

**CAT 1 - Chemical Sciences**

Wisdom Stage

Film Canister Rockets

**Aim:** The aim of this experiment is to find how...

**Hypothesis:** Once I have combined the solid (antacid tablet) with the liquid (cold water), I predict that….

Once I have combined the solid (antacid tablet) with the liquid (warm water), I predict that….

**Materials:**

1. Film canister
2. Antacid tablet x 2
3. 5mL cold water
4. 5mL warm water
5. Cardboard

**Method:** Watch the [video](https://www.youtube.com/watch?v=Kt5q8aMp8oU) and write the steps for your method. *Please note, we are using water instead of vinegar, and antacid tablets in place of bicarb soda.*

*In wisdom stage, you will be conducting this experiment a second time with warm water, and comparing the difference in results. This must be included in your method.*

**Results:** Film your results and take a photo that can be included in this report.

Record your observations, step by step, exactly what happened for both experiments.

**Discussion: Write your responses in full sentences**

1. What is the correct term for what was happening to the antacid tablet when it was added to the water?
2. When you add the antacid tablet to the water, water molecules break the bonds of the antacid tablet and combine with them. How does this explain what happened in the film canister?
3. Describe what caused the film canister to explode?
4. When you add the antacid tablet to the water, the particles change. *Draw* the particles and write a *description* under each box of why the antacid tablet, water, and carbon dioxide represent these types of matter?

**Drawing of the solid’s particles:**

**Description of the solid’s particles:**

**Drawing of the liquid’s particles:**

**Description of the liquid’s particles:**

**Drawing of the gas’ particles:**

**Description of the gas’ particles:**

1. Is the combination of antacid tablet and water in this experiment a solution or a mixture? Explain your response.
2. Was there any difference in results with the warm water compared to cold water? Explain your response
3. How could you improve this experiment?

**Conclusion**

Use the TEEL paragraph structure to conclude your report. Your conclusion should include:

* Write two to three sentences about what you thought of this experiment, and what you learned from it.
* Did anything go wrong?
* What would you change if you were to do it again?
* Did the experiment results match your hypothesis?