## **URLs**

Water circus activity (A-level Biology); free download from Times Educational Supplement:

https://www.tes.com/teaching-resource/water-circus-activity-a-level-biology-12324726

Movie of rotating ice structure:

https://janewhitney.com/ice movie resources

A demonstration showing solid benzene sinking in liquid benzene:

https://www.youtube.com/watch?v=BDW7C3eMk-g

3D molecular designs web site (showing water kit):

https://3dmoleculardesigns.com/product/water-kit/

Polywater is no 3 on this video:

https://www.youtube.com/watch?v=-pCzLbCCppo&t=355s

The rise and fall of polywater:

https://sciencehistory.org/stories/magazine/the-rise-and-fall-of-polywater/

Why do snowflakes have six points? (by Dr Christopher Fennell, Oklahoma University):

https://youtu.be/OUJLYCRwB9E

VisChem Institute: water:

http://www.vischem.com.au/online-resources.html

https://www.youtube.com/watch?v=edH6WN0hCbU

Circumstellar Habitable Zone Simulator:

https://ccnmtl.github.io/astro-simulations/circumstellar-habitable-zone-simulator/

## **Books**

Life's matrix, a biography of water, Philip Ball, University of California Press, 2001.

Water, a very short introduction, John Finney, Oxford University Press, 2015.

Astrobiology, a very short introduction David C. Catling, Oxford University Press, 2013.

Water, Felix Franks, Royal Society of Chemistry, 1984.

How proteins work, Mike Williamson, Garland Science, 2012.

## **Articles**

How Water's Properties Are Encoded in Its Molecular Structure and Energies, Emiliano Brini *et al, Chem. Rev.* 2017, 117, 12385–12414.

Hydrogen bonding problems, Christopher Talbot, School Science Review, March 2000, 81 (296), 117-118.

Seeking the solution, Philip Ball, Nature Vol. 436, 25<sup>th</sup> August 2005, 1084-1085.

Water? What's so special about it? John L. Finney, Phil. Trans. R. Soc. Lond. B (2004) 359, 1145–1165.

Simulating water and the molecules of life. Gerstein M. and Levitt M., *Scientific American* (1998), 279: 100–105.

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