

Unit 8.1 Contact Forces Video Links

All of the videos for the OpenSciEd units can be found on the [OpenSciEd YouTube Channel](#). For classrooms that are not able to access the videos via YouTube, we have provided alternative streaming links in the document below. Please note that some of the videos are only available via YouTube for permission reasons.

Student Facing Videos

| Lesson | Video Name | YouTube Link | Alternative Link | Description | Credits and Usage |
|----------|---------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------|
| Lesson 2 | Golf ball colliding with CD case | https://youtu.be/ZGN7zZrt-sQ | https://www.wevideo.com/video/1847735921 | This is a slow motion video of what happens to a golf ball when it collides with a CD case. | |
| Lesson 2 | Carts with rubber stoppers about to collide | https://youtu.be/8wojSebzTio | https://www.wevideo.com/video/1847738306 | This is a slow motion video of what happens when two blue carts with rubber stoppers are about to collide. | |
| Lesson 2 | Carts with metal rings colliding | https://youtu.be/sqXNPgYEEA4 | https://www.wevideo.com/video/1847740693 | This is a slow motion video of what happens when two cars with metal rings collide. | |
| Lesson 3 | Car collision showing bumpers | https://youtu.be/My1WOu3LOCM | https://www.wevideo.com/video/1847745361 | Slow motion video of slow speed collision between two cars showing elastic deformation of their bumpers | |

Unit 8.1 Contact Forces Video Links

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| Lesson 3 | Slow motion video of golf club hitting a golf ball | https://youtu.be/sVr6tVy7htU | https://www.wevideo.com/video/1848445134 | Slow motion video of golf club hitting a golf ball | |
| Lesson 3 | Baseball and bat collision | https://youtu.be/FYbn1WSWmQg | https://www.wevideo.com/video/1849079095 | Slow motion video showing collision between baseball and bat, showing the resulting deformation in both | |
| Lesson 3 | Strength Testing of Concrete Bridge | https://youtu.be/MVkmrGJBQAo | https://www.wevideo.com/video/1849083706 | This video is for students to analyze Strength Testing of Concrete Double-Tee Bridge Beam | |
| Lesson 5 | Carts colliding with brick | https://youtu.be/HRYcfOPCoRo | https://www.wevideo.com/video/1849074640 | Slow motion video of cart colliding with a brick with peak force collar | |
| Lesson 5 | Carts with different masses Collision | https://youtu.be/qeO3FjODpik | https://www.wevideo.com/video/1849039677 | Slow motion video of carts with different masses and speeds colliding, with rings as force detectors | |
| Lesson 7 | Condition A - regular speed & mass | https://youtu.be/ygbCFuqYFo | https://www.wevideo.com/video/1849086581 | Investigation 2, condition A - regular speed and mass launch pushing a box | |

Unit 8.1 Contact Forces Video Links

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| Lesson 7 | Condition B - regular speed & double mass | https://youtu.be/Xgc_zgVAiCYk | https://www.wevideo.com/video/18490889911 | Investigation 2, condition B - regular speed and double the mass launch pushing a box | |
| Lesson 7 | Condition C - double speed & regular mass | https://youtu.be/3Rzt0wNQATO | https://www.wevideo.com/video/1849091325 | Investigation 2, condition C - double the speed and regular mass launch pushing a box | |
| Lesson 13 | Cart & brick Collision - no rings | https://youtu.be/co5fN22N50A | https://www.wevideo.com/video/1849095210 | peak force collision with cart and brick, no rings | |
| Lesson 13 | Cart & Brick Collision - 1 Ring on Brick | https://youtu.be/OUOLsRFmBnk | https://www.wevideo.com/video/1849096143 | peak force collision with cart and brick, one ring on brick | |
| Lesson 13 | Cart & Brick Collision - 1 Ring on Cart | https://youtu.be/3A1gKY2qK1U | https://www.wevideo.com/video/1849097831 | peak force collision with cart and brick, one ring on cart | |
| Lesson 13 | Cart & Brick Collision - 2 Rings on Brick | https://youtu.be/eqKLBJFZlnE | https://www.wevideo.com/video/1849099485 | peak force collision with cart and brick, two rings on brick | |
| Lesson 13 | Cart & Brick Collision - 2 Rings on Cart | https://youtu.be/nqADgidCHOM | https://www.wevideo.com/video/1849100727 | peak force collision with cart and brick, two rings on cart | |

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| Lesson 15 | Cheerleading Competition Routine #1 | https://www.youtube.com/watch?v=yajRoKZVvg | No alternative link available | This video is used as part of the transfer task on Day 1. Cheerleading Competition Routine #1 | 2019 University of Kentucky cheerleaders - 24 time national champions |
| Lesson 15 | Cheerleading Competition Routine #2 | https://www.youtube.com/watch?v=RJYbqDFlexk | No alternative link available | This video is used as part of the transfer task on Day 1. Cheerleading Competition Routine #2 | |
| Lesson 15 | Cheerleading Competition Routine #3 | https://www.youtube.com/watch?v=RgH-Esw6GpI | No alternative link available | This video is used as part of the transfer task on Day 1. Cheerleading Competition Routine #3 - <i>this is a compilation of routines - choose 1-2 to watch.</i> | |

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Teacher Preparation Videos

| Lesson | Video Name | YouTube Link | Alternative Link | Description | Credits and Usage |
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| Lesson 2 | Preparing Sugar Glass | https://youtu.be/-jYT577_CAM | https://www.wevideo.com/video/1849106949 | This video is a teacher reference for how to prepare sugar glass for the classroom investigation. | |
| Lesson 3 | Setting up Laser to Test Deformation | https://youtu.be/N_LwGqvnOjk | https://www.wevideo.com/video/1849108470 | video demonstration of setting up and using the laser to test deformation of materials | |
| Lesson 12 | Setting up Investigation on the Ramp | https://youtu.be/3HZgumZXbKQ | https://www.wevideo.com/video/1849110279 | Setting up investigation on the ramp | |