

# How and Why God Created Plants



*The Study of Botany*



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## **Why and How God Created Plants**

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*Information for this workbook is based on material gathered from the  
World Book Encyclopedia, 1979 edition and the internet.*

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INTRODUCTION  
*Botany*  
Why and How God Created Plants

Dear parents and students,

Welcome to the study of Botany- or "Why and How God Created Plants". You will find this study to be very exciting! Here are some of the things you will learn:

- Geography as you discover the different kinds of plants and their environments -where they live and how they survive.
- How to recognize certain plants when you are outdoors.
- Which plants are poisonous and which are edible.
- The kinds of plants which are good for medicine.
- Surprising qualities of plants -- even weeds have a purpose!

In physiology ("Why and How God Created My Body"), as well as in zoology ("Why and How God Created Animals") you learned that the basic unit to all life are CELLS. In this workbook, you will first be studying how cells are organized into the basic unit which perpetuates almost all plant life - the basic unit of SEEDS.

When a tiny seed has good soil, the proper amount of moisture, and the strength of the sunshine, it can reach its full potential. At the same time it is growing upward, the plant is developing strong roots for nourishment and stability. Eventually the plant produces more seeds so that its own kind can continue to survive -- on and on through centuries of life cycles. This cycle is the same for all of God's creations - including His children.

As you learn about seeds and plants, you will have the chance to plant and grow some yourself. It is always interesting to watch living things. You can experiment to see what makes them grow best, what the plants don't like, what they do like, and how you can tell the difference.

In addition to growing plants, you will be writing your own science book. There are instructions included in this guidebook to help you organize and plan your book. You will want to do your best so that you can show your

work to other people, and maybe even use your book as a teaching tool for others.

You will be doing a lot of research in the scriptures. You may be surprised at the number of plants that are mentioned in the scriptures and what they were used for. Every plant has a purpose, and it will be an exciting adventure to find out WHY and HOW God created them all.

When you have completed the assignments and suggested learning exercises in this guidebook, you will have in your hands your own personal textbook on Botany - written and illustrated by you.

So let's get growing!



*\* Unless otherwise noted, this workbook uses the King James Version of the Bible when giving scriptural references*

# Suggestions for Organizing Your Personal Botany Workbook

The internet will give you plenty of material for your research. It will take you about one school year to complete your personal botany workbook.

Although a thorough study of plants could actually last a lifetime, Each of the ten major vocabulary words should be studied for about one month. At the end of your book, you will want to spend some time in the scriptures to answer the question, “WHY did God create plants?”

You will need (in addition to access to the internet):

- A 1-inch three-ring binder with a slip in cover
- Two Packets of 5 dividers (for the ten sections)
- Lined paper and plain paper
- Pencils and pens
- Colored Pencils or watercolors
- Optional: Plastic sheet protectors for illustrations

Follow these steps to organize your Zoology book:

1. **DESIGN A COVER**—Design a cover for your book and slip it inside the clear plastic front of your 3-ring binder. Be sure to put your own name on it to identify the author and illustrator. Use your imagination to create something beautiful that will be eye-catching and colorful.
2. **DIVIDE YOUR BOOK INTO TEN CHAPTERS** – Insert the ten dividers into your 3-ring binder. A divider will be the beginning of each new chapter. The chapters will contain information about one of the main vocabulary words (Primitive Plants, Ferns, Herbs, Grasses, Flowers, Fruits, Vegetables, Shrubs, Trees, Weeds).
3. **DIVIDE EACH CHAPTER INTO SECTIONS**— As you will see, each main vocabulary word is broken down into related vocabulary words. For example, the two related vocabulary words for FISH are SALT WATER and FRESH WATER. After each divider, place about 10 sheets of lined paper plus about 10 sheets of plain white paper (for the illustrations). You can add more paper as needed during your research.

4. DIVIDE EACH SECTION INTO SUB-SECTIONS— In your 3-ring binder, write at the top of the lined paper each vocabulary word. This will give you an outline of what you should study. For example, PRIMITIVE PLANTS are divided into *algae, fungus, diatoms, moss, parasite, mold, and mushrooms*. Write these words at the top of a sheet of lined paper in that section. Then as you do your research, all the information you find for these sub-sections can be written on that page.
5. WRITE DOWN YOUR REFERENCES—On the back of the last page of each chapter, or on the back of the vocabulary word page, write down where you found your information. Write the names of the books, the author, the pages you used. When using the internet, write down the web-page address. This list will be your *bibliography* at the end of your book.
6. ILLUSTRATE EACH VOCABULARY WORD—On the plain white paper, draw an illustration of each vocabulary word. You may wish to download a picture from the internet to copy. It will be important for your learning to draw it yourself if at all possible. You could trace it if you wish and color it. (Plastic sheet protectors will preserve your drawings.)
7. LABEL YOUR ILLUSTRATION—It is important to show the different parts of the plant you are studying. So after you have drawn it, be sure to label the different parts, as shown on the internet or in your research book.
8. DO AT LEAST 3 LEARNING EXERCISES—Additional ideas for you to use in your research are suggested. You will enjoy finding out more about the types of plants you are studying and writing your extra research for doing the projects.
9. WRITE CHAPTER SUMMARIES—At the end of each of the ten chapters, you might want to write a brief summary of that vocabulary word. You could also create a quiz for review, with an answer key for your readers.
10. ANSWER THE QUESTION “WHY”—The last section is where you should explain your findings on WHY God created plants. You will want to use your scriptures and other religious studies to answer this question. Write down your research and also your feelings about plants and their purpose for mankind. Put your research after Chapter 10.

11. NUMBER YOUR PAGES – This will be almost the last thing you will do after you have finished your botany book. When you have reviewed each section to make sure all your information is complete, and after you’ve written the “WHY” section, number the pages in your whole book. You can write the page numbers in the bottom center, or in the upper right-hand corner of each page.

12. INSERT A TABLE OF CONTENTS—Now you are ready to write the Table of Contents. This page lists the page number of each of the ten chapters, plus the WHY section. The Table of Contents is placed in your book before the first divider. It will help your readers find particular material they might be looking for.

Year after year, you can add more research materials to your Botany Workbook. There is no end to the knowledge of plants that grow on this earth. And you will be surprised at the tremendous amount of knowledge you'll be able to pass along to others as you develop your own Botany text!

Remember that service is the key. Knowledge becomes yours as you give it away.





# *The Ten Divisions of Botany*

# 1—Primitive Plants

# 2--Ferns

# 3—Herbs

# 4—Grasses

# 5—Flowers

# 6—Fruits

# 7—Vegetables

# 8—Shrubs

# 9—Trees

# 10—Weeds

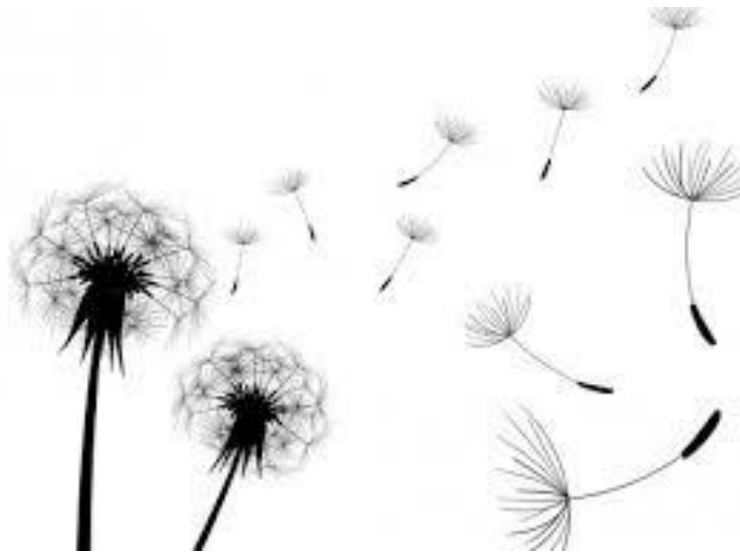
# The Ten Divisions of Botany and their 46 Related Vocabulary Words

- #1 – Primitive Organisms.....Algae  
Fungus  
Diatoms  
Moss  
Parasite  
Mold  
Mushroom
- #2 – Ferns.....Fossils  
Coal  
Fronds  
Spore cases
- #3 – Herbs.....Medicinal  
Healing  
Nourishment
- #4 – Grasses.....Grazing  
Turf  
Ornamental  
Sugar Cane  
Woody Grasses  
Grains

#5 – Flowers.....	Annuals Biennials Perennials Wild
#6 – Fruits.....	Pomology Temperate Subtropical Tropical Citrus
#7 – Vegetables.....	Rapidly Growing Hardy Tender Leafy Greens Perennial
#8 – Shrubs.....	Woody Flowering Herbal Ornamental

#9 – Trees.....	Broadleaf
	Needleleaf
	Palm
	Cycad
	Ginkgo
	Petrified
#10 – Weeds.....	Common
	Noxious
	Weed Control

# The Basic Unit of Plant Life: *Seeds*



# The Good Seed

You probably remember the parable Jesus told about the man who sowed seeds. Jesus told the people this story:

"A sower went out to sow his seed: and as he sowed, some fell by the way side; and it was trodden down, and the fowls of the air devoured it.

"And some fell upon a rock; and as soon as it was sprung up, it withered away, because it lacked moisture.

"And some fell among thorns; and the thorns sprang up with it, and choked it.

"And other fell on good ground, and sprang up, and bare fruit an hundredfold." (Luke 8:5-8)

Jesus' disciples wondered what this parable meant and asked Him what the point of this story was. His answer can be found in Luke 8:11-15. What does this parable mean to *you*?

On another occasion, Jesus said, "If ye had faith as a grain of mustard seed," you could even move mountains! (Luke 17:6) Can a grain of mustard seed actually have "faith"? Is it possible to have enough faith to move a mountain? Jesus said it was. It's something for all of us to think about.

Just like the seeds God placed in the earth, He has placed "seeds of gold" in the hearts of many, many youth like you who presently live on the earth in these last days before Jesus Christ's Second Coming.

You are one of these "golden" youth. It is hoped that this curriculum will help you gain a greater trust and love for your Father in Heaven, and that you will have a desire in your heart to be part of the beautiful harvest He intends to gather.

He is counting on you. You are -- and can become -- **"THE GOOD SEED."**

For your first assignment in Botany, write a report answering the following questions:\*

1. If you could imagine that you were a plant seed, what kind of plant will your seed grow to become?
2. Do you wish you could be a different kind of plant seed?
3. Do you feel like you are "growing" in your life?
4. What factors in your life have helped you grow?
5. Since you are growing like this seed, how deep do you imagine your roots to be?
6. How much have you grown in your life so far?
7. Do you see yourself as having a blossom yet?
8. Describe in a paragraph or two your mature self (as if you were the matured plant). What would you look like? What color? How tall?

*\*(NOTE: This is a personal report and will not be handed in or displayed to anyone without your permission.)*

If you wish, you can draw yourself in the box below, as the matured "plant" which grew from the seed you imagined. Show your stem, roots, leaves, and the "blossom" of spiritual values which you want to develop.

(Do you feel like you need some "tender nourishment"? Read Revelation 21:2-4.)



This is how I imagine myself  
as a mature "plant."

Date \_\_\_\_\_

# Learning Exercises

Do at least 3 of these Learning Exercises. Those with a \* are required.

See the Activity pages for this section on seeds.

1. \* Look up “parts of a seed” on the internet. On the Activity Page, draw and color a seed and label these three parts:
  - a. the embryo,
  - b. the food storage tissue, and
  - c. the seed coat.
2. \* Draw the growth pattern of a seed. Show it as:
  - a. a seed,
  - b. a sprout,
  - c. a seedling,
  - d. a plant,
  - e. the plant with a blossom, and
  - f. what the plant produces.
3. \* Research shapes of seeds. In your notebook, list at least two plants which have:
  - a. round seeds
  - b. oval seeds
  - c. seeds which have a "tear-drop" shape
  - d. long, thin seeds
  - e. flat seeds
  - f. seeds we can eat
  - g. seeds which are invisible to the human eye
  - h. seeds which float through the air
  - i. seeds which are called "bulbs"

Choose at least three of these and draw them. Then draw and color the plant they produce, using the page in the Activities section.

4. Seeds come in many colors. But their color doesn't always match the final "product." Search the internet for seeds of the following colors. Draw and color them and then show the kind of plant they produce: black, white, yellow, tan, brown, green, orange, red, gray.

(Continued)