



Multitasking mayhem

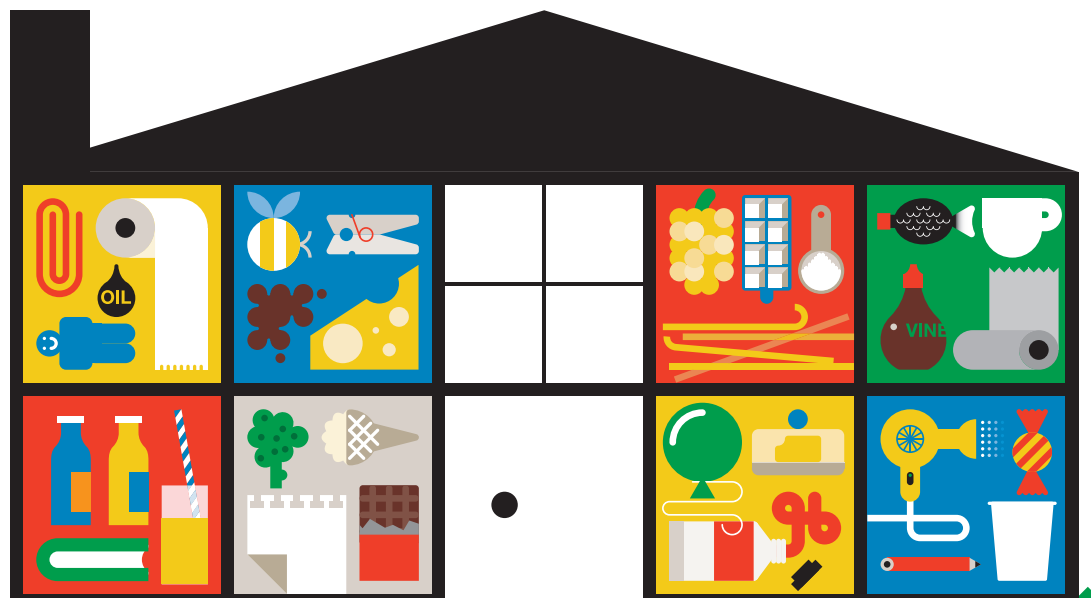


The activity

Make a game out of everyday tasks.

ExpeRiment with doing two things at once.

Learn how different parts of your brain deal with different tasks.





What you'll need

Special materials

You can download a ready-made chart at rigb.org/experimental.

- Paper
- Pen
- Ruler
- Something to read
- Something to count

What to do

Being safe

This is a nice safe activity, but do make sure you've got plenty of room when waving your arms and legs around.

Introduction: Ask your child if they've ever tried doing two things at the same time. As an example, you can get them to try rubbing their tummy and patting their head at the same time. If they're good at this, get them to try swapping hands. Ask them why they think it's difficult and suggest you try some different tasks to test what is difficult and what is not.

Activity: You can print off our chart, or draw your own. Either way, you need three columns and three rows. You need six tasks all together, two physical tasks, two language tasks, and two number tasks. We used:

- turning your foot clockwise
- turning your arm anti-clockwise
- reading
- listening to someone talk
- counting
- listening to someone else count

You can try and think of your own though. The important thing is to have one of each task in the rows and in the columns.

Explain each task to your child and then ask them to pick one of the squares in the chart. They should then try to perform the two tasks for this square, one from the column



What to do
(continued)

the other from the row. They can mark in this square if it is easy or hard to do these two tasks at the same time.

You should find that it is hardest to do the tasks that are of the same type at the same time, for example, counting, while listening to someone else count.

Follow up: Ask your child if they have spotted any patterns. Have they noticed that it's hardest to do pairs of the same type of task at the same time?

Talk to your child about the brain having different areas for different tasks and ask what they think is happening when you do similar tasks and when you do very different tasks.

Questions to ask children

Before the activity:

Why is it difficult to rub your tummy and pat your head at the same time?

What two things can you do at the same time?

During the activity:

How difficult was each pair of tasks to do?

When might you have to do these two things in real life?

Is this task to do with your body, words, or numbers?

What patterns are emerging on the chart?

After the activity:

What patterns can you see on the completed chart?

What is the same about the tasks that we found difficult?

Do you think all of your brain is controlling everything?

If you had to divide the brain up to do different tasks, what tasks would you put together?



The science

When performing a task different parts of the brain are working to complete the task. If two separate, unrelated tasks are happening, then different parts of the brain are being used and little to no interference happens. However, if you try to complete two tasks at the same time, using the same area of the brain, it will become confusing. Patting your head and rubbing your tummy is a classic example where the movement centres of the brain are trying to process and send signals for two different movement tasks at the same time. With practice though, you can train your brain to consider the two tasks as one, and so there is no longer a competition for your brain's resources.

Going further

Try adding your own tasks, but not just within the themes of physical, language, and number. See if you can deduce which tasks are handled by the same parts of the brain.

