



CREATION AND THE BEGINNING OF HUMAN HISTORY

#7 – The Land Produces Vegetation Genesis 1:11-13

PICTURES NEEDED

- 7-1 Picture of various plants
- 7-2 Bean growth chart
- 7-3 Process of photosynthesis
- 7-4 Photosynthesis equation visual
- 7-5 Things plants need

REVIEW (Before Teaching Lesson)

- **Journal Review:** Ask students to share an important truth that they learned from their journal readings at home that week. Share some of your own insights.
- **Previous Lesson Review:** (Use the visual from the last lesson to aid in review)
How did God create the dry land? What happened to the seas? Why did God call the seas good? Why did God call the land good?
- **The Big Question Review:** Why does God have the right to rule over the earth?
Let the students give their answers to the question.
- **Bible Verse Review: Psalm 24:1-2**
God created the earth and everything in it.

¹The earth is the LORD's, and everything in it, the world, and all who live in it; ²for he founded it upon the seas and established it upon the waters.

LESSON CONTENT

Note: The Bible verses included in the lesson are from the NIV 1984 edition. The wording of the questions is derived from that version. If another version of the Bible is used, questions may need to be adapted.

What are the things God created so far in the days of creation? On the first day God made the space to put created things in, the matter (atoms) things are made of and light (energy). On the second day he separated the waters, created the expanse of the heavens above the earth and gave the earth form. On the third day God separated water from land and made the dry ground appear on earth. All these things God created were absolutely essential for life to exist on the earth.

What was still lacking in creation that was needed to support animal life? God still had not created a source of food for animals. Without a consistent food supply, people and animals would not be able to live on earth. So on the third day, the same day that he separated the land from the water God created vegetation (plants). **(picture 7-1)**

Genesis 1:11-13 says, ¹¹*Then God said, "Let the land produce vegetation: seed-bearing plants and trees on the land that bear fruit with seed in it, according to their various kinds." And it was so.* ¹²*The land produced vegetation: plants bearing seed according to their kinds and trees bearing fruit with seed in it according to their kinds. And God saw that it was good.* ¹³*And there was evening, and there was morning--the third day.*

What is the one big difference between plants and the other things God had already created? Even though plants are made of the same basic elements or matter as the rest of God's creation, there is one big difference plants are living organisms.

What is the difference between living organisms and non-living matter? If something is living that means it takes in air, needs food, grows, reproduces living offspring and dies. When God created plants, he brought life into his creation. Before the creation of plants there was only non-living matter. Non-living material only exists; it cannot grow and reproduce. There is an important law of science called the Law of Biogenesis. (Bio means life and genesis means beginning.) This law states that living things only come from other living things. Life doesn't spring into being on its own. This law should cause a person to ask the question, "How did life come into being?"

How would evolutionists answer that question? Evolutionists would say that the first life form came from non-living matter which contradicts (goes against) the Law of Biogenesis. Life coming into existence had to be a supernatural event requiring the work of a supernatural being.

What does supernatural mean? Supernatural refers to something that exists or happens outside of the natural, physical world, the world we can see and touch. For life to come into being there needed to be something that existed outside of nature (the material world) that had the power to create life. God is supernatural, the primary mover and cause of all things. He is of a different essence (nature) than the material realm.

In Genesis 1:1 it says, *"In the beginning God created the heavens and the earth."* What do you know about God from Genesis 1:1? From Genesis 1:1 we understand that God is the creator. He exists outside of his creation and was before all things. He is the author and giver of life.

How did God create plants? In Genesis it says that God spoke and commanded plants to come into being and so they did. According to the Bible, plants and all other living things have their origin in the mind and will of God. He designed them and caused them to exist. He had already made the matter (atoms) which makes up both non-living and living things.

Why was God able to do speak plants into existence? God was able to do this because he is an eternal, all knowing, all powerful, supernatural being.

What were the plants God created like? In Genesis it says that God created the vegetation according to its kind.

What does it mean that God created each plant after its own kind? That means when God created apple trees he designed them to produce apples that would produce seeds from which would grow more apple trees. Each type of plant produces the same type of plant, according to its kind.

What happens to a bean seed when it is planted? (picture 7-2) When bean seeds are planted, bean plants grow. Wrapped up or contained in a bean seed is all the material and genetic information needed to give life to a bean plant. Even the way it grows is evidence of design.

1. To sprout a bean seed needs moisture (water), warmth (light) and soil to grow in. If it has these things, it first sends out a root to anchor itself into the ground and take up water.
2. As the stem pushes its way up through the soil, the plants live off the food stored in the cotyledons (two split halves of the seed).
3. Once a plant has developed roots and leaves it can make its own food; the cotyledons are no longer needed so they wither and fall off.

What is needed for the seed to produce a living plant? For a seed to live and grow it needs everything God had already created in days one, two and three. For it to sprout it needs water, air and warmth; to continue to grow it also needs a source of light so it can produce food and it needs soil to root in. **(pictures 7-3 & 7-5)**

1. A seed won't grow without absorbing water. Why is that? Water makes up a huge percentage of every living plant and is essential for transporting food through the plant and waste out of it. Without water, a plant will wither and die. The water cycle that we studied in the last lesson insures a continuous supply of water on the earth.
2. A plant also needs air, which exists in the atmosphere surrounding the earth. Why do plants need air? Plants take in carbon dioxide gas from the air, use it to produce food and then put out oxygen gas as a waste product of respiration. This is exactly the opposite from animals and people, which need oxygen from the air to live and grow and put out carbon dioxide as a waste product of respiration.

3. All plants also need light. Why do plants need light? Light from the sun produces the warmth needed for a plant to sprout. The light is also used by plants to produce food from the green chlorophyll in their leaves.
4. Most plants need ground or soil to grow in. Why do plants need soil? A seed sends out a root to anchor the plant into the soil so it can take up the water and minerals it needs for life.

Similar to the way plants need to be rooted in the soil to take up water so they can live and grow, God wants us to be rooted in him. What does it mean to be rooted in the Lord? If we are rooted in the Lord, it means we have been planted, have sprouted and have found life in him. We send out roots that go deep into his Word, taking in his truth and making it part of us. A relationship with Christ brings us living water and nutrients for our souls. Being rooted in God means that we continue to grow and thrive in him, even when society or people around us may be dry and lifeless.

Jeremiah 17:7-8 describes what it means to be rooted in the Lord. *⁷"But blessed is the man who trusts in the LORD, whose confidence is in him. ⁸He will be like a tree planted by the water that sends out its roots by the stream. It does not fear when heat comes; its leaves are always green. It has no worries in a year of drought and never fails to bear fruit."*

What does the verse mean? Those who are rooted in the Lord are connected to the source of life and receive what they need for an abundant life from God himself. They produce good fruit, which reflects the relationship they have with God

Psalms 92:12-13 says, *¹²The righteous will flourish like a palm tree, they will grow like a cedar of Lebanon; ¹³planted in the house of the LORD, they will flourish in the courts of our God.*

Who are the righteous? The righteous are the ones who have been made right by God through believing in the sacrifice of Jesus for the forgiveness of their sins and live according to his truth.

Why will the righteous flourish? They are rooted in Christ and receive what they need for life from him. They can dwell in God's presence, which will cause them to flourish. They will be sturdy and strong like a cedar of Lebanon, which is a tree that grows to 130 feet tall with a trunk more than 8 feet across. That is a tree that will stand firm in all circumstances.

LESSON WRAP-UP

- **Overview Questions:** What had God created on the first, second and third days before he brought forth plants? What is the difference between the plants God created and what he had created before them? What do plants need to live and grow? How did God create the plants? What did God see about the plants?
- **Thought Questions:** Why did God see that the plants he created were good? What is God's design for plants? Why wouldn't there be life on earth if there weren't any plants? What can we learn about God from the creation of plants?

- **Prayer:** Thank God for the good design of his creation; that all the things he made are designed to support life on earth. Thank God that he has given you and all things life. Pray that you would be well rooted in him and flourish in his presence. Thank God that in him you can grow strong and produce fruit that honors him.
- **The Big Question:** What does being rooted in the Lord do for us?

Let the students give their answers to the question. Share the memory verse. Ask how it answers the question.

- **Memory Verse:** Psalm 92:12-13
Being rooted in the Lord causes the righteous to flourish

¹²The righteous will flourish like a palm tree, they will grow like a cedar of Lebanon; ¹³planted in the house of the LORD, they will flourish in the courts of our God.

Questions: What does it mean to be righteous? What does it mean to flourish? Why will the righteous flourish like a palm tree? What does it mean to be planted in the house of the Lord? What does it mean to be in the courts of God?

ACTIVITIES (Completed after the lesson)

Any age appropriate activity can be included which fits into the class time. The activities with a star are included on the class notes.

- ★ **Lesson Notes:** Ask the students to summarize in one sentence what the lesson was about. Then have them give three main points covered in the lesson. An example is below.

Theme: On third day of creation God said for the land to produce vegetation.

1. The land produced plants and trees with seeds just as God told it to do.
2. Each type of plant was designed by God to produce plants just like itself.
3. God saw that the plants were good. They did what he designed them to do.

- ★ **Memory Verse:** Read the memory verse on the cover of the class notes and then have the students fill in the blanks in the verse.

- ★ **Activity Page:** Crossword Puzzle

Fill in the crossword puzzle with words related to plants and their design.

Roots – anchor a plant into the soil

Water – moves nutrients (food) through the plant

Leaves – place where plants produce food

Light – source of energy used by the plant to produce food

Stem – part of the plant that branches and leaves grow out from

Seeds – what new plants are produced from

Ground – place where plants root

Atmosphere – contains the carbon dioxide plants need to live

Food – something plants produce for themselves and animals don't

Life – what God brought into being when he created plants

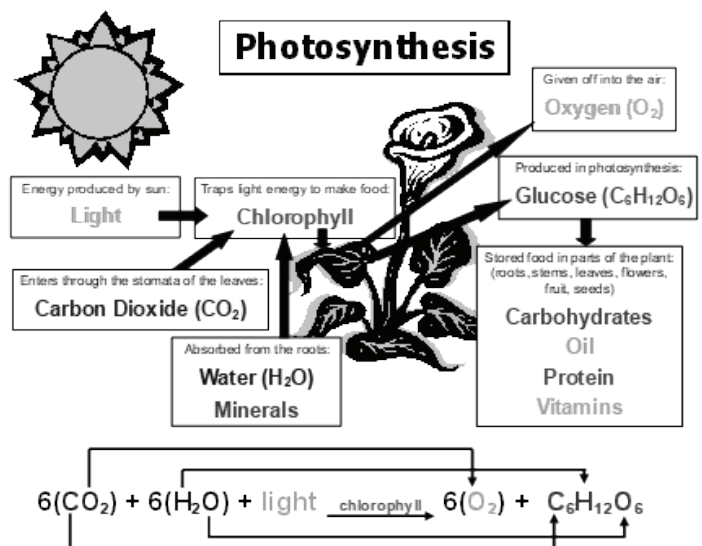
★ **Further Understanding:** Investigation/Reasoning Skills
The Process of Photosynthesis (picture 7-4)

One interesting characteristic of plants, which is very different from animals, is their ability to produce their own food. God designed plants to be the food source for his creation. Plants make food through the process of photosynthesis. The word photosynthesis comes from the Greek language. Photo means light and synthesis means to put together with. In the process of photosynthesis, plants take sunlight and put it together with the water they take up from the ground through their roots and the carbon dioxide they take in from the air through the stomata in their leaves to produce the food they need. Plants and the fruit and seed they produce become food for people and animals.

The Process of Photosynthesis (For older students.) (picture 7-4)

1. Sunlight is absorbed by the chlorophyll in the leaves of plants and the energy from the light is used by the plant to split water molecules (H_2O) into hydrogen (H_2) and oxygen molecules (O_2).
2. The hydrogen and oxygen molecules combine with the carbon from the carbon dioxide that the plant has absorbed from the air through the stomata in their leaves.
3. This forms glucose (a simple sugar $C_6H_{12}O_6$), which the plant uses, along with minerals from the soil, to make different types of food. The photosynthesis equation is:
 $6(CO_2) + 6(H_2O) + \text{light on the chlorophyll} \longrightarrow 6(O_2) + C_6H_{12}O_6$
4. The foods plants produce (protein, carbohydrates, fat, and vitamins) are stored in various parts of the plant: roots, stem, leaves, flower, fruit, and seeds.
5. In the process of photosynthesis, plants produce oxygen gas as a byproduct. The oxygen put out by the plants replenishes the oxygen supply in the air. People and animals take in the oxygen from the air to use in their life processes and put out carbon dioxide as a waste product, which is then taken in and used by plants in the production of food.

Discussion: What happens in the process of photosynthesis? If you took away any of the elements involved in photosynthesis (light, chlorophyll, carbon dioxide, water) what would happen to the plant? What would happen to the earth? What would be the outcome if you took away any of the parts of the plant (root, stem, leaves, fruit, seeds)? How does photosynthesis demonstrate design? What does understanding the process of photosynthesis teach us about God?



The journal is passed out at the end of class for the students to complete at home. It has six readings that answer a digging deeper question. It would be beneficial for the teacher to work through the journal readings also.

- Digging Deeper: What does being rooted in the Lord do for the righteous?

Reading 1: Psalm 92:1-15 The righteous bear fruit in old age.

What should we praise God for? What will happen to the wicked? What will happen to the righteous? Why will they stay fresh and green?

Reading 2: Psalm 1:1-6 The righteous will prosper.

What does the righteous man delight in? What is he like? What are the wicked like? What happens to the wicked man?

Reading 3: Isaiah 40:6-11 The righteous stand firm in the Lord.

What are men like? In what way? What is the difference between men and God's Word? What does that mean? What does it mean that God's reward is with him?

Reading 4: Psalm 65:1-13 The land of the righteous is well-watered and bountiful.

Who is God? What does God do for those who come to him?

Reading 5: Psalm 52:1-9 The righteous flourish like an olive tree.

What is the evil man like? What will happen to the evil man? What is the righteous man like? How does the righteous man respond to God?

Reading 6: Luke 8:4-15 Seed germination

To understand better the design of a plant record observations as a bean plant germinates.

Instructions:

1. Crumple a paper towel into the bottom of a clear plastic disposable cup.
2. Soak the towel with water and place a bean seed on top.
3. Keep the paper towel moist and put the cup in a warm place.
4. Observe the bean daily and from the time it begins to sprout draw pictures of its development.

Reflection: What enables a plant to grow from a seed? What does the ability of a seed to produce a plant tell you about God?