

**Exhibit 13.4: TIMSS 2015 Science Items for Concurrent Calibration at the Eighth Grade**

Item Type	Points	Items Released in 2011		Items Common in 2011 and 2015		Items Introduced in 2015		Total	
		Items	Points	Items	Points	Items	Points	Items	Points
Multiple-Choice	1	46	46	63	63	43	43	152	152
Constructed Response	1	33	33	57	57	34	34	124	124
	2	11	22	6	12	12	24	29	58
<b>Total</b>		<b>90</b>	<b>101</b>	<b>126</b>	<b>132</b>	<b>89</b>	<b>101</b>	<b>305</b>	<b>334</b>

**TIMSS 2015 Eighth Grade Science Items for Concurrent Calibration by Content and Cognitive Domains**

Science Content Domains	Items Released in 2011		Items Common in 2011 and 2015		Items Introduced in 2015		Total	
	Items	Points	Items	Points	Items	Points	Items	Points
Biology	32	36	47	51	28	36	107	123
Chemistry	18	20	25	26	18	19	61	65
Physics	24	27	31	31	22	22	77	80
Earth Science	16	18	23	24	21	24	60	66

  

Science Cognitive Domains	Items Released in 2011		Items Common in 2011 and 2015		Items Introduced in 2015		Total	
	Items	Points	Items	Points	Items	Points	Items	Points
Knowing	33	35	40	41	35	42	108	118
Applying	35	43	56	59	32	35	123	137
Reasoning	22	23	30	32	22	24	74	79
<b>Total</b>	<b>90</b>	<b>101</b>	<b>126</b>	<b>132</b>	<b>89</b>	<b>101</b>	<b>305</b>	<b>334</b>