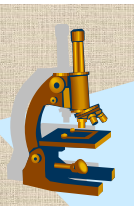


The Scientific Method

What is the Scientific Method?

- It is the steps someone takes to identify a question, develop a hypothesis, design and carry out steps or procedures to test the hypothesis, and document observations and findings to share with someone else.
- In other words, it's a way to solve a problem.

Scientist have to take the time to think logically when they are investigating a question or problem.

- They break things down into many steps that make sense.

Scientists develop a question, gather information and form an hypothesis.

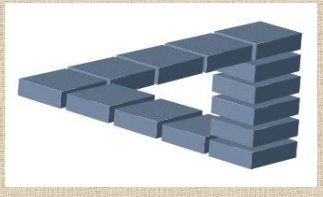
Using models to express scientific thought

The next step scientists take is to create and conduct an experiment to test their hypothesis.

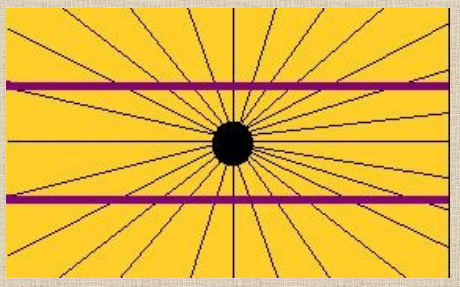
A key to experiments is observing what happens and writing it down.

- Gathering information or data and documenting it so it is **readable** and **makes sense** to others is really important.

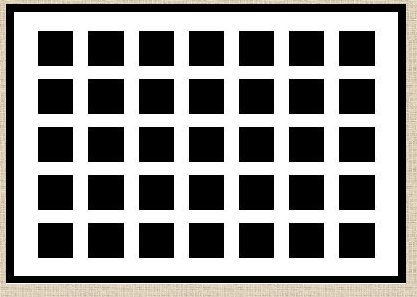
Is This Possible??



Are the purple lines straight or bent?



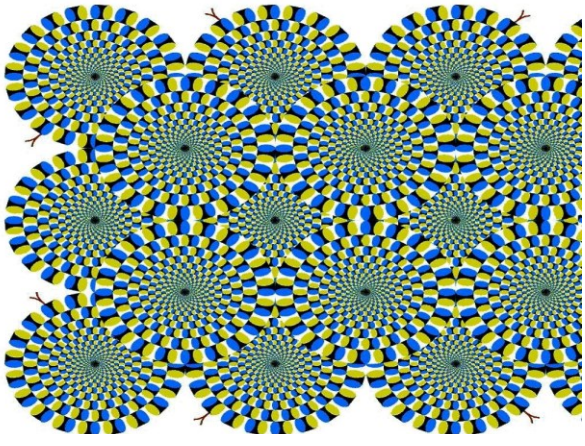
Do you see gray areas in between the squares?



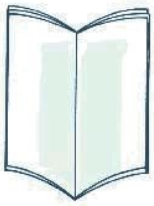
A man's face? Tilt your head and see what else there is

Wierd

When you take a look at the following picture, let me tell you .. it is not animated. Your eyes are making it move. To test this, stare at one spot for a couple seconds and everything will stop moving. Or look at the black center of each circle and it will stop moving. But move your eyes to the next black center and the previous will move after you take your eyes away from it



This is without a doubt one of the coolest PC-Illusion, I have seen so far.
Follow the instructions:
1) Relax and concentrate on the 4 small dots in the middle of the picture for about. 30-40 secs.
2) Then, take a look at a wall near you (any smooth, single coloured surface)
3) You will see a circle of light developing
4) Start blinking your eyes a couple of times and you will see a figure emerging…
5) What do you see?



Is The Book Looking Towards You... Or Away

Once a scientist completes an experiment, they often repeat it to see if they get the same findings and results.

- This is really what we call verification, or checking things out to make sure everything was valid and will happen again and again.

Scientists share their experiments and findings with others.

- Because they share their experiments and findings, scientists can learn from each other and often use someone else's experiences to help them with what they are studying or doing.

The steps of the Scientific Method are:

- **Observations**
- **Question**
- **Hypothesis**
- **Procedure/Method**
- **Results** (Data & Research)
- **Conclusion**

The steps of Scientific Method :

1. **Observation**- You observe something in the material world, using your senses or machines which are basically extensions of those senses.
2. **Question**- You ask a question about what you observe. State the problem or question.
3. **Hypothesis**- You predict what you think the answer to your question might be Research and Gather information about the problem
4. **Method** - You figure out a way to test whether hypothesis is correct. The outcome must be measurable. (quantifiable) Record and analyze data.
5. **Result**- You do the experiment using the method you came up with and record the results. You repeat the experiment to confirm your results by retesting.
6. **State Conclusion**- You state whether your prediction was confirmed or not and try to explain your results.

Experimental Terms

- Hypothesis: a testable prediction about the conditions under which an event will occur. *A hypothesis is a conjecture designed to guide experimentation. Hypotheses are extremely useful in problem solving, and are essential in developing new theories.*
- Theory: an organized set of principles used to explain observed phenomena. *Theories are well-established explanations for experimental data. To become established, the theory must experimentally tested by many different investigators. Theories usually cannot be proven; a single contrary experiment can disprove a theory.*