Innovation Training Module

5Ws & 1H

A Simple Content Development Technique

Introduction

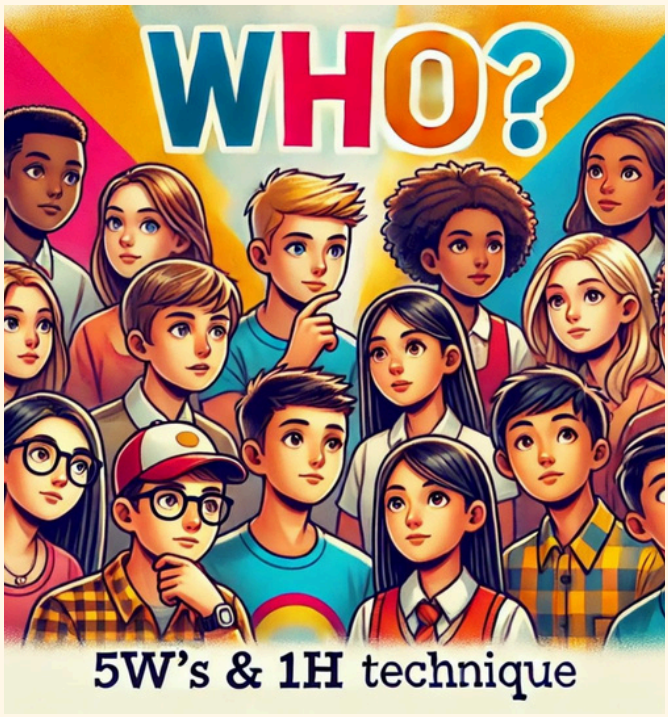
Dear Students, many of you write Essays for School Competitions and participate in Elocution in some National Contests. Some may be the Master of Ceremony at School Events. Sometimes you may have to do Extempore on a topic completely unprepared. In all such contexts, building content requires a structured, yet creative approach. One of the best techniques to get ready with the contest is the 5W's & 1H Technique. It involves answering six fundamental questions: **Who, What, When, Where, Why, and How**. By addressing these questions, one can create well-rounded and engaging content. With practice, using this technique, you can deliver speeches even at a short notice. This method is widely used in journalism, research, problem-solving, and creative writing.

The Technique

Let's explore each of these questions and how they contribute to building compelling content. In the next section, we will have a comprehensive example of building an Essay demonstrating the technique.

1. Who: The "Who" question focuses on identifying the main characters or subjects that your content revolves around. Whether you are solving a problem, building a Science Project, writing an essay, or creating a presentation, understanding the individuals or groups involved is crucial. Once you know the stakeholders, you can make your content more relatable. Look at the below examples on using this question WHO, gather answers, and you will have some content ready for your speech...

- Who leads the project?
- Who are the team members?
- Who benefits from the outcomes?
- Who is the target audience?



- Who funds the project?
- Who conducts the experiments?
- Who validates the findings?
- Who implements the innovation?

2. What: The "What" question delves into the heart of your content by defining the central theme, problem, project solution, or concept you aim to address.

This question encourages you to identify the main subject matter and clearly communicate the purpose of your content.

Let's see a few "What" questions answering which helps in building insightful content for your project report...

- What is the project's goal?
- What problem does it solve?
- What materials are needed?
- What methods are used?
- What are the expected outcomes?
- What data is collected?
- What are the findings?
- What are the next steps?

3. Where: The "Where" question prompts you to consider the location or setting of your content. Understanding the geographical context can help paint a vivid picture for your audience and enable them to visualize the scenario. This question is especially crucial when writing about events, historic moments, or specific locations. So, as an example, let us apply these "Where" questions for an Innovation Project and gather responses...

- Where did the idea originate?
- Where is the research conducted?
- Where will data be collected?
- Where are the materials sourced?

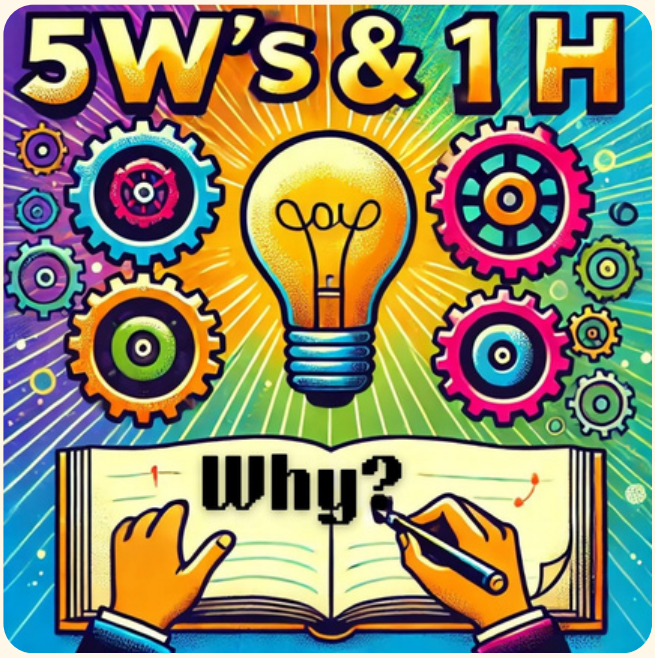
- Where do experiments take place?
- Where will testing be done?
- Where will the results be published?
- Where are the stakeholders located?

4. When: The "When" question focuses on time and chronology.

By defining the timeframe, you enable your audience to comprehend the context and evolution of your subject. It helps avoid confusion and lends credibility to your content. Let's look at a few "When" questions answers of which would help in an Essay perhaps...

- When does the project start?
- When are the milestones?
- When will data be collected?
- When will experiments conclude?
- When are results expected?
- When is the project deadline?
- When will the innovation be available for use?
- When will funding be received?

5. Why: The "Why" question digs deep into the motivations, justifications, or causes behind the project, innovation or the chosen topic. Understanding why something occurs or why it



is relevant proves to be very value-adding to your content. "Why" is a very powerful tool. This question may be applied in many ways to cull useful answers helping your Elocution or Debate. Shall we give it a try?

- Why start this project?
- Why this methodology?
- Why these criteria?
- Why these materials?
- Why this equipment?
- Why this audience?
- Why this region?
- Why these results?
- Why collaborate with these partners?
- Why invest in this technology?
- Why publish in this journal?

6. How: The "How" question focuses on the methodology, processes, or strategies involved in achieving a particular outcome. By providing step-by-step explanations, demonstrations, or infographics, you can make complex concepts more accessible and engaging for your audience. "How" completes the presentation, be it an Essay, a Speech, or a Project Report. Here are a few "How" questions to answer for completeness of your content...

Let's see a few "What" questions answering which helps in building insightful content for your project report...

- How are goals set?
- How does it benefit users?
- How is success defined?
- How is the project funded?
- How is the team organized?
- How is it tested?
- How is data collected?
- How are results analyzed?
- How is progress tracked?
- How are risks mitigated?
- How is it implemented?

Summary

The 5W's & 1H technique is a valuable tool for structuring scientific projects. By systematically addressing key questions, you can develop clear, logical, and impactful innovations.

Science and everyday life cannot and should not be separated.

Rosalind Franklin

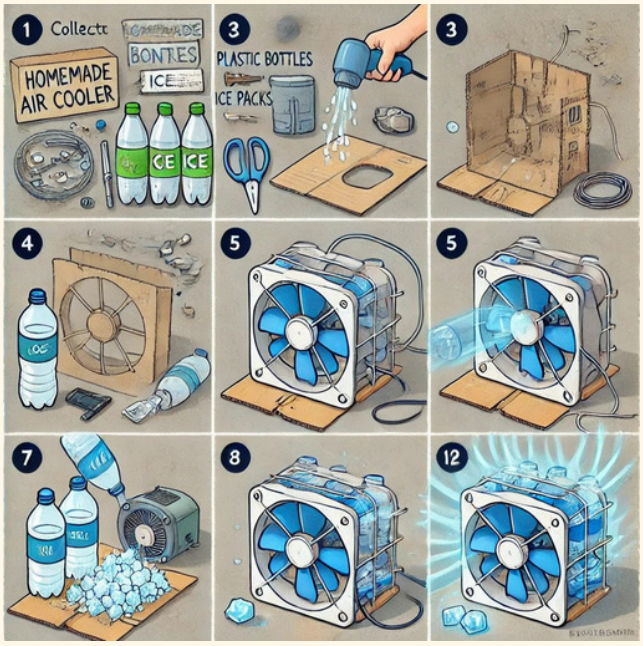
Take a project to Build a Low-Cost Home-Made Air Cooler Using Recycled Materials. Let us Apply 5W's & 1H Technique to this context and write a Project Summary at the end.

Who

- Who is designing the air cooler? - A group of high school students as part of a science project.
- Who will benefit from this innovation? - People in hot regions who cannot afford expensive air conditioning.
- Who will provide the necessary materials? - The students will collect discarded items from their homes and local recycling centers.
- Who will test the efficiency of the air cooler? - Teachers, classmates, and local community members.
- Who will help in building the prototype? - Mentors, science teachers, and family members.

What

- What is the primary goal of the project? - To create an affordable and eco-friendly air cooling solution using recycled materials.
- What materials will be used? - Plastic bottles, a small fan, cardboard, ice packs, and a used motor.
- What is the working principle of the air cooler? - It cools the air by passing it through ice-filled recycled bottles with the help of a fan.
- What safety measures need to be considered? - Ensuring electrical safety &n proper insulation to avoid short circuits.
- What are the limitations of this cooler? - It may not work effectively in very large rooms and requires regular ice replacement.



When

- When did the students start working on the project? - At the beginning of their science fair preparation.
- When will the prototype be completed? - Within a month after collecting the materials.
- When will the air cooler be tested? - A few days before the science fair to ensure its efficiency.
- When will the project be presented? - At the upcoming school science exhibition.

Where

- Where will the materials be sourced from? Recycling centers, households, and discarded electronic items.
- Where will the cooler be tested? - In different room environments to check its effectiveness.
- Where will the project results be shared? - Through school presentations, social media, and Science & Innovation Competitions.

Why

- Why is this project important? – It provides a cost-effective cooling solution for people who cannot afford expensive air conditioning.
- Why were recycled materials chosen? – To promote sustainability and reduce environmental waste.
- Why should people consider using this cooler? – It is affordable, eco-friendly, and easy to make at home.
- Why is this innovation useful in rural areas? – Because it does not require expensive equipment or high electricity consumption.

How

- How does the air cooler function? – A fan pushes warm air through ice-filled plastic bottles, cooling it before releasing it into the room.
- How will the efficiency be measured? – By recording the temperature drop in a controlled room setting.
- How will the project be funded? – Through personal contributions, school funding, or community donations.
- How will the project be improved in the future? – By integrating a solar-powered fan and better cooling elements.
- How can people assemble the cooler at home? – By following a step-by-step guide shared by the students.

Riddle 2501

What is black when you buy it, red when you use it and gray when you throw it away?

(Answers on Back Cover Inside)

Project Synopsis: Making a Low-Cost Home-Made Air Cooler Using Recycled Materials

Extreme heat is a common issue in many regions, but not everyone can afford expensive air conditioning. A group of high school students sought to address this problem by designing a **low-cost, homemade air cooler** using recycled materials. Their project aims to create an **eco-friendly and affordable** cooling solution that can be easily replicated at home.

The materials used include discarded **plastic bottles, a small fan, cardboard, ice packs, and a used motor**. The cooler works by directing warm air through ice-filled plastic bottles, cooling it before it is released into the room. This simple but effective technique lowers room temperatures without consuming excessive electricity.

The students faced multiple challenges, such as ensuring sufficient airflow and maintaining cooling efficiency. They overcame these obstacles by testing different fan placements and insulation methods. Materials were sourced from recycling centers and household waste, reducing environmental impact.

This innovation is particularly useful in rural areas and low-income households. The project was tested in a controlled room environment, where it successfully reduced temperatures by several degrees. The students plan to share their findings through presentations and online guides.

Future improvements include integrating a solar-powered fan to make the cooler even more sustainable.