

What's In My Tray?

Would you like to create more practical science opportunities for your students? **What's In My Tray?** from **Gratnells**, makers of the iconic classroom tray, is a collection of over 100 free, tray-based practical activities that will enthuse and engage your students. The Gatsby Foundation's *Good Practical Science Report* (Holman, 2017) reported that many schools are making too little use of their often excellent practical science facilities. Gratnells are working to support teachers and schools to increase the amount of practical work they undertake. We are doing this through the publication and sharing of well-planned and purposeful practical activities that require little in the way of specialist equipment. *What's In My Tray?* activities are straight-forward and can be undertaken in your usual classroom or school grounds.

Showcased at Association for Science Education (ASE) Conference in Belfast, Northern Ireland, Gratnells' Learning Rooms *What's In My Tray* primary practical carousel attracted a full house and received glowing feedback from attendees.

All *What's In My Tray?* activities are curriculum-based and easily recreated for your learners using your own classroom and commonly available equipment. They are robust and repeatable, using minimal consumables. The *What's In My Tray?* activities can be used individually as lesson starters, for STEM Clubs or to support theory work and develop subject knowledge. The full carousel can be recreated for end of term round-ups, science week and open days and are a great way to raise the profile of science in your school and to cascade practical science activities to colleagues via a CPD session.

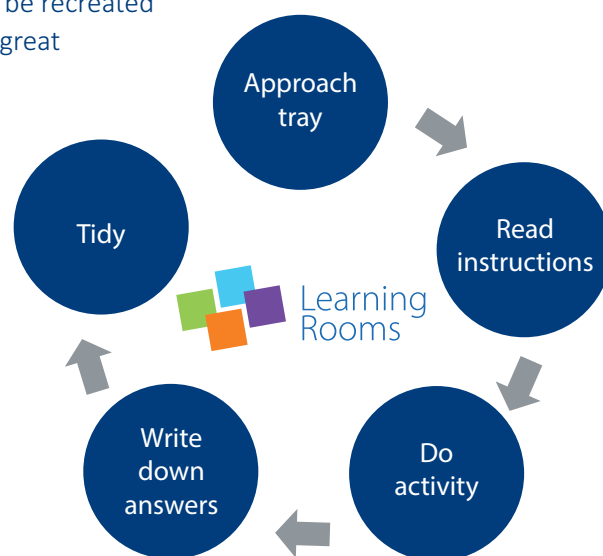
The benefits of tray-based practical work include:

- Easy resource allocation
- Finite equipment access
- Simplified preparation and clearing up
- A controlled work environment
- A clear format for collaboration and group work
- Transportability
- Easy differentiation
- Supporting students to take ownership of the activity.

At the 2019 ASE Conference in Belfast, the *What's In My Tray?* workshop saw five teams take on a selection of five of our tray-based practical activities, which you'll find detailed below.

With only five minutes per activity, it was a fast-paced, interdisciplinary whirlwind around five areas of the primary science curriculum. Participants had to work together to complete each task and there were Gratnells Tea Trays available as prizes for each member of the winning team.

The competition was fierce, which was evidenced by the high levels of engagement from all participants.



What's In My Tray?

BrightSparks – Electricity

What will allow electricity to flow? Construct a simple circuit using 'plug and play' BrightSparks modules following the circuit diagrams. Test nine different materials and record which are conductors and which are insulators. Can you add a parallel circuit with a buzzer to provide an audible signal too?



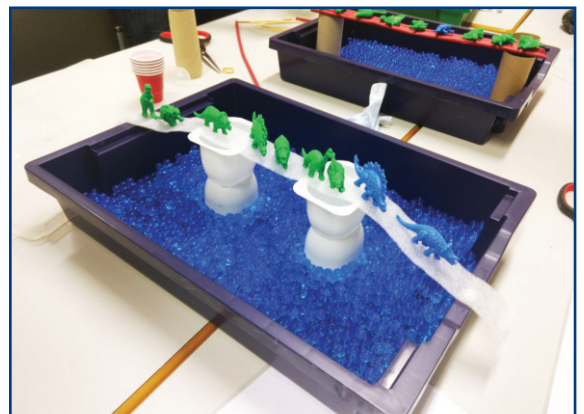
Minibeast Key

Use brushes and spoons to hunt through a woodchip-filled tray and uncover an amazing collection of minibeasts. Follow the key (free download available) to identify all ten and note down your answers. Use a magnifying glass to see their interesting features.



Dinosaurs Love Bridges – STEM Challenge

Dinosaurs migrate too! Help the dinosaurs escape the long dark winter and get to land with more food and water by building them two bridges over the river (water bead trays). The two bridges must be of differing designs. The bridges must span the longest length of the tray. If any dinosaurs fall in the river they will be swept away, you cannot pick them up out of the water once they have fallen. When the buzzer goes, note down how many dinosaurs are standing on your bridges and how many are in the river. Take a photograph to record your work.



Digestive System

Use the recycled bottles, tubes, pipes and props to build a model digestive system in the large art tray. Label each part with its name and function (free download available). Take a photograph of your completed, labelled, digestive system to evidence your work.



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Seed Tray

Explore the seed models and real seeds in the 30-section tray insert. Match the seed dispersal method labels (free download available) to the seed models. Match one real seed example to each seed dispersal method. Take a photograph of your matched pairs or note down your answers.



After five rounds of activity the teams swapped answer sheets and totted up their scores. The winning team of teachers is shown here with their Gratnells Tea Tray prizes. No one went away empty handed though, all workshop participants took home with their very own Gratnells mini tray.



I hope I have inspired you to try out the *What's In My Tray?* activities and increase the amount of practical science you undertake with your pupils. We would love to see photographs and videos of your *What's In My Tray?* recreations, you can share them with us via any social media platform using #WhatsInMyTray.

Full details of each activity, including kits lists, printable instructions, labels and answer sheets are freely available, along with over 100 more curriculum based, practical *What's In My Tray?* activities on the Gratnells Learning Rooms website at www.learning-rooms.com/whats-in-my-tray

What's In My Tray? will be touring the UK and USA during 2020 and we'd love to see you in one of our workshops.

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References:

Holman, J. (2017). Good Practical Science. The Gatsby Foundation.

