

APPENDIX B – Suggested Internet Links

Key links

ASGSR

<https://asgsr.org/>

Current Drop Tower Challenge

<https://www.nasa.gov/glenn/glenn-expertise-space-exploration/physical-sciences-program/education-and-outreach/current-drop-tower-challenges-and-competitions/>

Past Drop Tower Challenges

<https://www.nasa.gov/glenn/glenn-expertise-space-exploration/physical-sciences-program/education-and-outreach/past-drop-tower-challenges-and-competitions/>

Microgravity & drop testing

2.2 Second Drop tower

<https://www.nasa.gov/centers-and-facilities/glenn/2-2-second-drop-tower/>

Brian Cox visits the world's biggest vacuum (video)

<https://www.youtube.com/watch?v=E43-CfukEgs>

Fire in Free Fall (video)

https://www.youtube.com/watch?v=VAA_dNq_-8c

Microgravity (video)

<https://www.youtube.com/watch?v=GSLwvtF4Zo0>

What is Microgravity?

<https://www.nasa.gov/audience/forstudents/5-8/features/nasa-knows/what-is-microgravity-58.html>

Zero Gravity Research Facility

<https://www.nasa.gov/centers-and-facilities/glenn/zero-gravity-research-facility/>

Zero Gravity [Research] Facility (virtual tour)

<https://www.nasa.gov/glenn/virtual-tours/zero-g/>

Fluids in microgravity (*all videos unless otherwise noted*)

4K Camera Captures Riveting Footage of Unique Fluid Behavior in Space Laboratory

<https://www.youtube.com/watch?v=Vx0kvxqgC1c>

4K Video of Colorful Liquid in Space

https://www.youtube.com/watch?v=bKk_7NIKY3Y

A Cup of Joe in Space

<https://www.youtube.com/watch?v=8sDc00IK7mA>

A Researcher's Guide to International Space Station Fluid Physics (*booklet*)

https://www.nasa.gov/wp-content/uploads/2019/10/iss-fluid_physics_tagged.pdf

Behaviour of water in microgravity

https://www.youtube.com/watch?v=HjBU_4if_CE

Boiling Fluids Behave Quite Differently in Space

<https://www.youtube.com/watch?v=kdt20h0ZaDw>

Capillary Flow Experiments on Space Station

<https://www.youtube.com/watch?v=3lwy8xxJxKo>

Christa's Lost Lessons: Liquids in Microgravity

<https://www.youtube.com/watch?v=HGf4Uka5hac>

Honey in space

<https://www.youtube.com/watch?v=Say3pUblISA>

ISS Update: Capillary Flow Experiments-2

<https://www.youtube.com/watch?v=K-PQE-VEdhc>

Liquid Ping Pong in Space - RED 4K

https://www.youtube.com/watch?v=TLbhrMCM4_0

Moving Water in Space - 8K Ultra HD

https://www.youtube.com/watch?v=H_qPWZbxFI8

Open Science: Space Coffee Cup

https://www.youtube.com/watch?v=Kr3OPNjsx_M

Playing with water in space!

<https://www.youtube.com/watch?v=Z2Jh9KyvJqg>

Science off the Sphere: Astro Puffs

<https://www.youtube.com/watch?v=e6Faq1AmlSI&t=8s>

Science off the Sphere: Fun with Antibubbles

<https://www.youtube.com/watch?v=U9VFwGYRZQg&t=69s>

Science off the Sphere: Bistronauts

<https://www.youtube.com/watch?v=q1k9njdSVE0>

Science off the Sphere: Goo!

<https://www.youtube.com/watch?v=Ohs8TQxDuX8&t=117s>

Science off the Sphere: Knitting Needle Experiment

https://www.youtube.com/watch?v=qHrBhgwq_Q&t=101s

Science off the Sphere: Lenses and Vortices

<https://www.youtube.com/watch?v=CrTUpTDyGpl&t=103s>

Science off the Sphere: Space Balloonacy

<https://www.youtube.com/watch?v=Wlsydeu7ZTo&t=78s>

Science off the Sphere: Space Soundwaves

https://www.youtube.com/watch?v=U0rl_-z1YwQ&t=175s

Science off the Sphere: Thin Film Physics

https://www.youtube.com/watch?v=Uddz-3RwA_Y&t=1s

ScienceCasts: Space Coffee

<https://www.youtube.com/watch?v=dWuEVSCw8B8>

Sciencetasia (*also addresses plants and flames in microgravity*)

https://www.youtube.com/watch?v=dZpTaC_SP_4

Scientists popping water balloons in weightlessness (microgravity)

<https://www.youtube.com/watch?v=u7TQM9z2lJA>

Space Station Live: A Cup of Coffee Beats a Bagful

https://www.youtube.com/watch?v=Fttaf_rhpm4

Space Station Live: ISS: Space Cup Full of Science

<https://www.youtube.com/watch?v=0Lmsvr8VVwM>

SpeedyTime 5 – Water in Space

<https://www.youtube.com/watch?v=NmnnBvYFOIs>

STEMonstrations: Properties of Water

https://www.youtube.com/watch?v=4A_dMWsw2oA

STEMonstrations: Surface Tension

<https://www.youtube.com/watch?v=34bFgA3H3hQ>

Tears in Space (Don't Fall)

<https://www.youtube.com/watch?v=P36xhtpw0Lg>

Water and Ping Pong Ball - Microgravity Experiment

https://www.youtube.com/watch?v=hl8fg_d67fU

Water Glove in Space

https://www.youtube.com/watch?v=aD1D9E_tdS8

Why Is NASA Boiling Fluids in Space?

<https://www.youtube.com/shorts/O1gj-MMjtqc>

Wringing out Water on the ISS - for Science!

<https://www.youtube.com/watch?v=o8TssbmY-GM>

Capillary action, surfaces, etc.**Capillarity – Measuring Surface Tension**

https://www.teachengineering.org/lessons/view/duk_surfacetensionunit_less2

Capillary Action and Water

<https://www.usgs.gov/special-topics/water-science-school/science/capillary-action-and-water>

Explained: Hydrophobic and Hydrophilic

<https://news.mit.edu/2013/hydrophobic-and-hydrophilic-explained-0716>

Fundamentals of Surface Tension/Wettability

<http://web.mit.edu/nnf/education/wettability/index1.html>

Lotus effect

<https://www.kruss-scientific.com/en/know-how/glossary/lotus-effect>

Superhydrophobic surfaces

www.lawrencehallofscience.org/sites/default/files/pdfs/college_resources/module_s/Superhydrophobic/Superhydrophobic_Surfaces.pdf

Superhydrophobicity – The Lotus Effect

https://www.teachengineering.org/lessons/view/duk_surfacetensionunit_less4

Surface Tension Basics

https://www.teachengineering.org/lessons/view/duk_surfacetensionunit_less1

Wetting and Contact Angle

https://www.teachengineering.org/lessons/view/duk_surfacetensionunit_less3

Analysis software**Fiji**

<https://fiji.sc/>

ImageJ

<https://imagej.net/ij/>

Tracker

<https://opensourcephysics.github.io/tracker-website/>

Paper writing

A Guide to Writing a Scientific Research Paper

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3528086/pdf/zeb.2012.0743.pdf>

Gravitational and Space Research journal

<https://reference-global.com/journal/GSR>

International Conference on Environmental Systems (ICES) digital repository

<https://hdl.handle.net/2346/58495>

Poster guidance (e.g., for those invited to present at the ASGSR meeting)

10 simple rules for designing a scientific poster

<https://www.molrecologist.com/2016/06/03/10-simple-rules-for-designing-a-scientific-poster/>

Conference presentations: Lead the poster parade

<https://www.nature.com/articles/nj7614-115a>

Creating Anthropology Conference Posters: A Guide for Beginners

https://content.csbs.utah.edu/~cashdan/tig/making_a_poster.pdf

Designing conference posters

<https://colinpurrington.com/tips/poster-design/>

How to Create a Research Poster

<https://guides.nyu.edu/posters/>

How to make an academic poster

<https://www.ovid.com/jnls/annals-of-medicine-and-surgery/fulltext/10.1016/j.amsu.2016.09.001~how-to-make-an-academic-poster>

Poster Perfect

<https://www.the-scientist.com/poster-perfect-42000>

Ten Simple Rules for a Good Poster Presentation

<https://pmc.ncbi.nlm.nih.gov/articles/PMC1876493/pdf/pcbi.0030102.pdf>

Microgravity on aircraft (*selected videos for related fun & enlightenment*)

OK Go - Upside Down & Inside Out

<https://www.youtube.com/watch?v=LWGJA9i18Co>

OK Go - Upside Down & Inside Out BTS - How Parabolas Work

<https://www.youtube.com/watch?v=bMrX014HTgU>

OK Go - Upside Down & Inside Out BTS - How We Did It

<https://www.youtube.com/watch?v=pnTqZ68fI7Q&t=2s>

Please understand that these are just suggestions and are not meant to indicate endorsements by NASA or the federal government.