

The IOR Fantastic Fridges STEM Toolkit

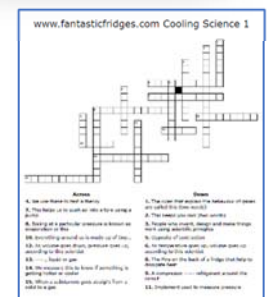
Resources for IOR Members promoting RACHP in schools and at careers events.

The IOR Refrigeration STEM Toolkit

The IOR provides a package of promotional material, experiments, demo equipment and games to inspire you and the young people you are talking to about refrigeration science and careers. Our IOR STEM network members keep the kits in regional locations and can lend them out to other members to support their activities.

The kits include:

1. A thermally insulated branded Backpack to keep all your IOR experiments and giveaways in.
2. Branded materials for use at exhibitions and displays: a popup exhibition stand, Tshirts, FridgeMagnets and business cards featuring the fantasticfridges.com website
3. Activities and handouts: Fridge diagram jigsaws, crosswords/wordsearches (and solutions), flip cards and games. You can give these out as an activity and encourage students to look at the interactive content these are based on at www.fantasticfridges.com.
4. Basic Heat Transfer Demonstration materials: handboilers, gallileo thermometers, magic mugs that reveal a fridge circuit when hot (heat transfer)
5. Suggestions for more complicated activities or demonstrations: Magnet engine and Peltier cooler.
6. Ideas for experiments and explanations of principles - A book "How to be an Engineer" with ideas for activities you can organise related to various engineering principles, and guides to using the IOR science demonstration items plus videos from members with tips on how to engage with students.



All of these items are designed to link back to our interactive schools website www.fantasticfridges.com and we are developing an IOR youtube playlist of members explaining how they have used these items with schools, and what scientific principles they show. You will also be able to download information about the experiments and activities from <https://www.fantasticfridges.com/Main/TeachersArea> (coming soon)

Online Resources to support the ToolKit

- The www.fantasticfridges.com website provides explanations about basic refrigeration principles, how fridges work and examples of applications as well as online games.
- Careers interviews and quizzes at <https://www.fantasticfridges.com/Home/Careers>
- Online Crosswords at [https://www.fantasticfridges.com/AdvancedTopics \(coming soon\)](https://www.fantasticfridges.com/AdvancedTopics (coming soon))
- An IOR YouTube Fantastic Fridges playlist is under development and we are continually adding videos with explanations of experiments and demonstrations to share with schools/students and walk rounds of systems and science explainers. Please send us videos of you using the fantasticfridges resources (with permission to take images of course)

https://youtube.com/playlist?list=PLHzC3EPObC3p5CZDSS86o_gxAnqwVvNjv

More IOR Guidance Notes available

Download our free Education Guidance notes for more hints and tips from <https://ior.org.uk/careers>

- GN 2 – How to become a STEM (Science Technology Engineering and Maths) Learning Ambassador scheme FAQs
- GN 4 - Promoting the RACHP industry and careers through engagement with Schools
- GN 6 - Employers Guide to Apprenticeships
- GN 7 – Using IOR’s Fantastic Fridges resources to promote careers in schools

STEM Learning Ambassador Programme

We recommend that you register to become a STEM Learning Ambassador with STEM Learning if you plan to give regular talks to schools and club, as they will help with free training, DBS checks, adding your name to a database of engineers and letting you know what opportunities are available locally.

<https://www.stem.org.uk/stem-ambassadors/become-a-stem-ambassador>

STEMAZING inspiration academy also provides training for women in STEM as visible role models to run fun, interactive online STEM sessions <https://www.stemazingltd.com/inspiration-academy>

How to get an IOR STEM Refrigeration Tool Kit

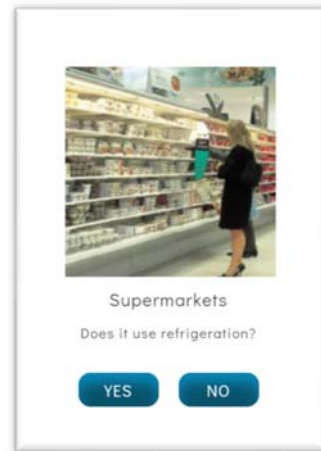
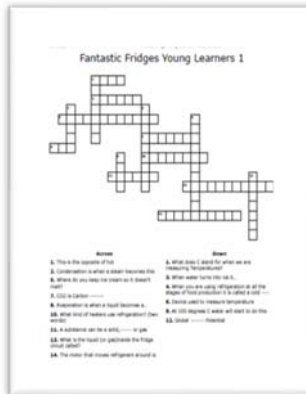
Contact your local IOR STEM Network member to borrow a toolkit.

Draft list to be confirmed??:

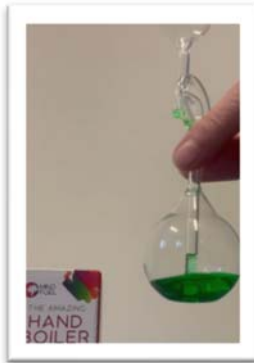
Please remember that the contents of the IOR STEM Tool Kit are loaned to members for use at specific events and must be returned to the network member or IOR office so that the Kit can be used by others who want to help promote RACHP careers and science. Copies of crosswords and other printable resources can be freely downloaded from the www.fantasticfridges.com website or used online.

IOR STEM TOOLKITS

Games and puzzles for students to use



Ideas and activities to demonstrate thermodynamics and heat transfer and science



Branded promotional items (bag, "business cards", fridge magnets, adult tshirts, pull up stands)

