

Exhibit P3.3: Achievement in Physics Cognitive Domains

Country	Overall Physics Average Scale Score	Knowing (30 items)		Applying (41 items)		Reasoning (30 items)	
		Average Scale Score	Difference from Overall Physics Score	Average Scale Score	Difference from Overall Physics Score	Average Scale Score	Difference from Overall Physics Score
Slovenia	531 (2.5)	521 (4.2)	-10 (3.3) ▼	543 (3.8)	12 (3.5) ▲	514 (5.7)	-17 (5.6) ▼
Russian Federation	508 (7.1)	517 (7.5)	9 (2.4) ▲	508 (7.6)	1 (1.3)	493 (6.7)	-15 (2.4) ▼
Norway	507 (4.6)	529 (4.2)	22 (2.9) ▲	484 (5.3)	-23 (1.8) ▼	519 (5.7)	12 (2.8) ▲
Portugal	467 (4.6)	474 (4.7)	7 (3.0) ▲	452 (5.7)	-15 (3.9) ▼	481 (3.9)	14 (2.9) ▲
Sweden	455 (5.9)	452 (6.0)	-3 (2.1)	454 (6.4)	0 (3.0)	450 (6.2)	-4 (3.2)
‡ United States	437 (9.7)	444 (9.8)	7 (3.5)	420 (10.2)	-17 (2.9) ▼	455 (8.8)	17 (3.3) ▲
‡ Lebanon	410 (4.5)	378 (4.7)	-32 (3.6) ▼	433 (5.4)	22 (5.3) ▲	375 (6.2)	-35 (4.1) ▼
Italy	374 (6.9)	367 (6.6)	-7 (4.4)	371 (7.3)	-3 (2.1)	375 (7.3)	1 (3.0)
France	373 (4.0)	375 (3.9)	2 (1.6)	358 (5.6)	-15 (3.4) ▼	397 (4.2)	24 (1.9) ▲

- ▲ Subscale score significantly higher than overall physics score
- ▼ Subscale score significantly lower than overall physics score

See Appendix PC.5 for sampling guidelines and sampling participation notes †, ‡, and ‡.

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS Advanced 2015