

Dr. Fiddlefaddle's Amazing Science Lab

Teacher's Guide — Lesson 1

1. Lesson Overview

In this first lesson, students are introduced to the **scientific method** as a procedure scientists use to investigate questions and test ideas.

The lesson also establishes an important distinction:

Science is knowledge, but science itself is not truth.

Science can be a valuable tool for discovering and understanding God's creation. However, scientific ideas and conclusions can change when new evidence is discovered. **God's truth does not change.**

Students will learn that God wants us to:

- Seek truth.
 - Ask questions.
 - Examine evidence.
 - Be careful about what we believe.
 - Test what we hear.
 - Understand that God is the ultimate source of truth.
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2. Lesson Objectives

By the end of the lesson, students should be able to:

Science Objectives

1. Define **observation**.
2. Explain why scientists ask questions.
3. Explain the purpose of research.
4. Define a **hypothesis** as an educated guess or proposed explanation.
5. Explain what an experiment does.
6. Understand that evidence is collected during an investigation.
7. Explain what a conclusion is.
8. Understand why experiments and results should be repeated or tested.

Bible Objectives

Students should understand that:

1. God wants us to seek truth.
 2. We should not automatically believe everything we hear.
 3. We should examine things carefully.
 4. God is truth.
 5. Satan is described in Scripture as a liar.
 6. Searching for truth should ultimately point us toward God.
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3. Memory Verse

Jeremiah 29:13 — KJV

“And ye shall seek me, and find me, when ye shall search for me with all your heart.”

Memory Verse Emphasis

Have the children identify three important words:

SEEK — FIND — SEARCH

Ask:

- What does it mean to seek something?
- What does it mean to search?
- What does God promise when we search for Him with all our heart?

Memory Verse Motions

For younger children, add motions:

“And ye shall SEEK me”

(Put hands over eyes as if looking.)

“and FIND me”

(Point as though you found something.)

“when ye shall SEARCH for me”

(Look around.)

“with all your heart.”

(Put hands over heart.)

Repeat several times.

4. Key Truths From the Skit

Before beginning the discussion, remind students of the seven guidelines Dr. Fiddlefaddle gave.

The Seven Lab Guidelines

1. **God wants us to seek truth and examine things carefully.**
2. **Science is knowledge, but science is NOT truth and truth is NOT science.**
3. **God created all things, is over all things, and by Him all things consist.**
4. **Science is NOT God and God is NOT science. God is never wrong, but sometimes science is wrong.**
5. **We must be careful who we listen to and what we accept as truth.**
6. **Truth is fact and truth cannot change, lie, or be partially false.**
7. **God is TRUTH.**

Teacher Emphasis

A helpful statement for the class is:

“Science is a tool for investigating God's creation. God is the Creator, not the creation.”

5. The Scientific Method

Write these steps on the board:

THE SCIENTIFIC METHOD

1. Observation



2. Ask a Question



3. Research



4. Hypothesis



5. Experiment



6. Collect Evidence



7. Draw Conclusions



8. Repeat/Test Results

Explain that there can be different versions of the scientific method, and scientists may use the steps somewhat differently. The important idea is that **science uses a process for investigating questions rather than simply guessing an answer.**

6. Step One — Observation

Definition

Observation: Noticing, watching, or becoming aware of something through our senses.

Our five basic senses are:

- 👁 Sight
- 👂 Hearing
- 🍷 Taste
- 🤲 Touch
- 👃 Smell

Ask the Students

“What did Dr. Fiddlefaddle observe?”

Answer: He observed a matchbox car rolling across his desk.

Ask: “Did Dr. Fiddlefaddle have to guess that something happened?” No. He could **see** the car.

Teacher Point

An observation is different from an assumption.

For example:

Observation:

“I see a wet sidewalk.”

Assumption:

“It rained.”

The sidewalk being wet is what we observed. Rain is one possible explanation.

7. Step Two — Ask a Question

Dr. Fiddlefaddle asked: “Vern, did you roll that car across my desk?” Explain that questions help us learn.

Ask students:

- Who?
- What?
- Where?
- When?
- How?
- Why?

Classroom Question Place an object on the table before class.

Ask:

“What do you observe?”

Then ask:

“What questions could we ask about it?”

Write some of their questions on the board.

8. Step Three — Research

Explain that researchers don't simply jump to an answer.

They gather information.

In Dr. Fiddlefaddle's example, he asked:

- Who could have put the car there?
- Who was close enough?
- Who owns cars like this?
- Who could have moved it?

Teacher Point

Research means **looking for information that can help us answer our question.**

But remind students:

Not everything we read or hear is automatically true.

That connects directly to one of Dr. Fiddlefaddle's seven guidelines.

9. Step Four — Hypothesis

Definition

A **hypothesis** is a proposed explanation or an educated guess that can be tested.

Dr. Fiddlefaddle's hypothesis was:

“It was Vern.”

Ask the students:

“Was Dr. Fiddlefaddle absolutely certain yet?”

No.

He still needed to test his idea.

Important Teaching Point

A hypothesis is **not the same thing as a fact.**

A hypothesis can be:

- Correct
- Incorrect
- Modified
- Rejected

This is an important distinction for children to understand.

10. Step Five — Experiment

An experiment is a way to **test a hypothesis**.

Dr. Fiddlefaddle tested his hypothesis by asking Vern:

“Vern, did you roll that car across my desk?”

Vern answered:

“Yes DFF.”

The experiment gave Dr. Fiddlefaddle evidence supporting his hypothesis.

11. Step Six — Collect Evidence

Ask:

“What evidence did Dr. Fiddlefaddle have?”

The evidence included:

- The car was on his desk.
- Vern was nearby.
- Vern had the opportunity to move it.
- Vern admitted that he rolled it.

Explain that **evidence is information that helps us evaluate an idea or answer a question**.

12. Step Seven — Draw a Conclusion

Dr. Fiddlefaddle concluded:

Vern rolled the car across the desk.

His hypothesis was supported by the evidence.

Important Point

The conclusion comes **after** examining the evidence.

Teach the children:

Don't decide first and look for evidence later.

Instead:

Observe → Investigate → Test → Examine Evidence → Conclude

13. Step Eight — Repeat/Test Results

Explain why repeating an experiment is important.

Ask:

“What if the experiment only worked once?”

Repeating tests can help determine whether the result is consistent.

Simple Example

If you drop a ball and it falls to the ground once, you can repeat it.

Drop it again.

And again.

You can observe whether the result remains consistent.

Teacher Point

Science seeks results that can be tested and investigated.

14. Science and Truth

This is one of the most important portions of the lesson.

Ask the students:

“Is science truth?”

The answer you want them to understand is:

Science is a method of investigating and understanding the natural world. Scientific conclusions are not automatically absolute truth.

Scientific ideas can change when evidence changes or when an explanation is found to be incorrect.

But God's truth does not change.

Board Activity

Write:

SCIENCE → CAN CHANGE

GOD'S TRUTH → DOES NOT CHANGE

Then ask:

“Why can science change?”

Because people can make mistakes, misunderstand evidence, or discover new information.

Ask:

“Does God make mistakes?”

No.

15. Bible Connection — John 8:44

John 8:44 — KJV

“...because there is no truth in him. When he speaketh a lie, he speaketh of his own: for he is a liar, and the father of it.”

Ask:

- Who does Jesus describe as a liar?
- Why is it dangerous to believe lies?
- Why should we check what we hear?

Teacher Application

Children hear many things:

- From television
- From friends
- From social media
- From books
- From teachers
- From the internet
- From adults

Teach them:

We should never be afraid to ask, “Is that true?”

But also teach them to ask:

“What does God's Word say?”

16. Bible Connection — John 14:6

John 14:6 — KJV

“Jesus saith unto him, I am the way, the truth, and the life: no man cometh unto the Father, but by me.”

Ask the class:

“Who is the truth?”

Jesus.

Dr. Fiddlefaddle's science lesson ultimately points the children beyond science.

Science can help us investigate creation.

But **Jesus is the Truth.**

17. Main Lesson Illustration

“The Mystery of the Missing Cookie”

Tell the children:

“Suppose you walk into the kitchen and discover that the last cookie is gone.”

Ask:

Observation

“What did you observe?”

The cookie is gone.

Question

“What happened to the cookie?”

Research

“What information could we gather?”

- Who was in the kitchen?
- Who likes cookies?
- Were there crumbs?
- Was the cookie container open?

Hypothesis

“Maybe Johnny ate it.”

But that's only a hypothesis.

Experiment/Test

Could we find evidence?

Evidence

Maybe there are cookie crumbs on Johnny's shirt.

Maybe Johnny admits eating it.

Conclusion

Now we have stronger evidence for our conclusion.

Biblical Connection

Then ask: “What if someone told you something that wasn't true?” Explain that this is why we must be careful about what we believe.

18. Classroom Activity — Be a Scientist

Give students a simple object such as:

- A pencil
- Rock
- Leaf
- Toy car
- Cup
- Spoon

Have students work through the scientific method.

Worksheet

OBJECT: _____

1. OBSERVATION:

What do I notice?

2. QUESTION:

What do I want to know?

3. RESEARCH:

What information can I find?

4. HYPOTHESIS:

What do I think the answer might be?

5. EXPERIMENT:

How can I test my idea?

6. EVIDENCE:

What did I discover?

7. CONCLUSION:

What is my answer?

8. TEST AGAIN:

Can I repeat the test?

19. Discussion Questions

Use these questions after the activity.

Science Questions

1. What is an observation?
2. What are our five senses?
3. Why do scientists ask questions?
4. What is research?
5. What is a hypothesis?
6. Is a hypothesis automatically a fact?
7. What is an experiment?
8. What is evidence?
9. What is a conclusion?
10. Why should results be tested or repeated?

Truth Questions

11. Can people make mistakes?
12. Can scientists make mistakes?
13. Can scientific ideas change?
14. Should we believe everything we hear?
15. Why should we check facts?
16. What does the Bible say about lying?
17. Who is the Truth?

20. “True or False?” Review Game

Read each statement aloud.

Have students stand for **TRUE** and sit for **FALSE**.

1. An observation uses our senses.
TRUE
2. A hypothesis is always a fact.
FALSE
3. Scientists ask questions.
TRUE
4. We should believe everything we hear.
FALSE
5. Evidence helps us evaluate an idea.
TRUE
6. Scientists can make mistakes.
TRUE
7. God can make mistakes.
FALSE
8. God's truth changes.
FALSE
9. Satan is described in the Bible as a liar.
TRUE
10. Jesus said, “I am...the truth.”
TRUE
11. God wants us to seek Him.
TRUE
12. Jeremiah 29:13 tells us that we will find God when we search for Him with all our heart.
TRUE

21. The Big Idea

Have the children repeat this together:

“God wants me to seek truth, examine what I hear, and follow His Word.”

Then repeat:

“Science helps me investigate God's creation, but God's Word tells me who the Creator is.”

And finally:

“Jesus is the Truth!”

22. Memory Verse Review

Jeremiah 29:13 — KJV

“And ye shall seek me, and find me, when ye shall search for me with all your heart.”

Fill-in-the-Blanks

“And ye shall _____ me, and _____ me, when ye shall _____ for me with all your _____.”

Answers: seek, find, search, heart.

For older students, have them write the entire verse from memory.

23. Take-Home Challenge

Give the students a **“Truth Detective” challenge**.

During the coming week, ask them to find something they don't know the answer to.

Then have them:

1. **Observe it.**
2. **Ask a question.**
3. **Research it.**
4. **Look for evidence.**
5. **Form a conclusion.**
6. **Ask:**

“What does God's Word say about this?”

Encourage them to bring their question back to the next class.

24. Teacher's Closing Thought

The goal of this first lesson is not merely to teach children eight scientific steps.

It is to establish the foundation for the entire **Dr. Fiddlefaddle's Amazing Science Lab** series:

God is not afraid of our questions. God wants us to seek truth.

Children should learn that asking questions isn't wrong. Investigating isn't wrong. Examining evidence isn't wrong.

The important question is:

Where does our search for truth ultimately lead us?

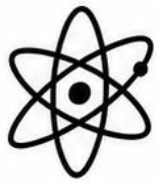
The answer is **God and His Word**.

Jeremiah 29:13 gives us the foundation:

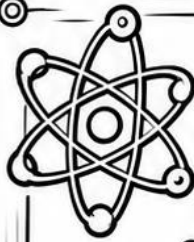
“And ye shall seek me, and find me, when ye shall search for me with all your heart.”

And Jesus gives us the destination:

“I am the way, the truth, and the life.” — John 14:6



FAITH
+
CURIOSITY
=
DISCOVERY

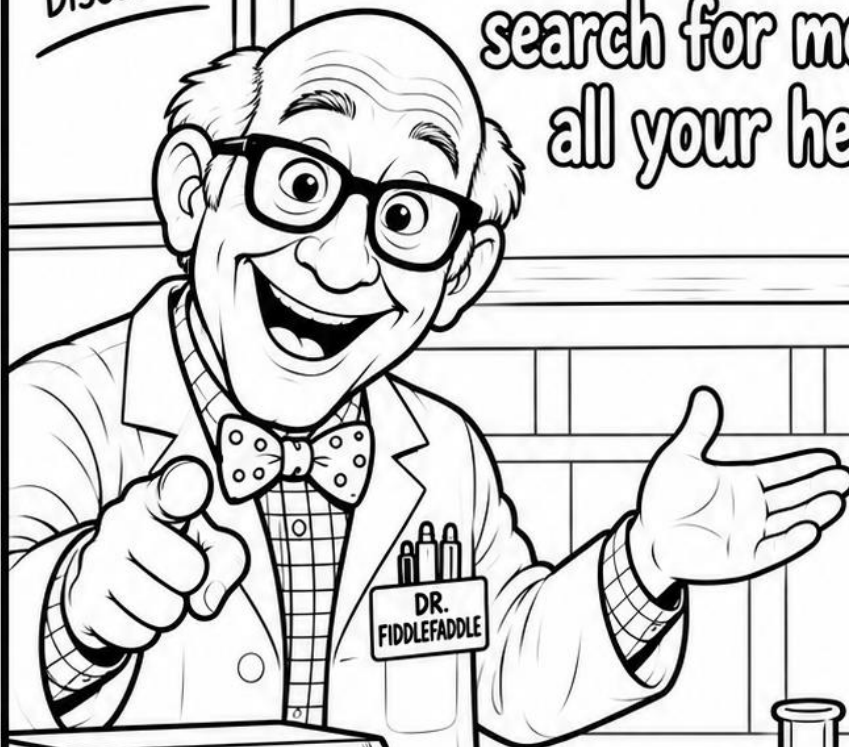


Jeremiah 29:13

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and find me, when ye shall
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Science
Helps Us
Explore
God's
Amazing
World!



DR.
FIDDLEFADDLE

