

Doc Walding's "Have no fear" physics videos

Hi, I'm Dr Richard Walding, and I'm presenting a series of lectures on "Special Relativity" for my Year 12 Physics class at Moreton Bay College, Brisbane. These lectures cover material from my "New Century Physics for Queensland" Unit 3 & 4 textbook, Chapters 9 & 10, (published by Oxford University Press, 2019). Oxford provides videos as part of the published obook resource, however, OUP has no interest in, or responsibility for, the videos below.

I made these videos as a resource for my remote schooling during the April/May 2020 Covid shutdown. Feel free to pass on the links to your classes. As part of the *YouTube* license I have denoted all these as "suitable for children" and so comments are disabled. I can assure you that there is nothing untoward in these videos and you can safely show them to children. Cheers, Richard.

Playlist: <https://www.youtube.com/watch?v=BsQMc6JzKzY&list=PLDSD-d0kihs6fr675VVxXrIH4InfPIIq1>

Title	Time	Reference	Video link
9.1A - The problem of muon decay	23:38	Section 9.1 (A) page 248	https://youtu.be/BsQMc6JzKzY
9.1B - Frames of Reference	13:32	Section 9.1 (B) page 250	https://youtu.be/6oOULaQege0
9.1C - Postulates of Special Relativity	11:14	Section 9.1 (C) page 251	https://youtu.be/nhWZNz3CPQE
9.2 - Relative motion	19:36	Section 9.2 page 252	https://youtu.be/ofR_bhHVz3Q
9.3 - Simultaneity	8:21	Section 9.3 page 257	https://youtu.be/-WK3v5OmG90
9.4A - Relativity of time	18:24	Section 9.4 (A) page 261-264	https://youtu.be/VRFxtrpvr5o
9.4B - Which clock is moving	16:57	Section 9.4 (B) page 265	https://youtu.be/yyvm9b49XRQ
10.1A - Length contraction	22:29	Section 10.1 (A) page 274-277	https://youtu.be/LFN3m0saCgA
10.1B - Light years as a unit of distance	11:47	Section 10.1 (B) page 278	https://youtu.be/Hp4g_ONGTG0
10.2A - Rest mass and relativistic momentum	14:19	Section 10.2 (A) pages 280-281	https://youtu.be/f9L8Wuhmlz8
10.2B - Mass-energy equivalence	11:07	Section 10.2 (B) pages 282-283	https://youtu.be/rwx9WAm9NDg
10.4 - Paradoxical scenarios	30:24	Section 10.4 pages 288-291	https://youtu.be/ou6D4HjxOY0

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