**Kitchen Science**

Try this experiment to see how fast powders dissolve in hot and cold water.

**Dissolving** happens when two substances combine completely (like chocolate and saliva / water and powder)

When one substance dissolves in another, the result is called a **solution**.

A mixture is often in the form of a solution, where one substance (the **solute**) is dissolved in another (the **solvent**)

**You will need**

* Powders to dissolve eg coffee, flour,sugar,salt,baking powder,custard powder, cocoa powder (whatever you have)
* Five glass jars (a drinking glass will work)
* Hot water **(you need an adult to help with this!!)**
* Cold water
* Teaspoons

**What to do**

1. Put one teaspoon of each powder in a glass
2. Add the same amount of cold water to each glass (half cup)
3. **Observe** (watch) what happens. Do any powders dissolve immediately?
4. Stir the water. Observe. Which powder dissolves the quickest?
5. Record your answers on the worksheet or a page.
6. Discard your substances.
7. Repeat steps 1-6 using **hot** water

**Thinking time**

* Was there a difference between dissolving in hot and cold water?
* Which was quicker to dissolve?
* Was this a **fair test**? Why / why not?

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Complete the table.

The dissolving order goes from 1 (the fastest) to 5 (the slowest)

|  |  |  |
| --- | --- | --- |
|  | **Cold water** | **Hot water** |
| Food/powder | Observation | Dissolving order | Observation | Dissolving order |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Which substance dissolved the quickest in…

1. Cold water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Hot water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Was there any difference between dissolving in hot and cold water?

Explain.