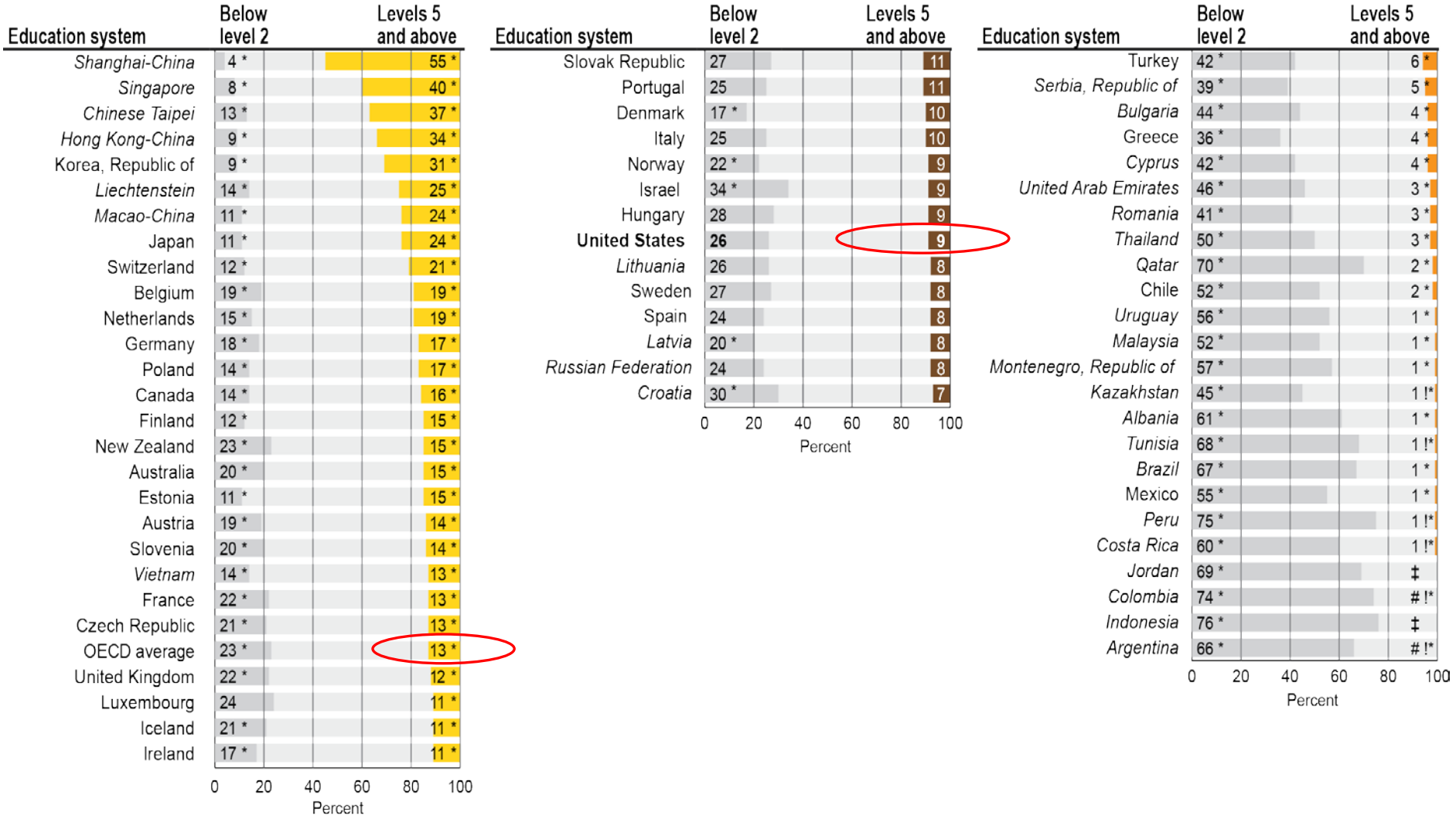
*** = State avg. different than U.S.**
**** = State avg. different than OECD**

Average higher than U.S. average

Average not measurably different from U.S. average

Average lower than U.S. average

Mathematics: 9 percent of U.S. 15-year-olds at highest proficiency levels

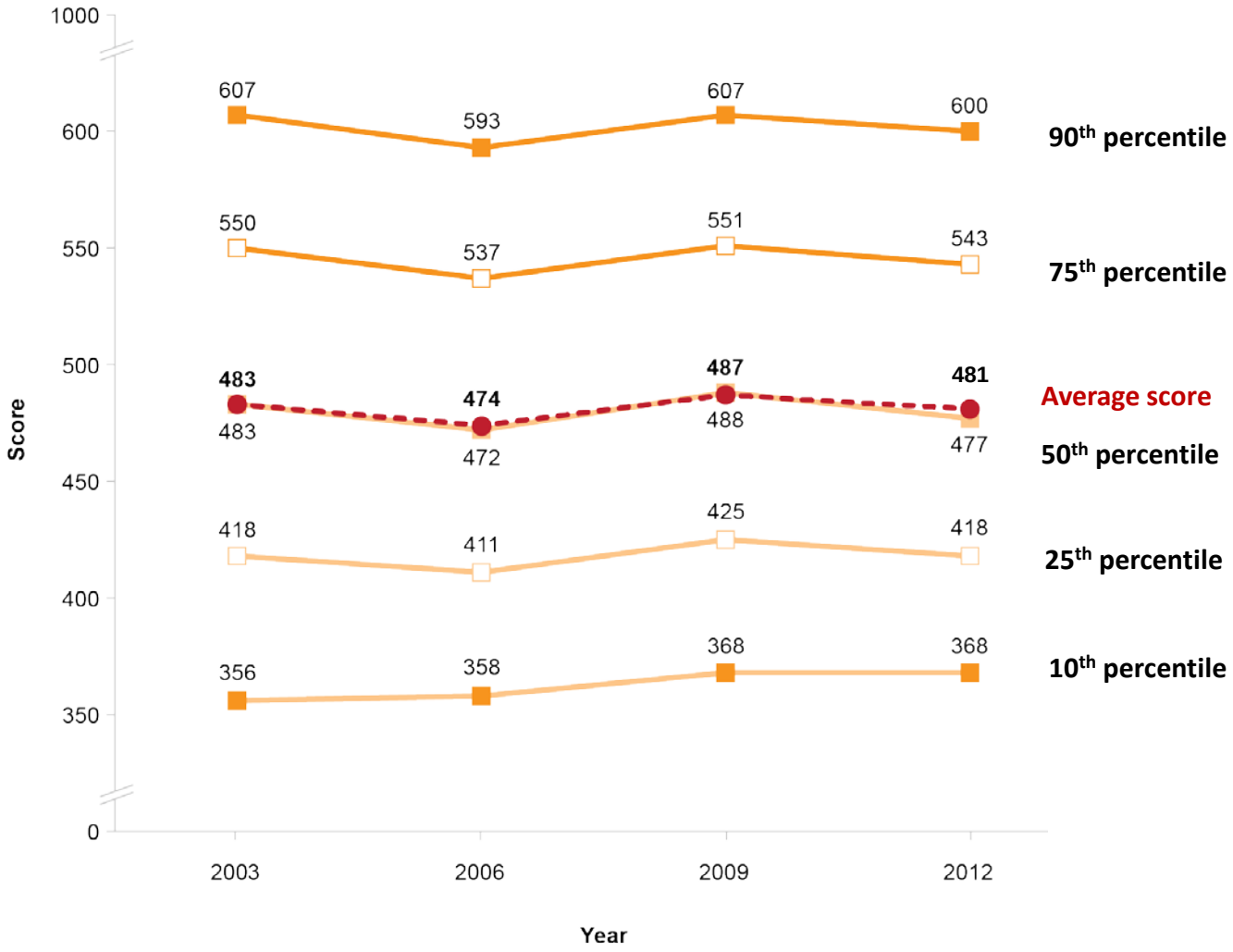


Percentage higher than U.S.

Percentage not measurably different than U.S.

Percentage lower than U.S.

Mathematics: No measurable change between 2012 and previous years



U.S. not measurably different than OECD average in science

Shanghai-China	580
Hong Kong-China	555
Singapore	551
Japan	547
Finland	545
Estonia	541
Korea, Republic of	538
Vietnam	528
Poland	526
Canada	525
Liechtenstein	525
Germany	524
Chinese Taipei	523
Netherlands	522
Ireland	522
Australia	521
Macao-China	521
New Zealand	516
Switzerland	515
Slovenia	514
United Kingdom	514
Czech Republic	508

MA 527 (*,**)

CT 521 (*,**)

Austria	506
Belgium	505
Latvia	502
OECD average	**501**
France	499
Denmark	498
United States	**497**
Spain	496
Lithuania	496
Norway	495
Hungary	494
Italy	494
Croatia	491
Luxembourg	491
Portugal	489

Russian Federation	486
Sweden	485
Iceland	478
Slovak Republic	471
Israel	470
Greece	467
Turkey	463
United Arab Emirates	448
Bulgaria	446
Chile	445
Serbia, Republic of	445
Thailand	444
Romania	439
Cyprus	438
Costa Rica	429
Kazakhstan	425
Malaysia	420
Uruguay	416
Mexico	415
Montenegro, Republic of	410
Jordan	409
Argentina	406
Brazil	405
Colombia	399
Tunisia	398
Albania	397
Qatar	384
Indonesia	382
Peru	373

FL 485 (**)

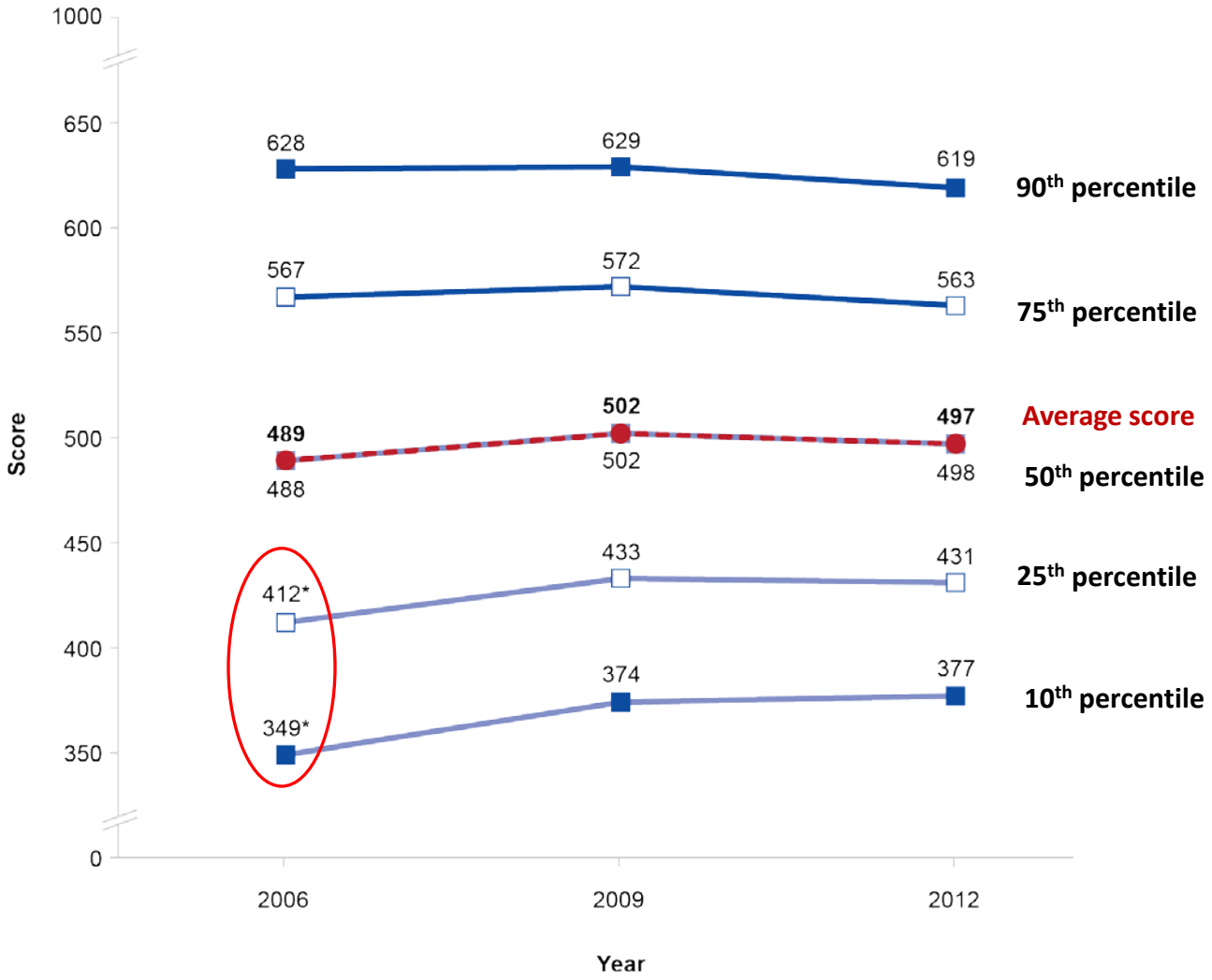
*** = State avg. different than U.S.**
**** = State avg. different than OECD**

Average higher than U.S. average

Average not measurably different from U.S. average

Average lower than U.S. average

Science: No measurable change in average; increase at lower end



* Significantly different from 2012 score

U.S. not measurably different from OECD average in reading

MA 527 (*,**)

CT 521 (*,**)

Shanghai-China	570
Hong Kong-China	545
Singapore	542
Japan	538
Korea, Republic of	536
Finland	524
Ireland	523
Chinese Taipei	523
Canada	523
Poland	518
Estonia	516
Liechtenstein	516
New Zealand	512
Australia	512
Netherlands	511
Belgium	509
Switzerland	509
Macao-China	509
Germany	508
Vietnam	508
France	505
Norway	504
United Kingdom	499
United States	**498**
OECD average	**496**
Denmark	496
Czech Republic	493
Italy	490
Austria	490
Hungary	488
Portugal	488
Israel	486
Latvia	489
Spain	488
Luxembourg	488
Croatia	485
Sweden	483
Iceland	483
Slovenia	481
Greece	477
Turkey	475
Russian Federation	475
Slovak Republic	463
Cyprus	449
Serbia, Republic of	446
United Arab Emirates	442
Chile	441
Thailand	441
Costa Rica	441
Romania	438
Bulgaria	436
Mexico	424
Montenegro, Republic of	422
Uruguay	411
Brazil	410
Tunisia	404
Colombia	403
Jordan	399
Malaysia	398
Indonesia	396
Argentina	396
Albania	394
Kazakhstan	393
Qatar	388
Peru	384

FL 492

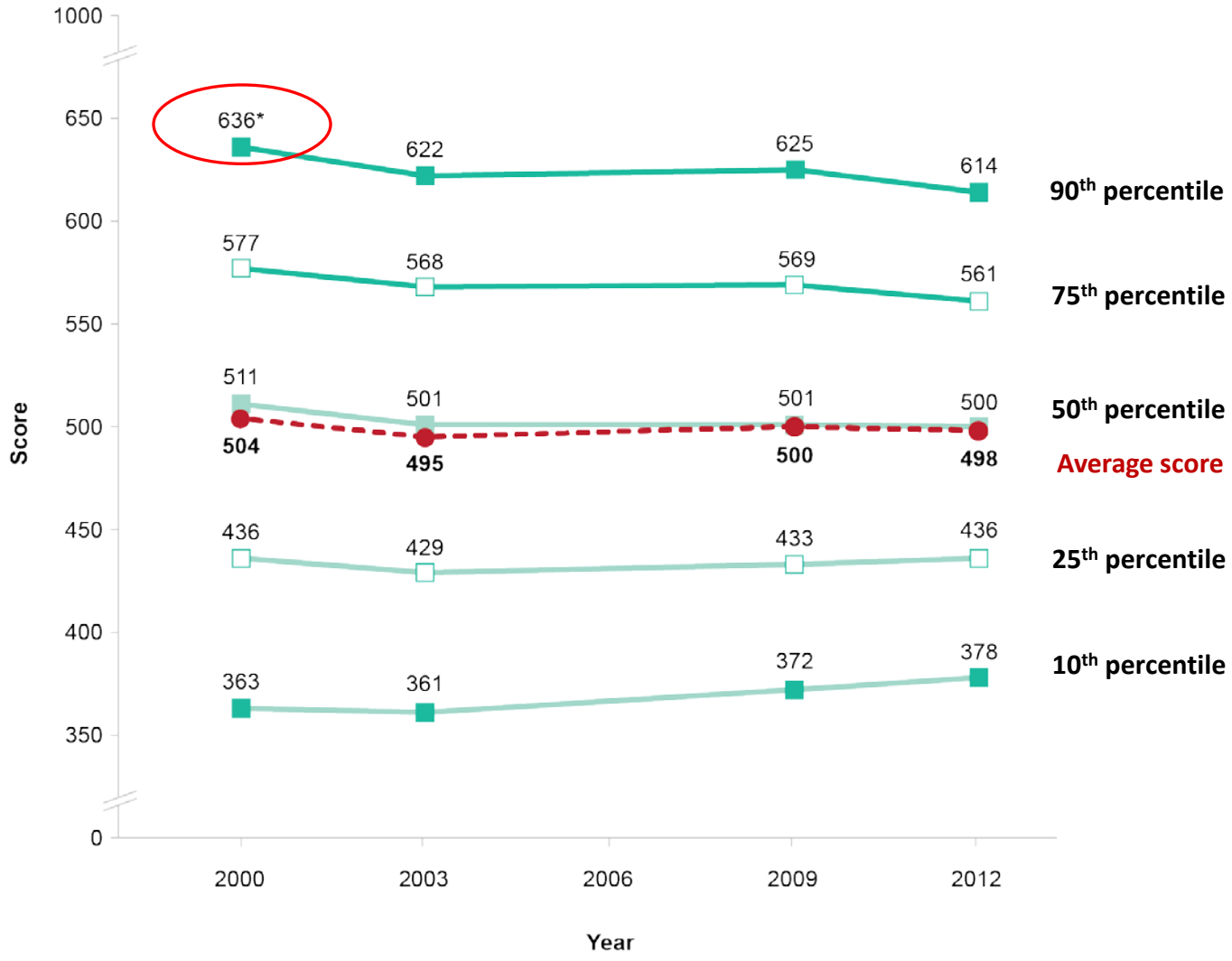
*** = State avg. different than U.S.**
**** = State avg. different than OECD**

Average is higher than U.S. average

Average not measurably different from U.S. average

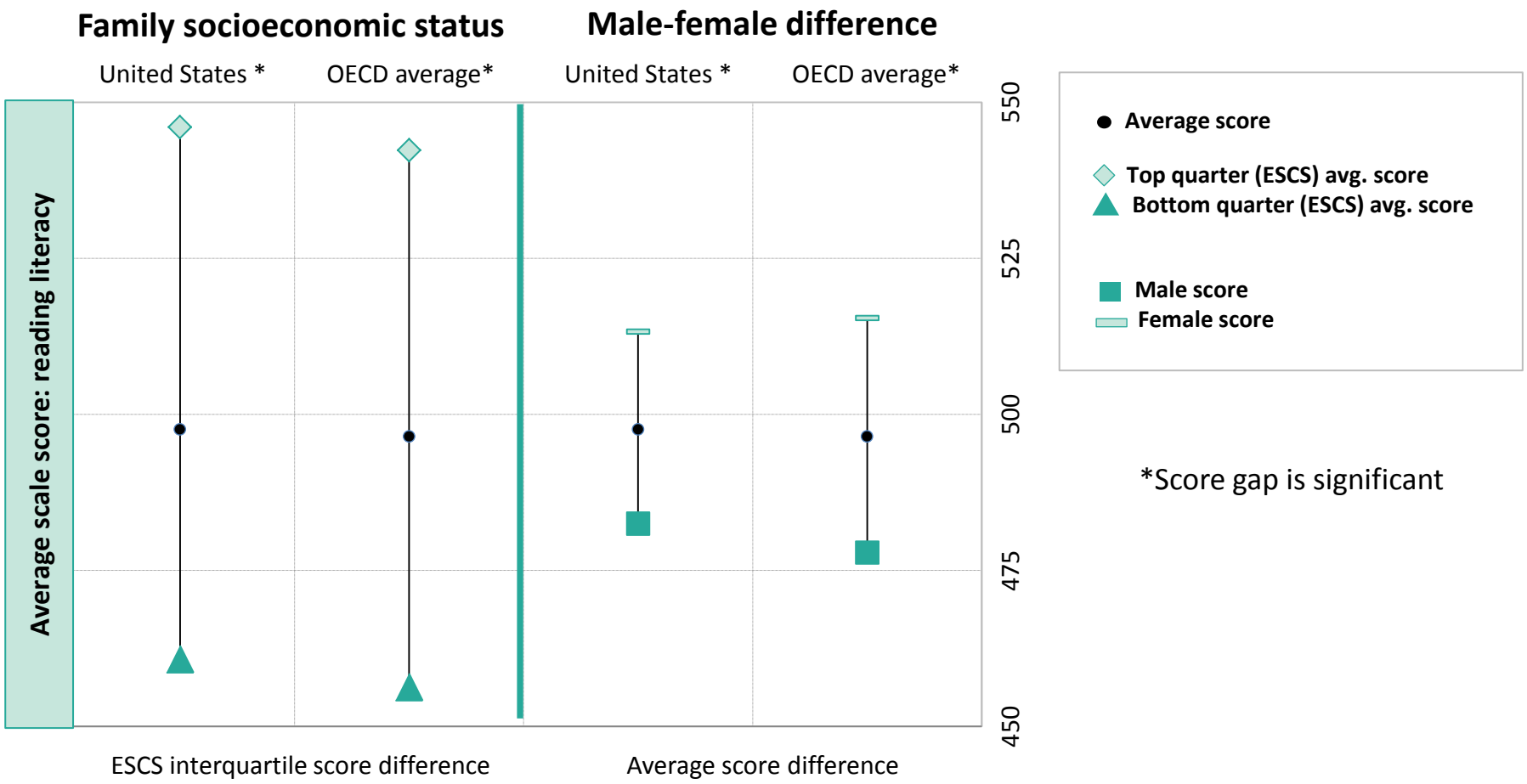
Average is lower than U.S. average

Reading: Decrease in scores at the high end; no other measurable changes



* Significantly different from 2012 score

Reading: Gap by family socioeconomic background similar in U.S. and OECD
Gender gap in both U.S. and OECD average



Note: Economic, social and cultural status (ESCS) index is based on students' reports on parents' occupation and education, and home possessions related to family wealth and educational resources.

What can we learn from the top countries?

What we can do:

- identify top countries and top U.S. states to study more closely
- identify promising education policies to study more closely
- compare progress against top countries

What we cannot do:

- conclude what works in these countries from an international assessment because
  - Cultural and economic contexts vary widely across countries
  - International assessments like PISA are just a snapshot of countries' performance on the given tests in the given subjects