# What is the secret to eco-friendly homes?

## Required materials

* 5 cups
* 5 small cups
* water
* a tablespoon
* wool, cotton fabric, paper/cardboard, hay/straw
* cling film
* 5 rubber bands
* a stopwatch

## 1. Questions before performing the experiment

1. Have you ever noticed that some clothes keep you warmer than others?  
   What do you think makes the difference?

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1. Can you name some materials that you think might be good at keeping a house warm in winter and cool in summer?

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## 2. Watch the first video and perform the experiment

Follow the steps outlined in the experiment video.

Draw a diagram of your experiment in the box on the next page.

## 3. Record your measurements

Fill the table.

|  |  |
| --- | --- |
| **Material** | **Time (min)** |
|  |  |
|  |  |
|  |  |
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## 4. Observations

Describe what happened during the experiment.

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## 5. Summary

Summarize the activity by answering the questions: why, what and how.

1. **Why** is it important to study how different materials insulate buildings?
2. **What** did we learn about the insulating capabilities of wool, cotton, hay, paper and air?
3. **How** did we conduct the experiment to test the insulating properties of materials?

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