

# CHAPTER 1 - Introduction to Life Science



WHAT IS SCIENCE? \_\_\_\_\_  
\_\_\_\_\_

WHAT IS LIFE SCIENCE? \_\_\_\_\_

SCIENTISTS USE THESE SKILLS TO LEARN MORE ABOUT THE WORLD:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

1. WHAT IS OBSERVATION?

\_\_\_\_\_  
\_\_\_\_\_

**QUANTITATIVE OBSERVATION :**

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**QUALITATIVE OBSERVATION:**

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**2. WHAT IS INFERENCE?**

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**3. WHAT IS PREDICTING?**

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**4. WHAT IS CLASSIFYING?**

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**5. WHAT ARE MAKING MODELS?**

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# WHAT IS THE SCIENTIFIC PROCESS/METHOD?

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## The Scientific Method

to the tune of "Dixie"



Oh, what do you think a scientist does  
To solve a problem found because  
Many scientists are scientists  
'Cause they're great problem solvers

There is a systematic way  
They go about 'most every day  
It's methodical and it's logical  
The scientific method

Chorus:

A way to solve a problem, a way, a way  
The scientific method is a way to solve a problem  
A way, a way, a way to solve a problem  
A way, a way, a way to solve a problem

It may not seem important to you  
But the first thing that they always do  
Is state the problem or ask a question  
So, they know just what they're after

Then they review everything involved  
that might help get the problem solved  
By reading, researching  
And gathering information...

# THE SCIENTIFIC METHOD:

## **OBSERVE**

Make observations

## **QUESTION**

Ask a question or identify a problem

## **RESEARCH**

Search for existing answers or solutions

## **HYPOTHESIZE**

Formulate Hypothesis

## **EXPERIMENT**

Design and perform an experiment

## **TEST HYPOTHESIS**

Accept or reject hypothesis

## **DRAW CONCLUSIONS**

Make conclusions based on hypothesis

## **REPORT**

Share your results

**WHAT IS A HYPOTHESIS?**

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**WHAT IS A VARIABLE?**

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**WHAT IS A CONTROLLED EXPERIMENT?**

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**WHEN CONDUCTING A CONTROLLED EXPERIMENT, WHAT IS THE MANIPULATED (INDEPENDENT) VARIABLE??**

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**WHEN CONDUCTING A CONTROLLED EXPERIMENT, WHAT IS THE RESPONDING (DEPENDENT) VARIABLE?**

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WHAT IS SCIENCE? \_\_\_\_\_

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WHAT IS TECHNOLOGY? \_\_\_\_\_

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SCIENCE ASKS THE QUESTION OF: \_\_\_\_\_

TECHNOLOGY ASKS THE QUESTION OF: \_\_\_\_\_

### Science or Technology?

- A rocket ship to the moon
- The muscular system of humans
- The wheel
- Earth revolving around the sun
- A musical instrument
- Sunflower turning toward the sun
- A windvane gathering energy
- A pencil