

## Anne Goldsworthy's Post-it Note Approach to planning a 'Fair Test Investigation': guidance for teachers

To set up a science enquiry and to learn anything useful, the test needs to be fair. In order to make the test fair, we need to keep most things the same and only change one thing at a time. If we change more than one thing, then we can't tell what makes a difference to the result. *(A comparative test (where we just compare two things) is simpler than a fair test, so this is where we should start with young children).*

Anne Goldsworthy is well known in primary science for her 'Post it' approach to planning.

It helps the learners to:

- identify what you can change or vary
- identify what you can measure or observe
- decide on one thing to change and one thing to measure, while keeping everything else the same

Science enquiry starts with a science question. Introduce the activity, which involves planning an investigation to answer a broad question.

Introduce the children to the planning board for a fair test/comparison.

On the planning board, write the broad question for the investigation.

List the things that you could change

Now ask the children to identify what factors could be changed to find out the answer to the question. Write each factor on a 'Post-it' note and add to the planning board (there may be more than six factors; this is OK just squash them on!).

List the things that you could measure or observe

We want to elicit the 'dependent variable'. Say to the children, "If we change one of these things" (the factors already identified) "What can we measure or observe to see if it's made a difference?"

Here the children should identify the dependent factors. These should be written on 'Post-it' notes (a different colour) and stuck on the appropriate place on the planning board.

Choose one thing to change and one thing to measure or observe

Choose a factor to investigate, and what you will measure/observe, and place these Post-it notes in the appropriate places on the planning board.

Ask the children "What do we need to keep the same to make it a fair test or comparison?" They are likely to identify each of the factors on the left hand side of the poster in turn. Move the appropriate 'Post-its' down into the next section of the planning board as they list them.

The broad question from the start of the lesson can now be changed into 'a fair test question format'

***'If I change..... what happens to....?'***

Now get the children to make a prediction:

The 'Post-its' can be easily replaced in their original positions, and you can exemplify the fair test/comparison stage again, by deciding on a different factor to test. This helps the children to realise that one factor only is changed, and the rest are kept constant.

This method of planning can generate a multitude of 'fair test' investigations. This can be used so that groups of learners in the classroom could be investigating different things. This gives each group something different to talk about/present to the class and real purpose to each investigation.

The two Post-its used in the investigation can then be used to place on the axes of a graph to ensure the x and y axes are used correctly when presenting the data.

An example of this type of planning in use can be found here:

[Sticky note planning: a teaching resource for planning comparative or fair tests. - YouTube](#)

***NB: the video shows only one colour of Post-it notes being used and the planning is not being done with the learners!***

# Planning Board

Class/Group planning Board

Our question is...

We could change


We could measure/observe


We will change

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We will measure/observe

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We will keep these the same...

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When I change:

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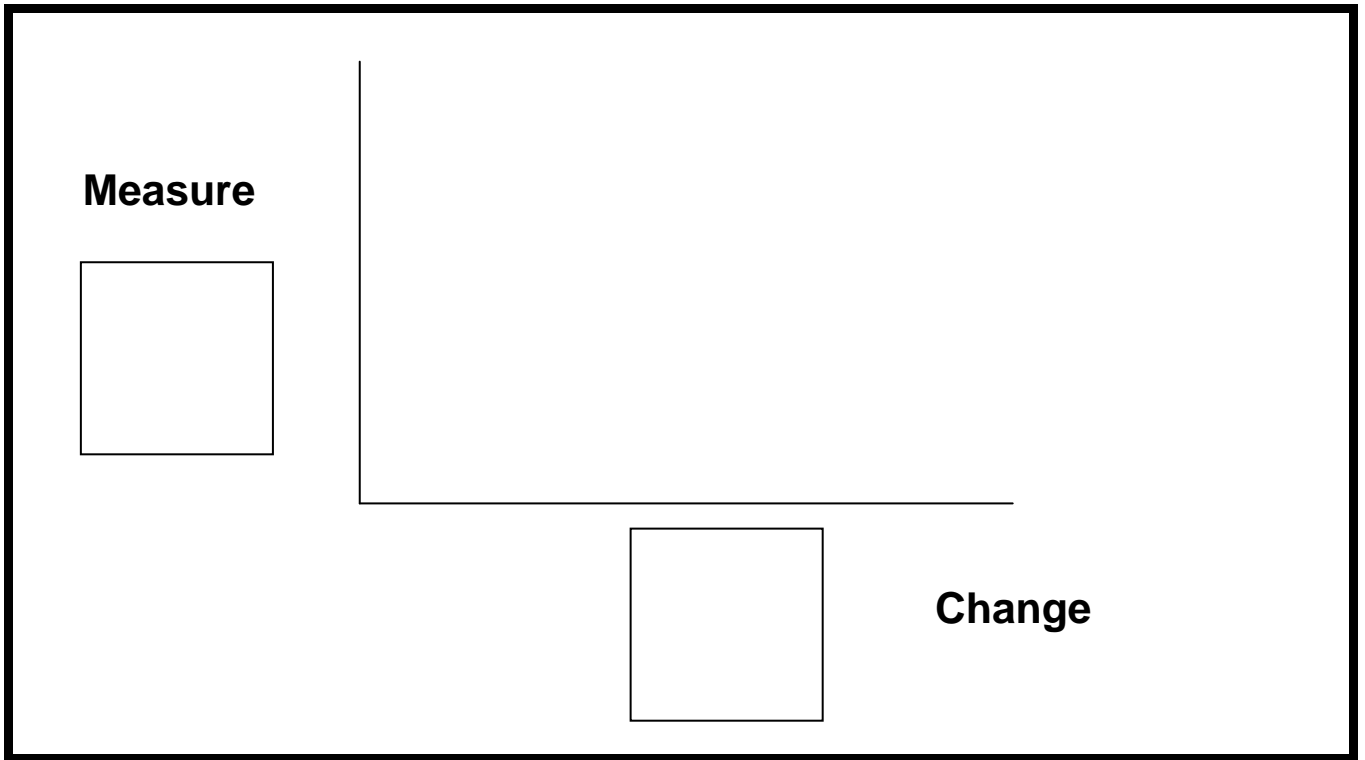
What will happen to:

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We think that.....

Why?.....

# Creating a graph



# Planning Board- Example

Class/Group planning Board

Our question is... *What things make plants grow the best?*

## We could change

Light	Temp	Amount of soil
Size of pot	Type of seed	Spacing of seeds

## We could measure/observe

No. seeds germinating	Height of plant	No. of leaves

## We will change

Temp
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## We will measure/observe

No. seeds germinating
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## We will keep these the same...

Light	Amount of soil	Size of pot	Type of seed	Spacing of seeds	
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## When I change:

Temp
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## What will happen to:

No. seeds germinating
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**We think that...***the warmer the temperature, the more seeds will germinate*

**Why?...***because plants normally grow best in summer when it is warm*

## Creating a graph

**Measure**

No. seeds  
germinat-  
ing



Temp

**Change**