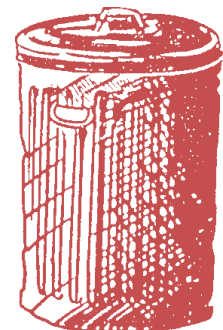
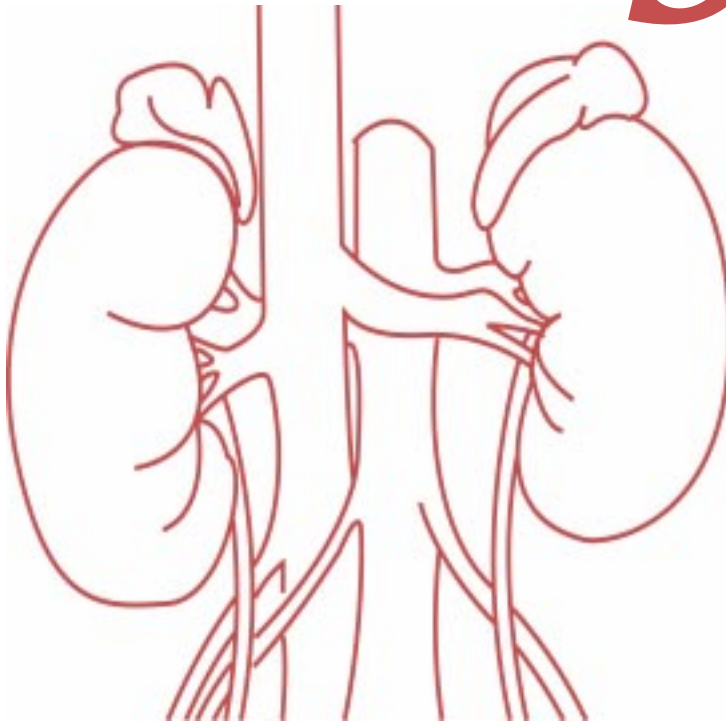


*Designing Your
Own School Program*

5

The Kidneys



A "True Education" Health Series

*“For thou hast possessed
my reins [kidneys].”*

Psalm 139:13



**Printed by SEM
627 Highland Loop Rd.
Kettle Falls, WA 99141**

Copyright © 1995
SonLight Education Ministry
P.O. Box 518
Colville, WA 99114

Teacher Section



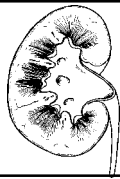


Table of Contents

Teacher Section	Pages 1-12
Student Section	Pages 1-44
Research	
Waste Products	Page 1
Urinary System – Illustration	Page 1
Location	Page 2
Size	Page 2
Circulation	Page 3
Kidney Transection – Illustration	Page 3
Filter	Page 3
Where Do Worn-out Cells Go?	Page 4
Structure	Page 4
Waste	Page 5
“Value of Purity” – Story	Page 5
Kidney and Nephron – Illustration	Page 5
Urea	Page 6
Reinforce	Page 6
Pumping Station	Page 6
Cleansing	Page 7
Reinforce	Page 7
“Mary’s Two Prayers” – Story	Page 8
Reflect	Page 8
“Cleansing Blood of Christ” – Story	Page 9
“The All-cleansing Blood” – Thought	Page 9
Balance	Page 10
Reinforce – Kidneys	Page 10
Review	Page 11
Protection – Illustration	Page 12
Remind	Page 13
“Kidneys I” – Mark Your Bible	Page 14
Reinforce	Page 16
Extra Work	Page 16
“Lift a Little” – Story	Page 17

Table of Contents



Research

Importance	Page 18
Can someone Live With Only One Kidney?	Page 18
Kidney Failure	Page 18
Kidney Dialysis Machine – Illustration	Page 19
Kidney Stones	Page 19
Kidney Disorders	Page 21
Keep Your Kidneys From Floating Away!	Page 22
Do the Kidneys Grow Old?	Page 22
Review	Page 23
Remind	Page 24
Reinforce	Page 24

Research

Healthy Kidneys	Page 25
Back to Eden	Page 27
Avoid Too Much Protein	Page 27
Reinforce	Page 28
Review	Page 31
Remind	Page 31
Poem – “The Kidneys”	Page 32

Research

Life and Death	Page 33
Ashes	Page 33
Review	Page 35
Remind	Page 37
“Kidneys II” – Mark Your Bible	Page 38
Reinforce	Page 39
“Psalm 119:9” – Poem	Page 39
“A Testimony” – Story	Page 40
Reflect	Page 43
Reinforce	Page 44



INSTRUCTIONS

For the Teacher

Step 1

Study the Bible Lesson and begin to memorize the Memory Verses. Familiarize Yourself With the Character Quality. The student can answer the Bible Review Questions. See page 6. Use the Steps in Bible Study.

Bible Lesson

The Dedication – Luke 2:21-38

Memory Verses

I Peter 1:18-19; Isaiah 11:1-5; 9:2, 6; Revelation 15:3-4

Character Quality

Discernment – the power or faculty of the mind by which it distinguishes one thing from another, as truth from falsehood, virtue from vice; acuteness of judgment; power of perceiving differences of things or ideas, and their relations and tendencies.

Antonyms – stupidity; slowness; dullness; density; crassness; blindness; lack of judgment

Character Quality Verse

I Samuel 16:7 – *“But the Lord said unto Samuel, Look not on his countenance, or on the height of his stature; because I have refused him: for the Lord seeth not as man seeth; for man looketh on the outward appearance, but the Lord looketh on the heart.”*

Step 2

Understand How To/And

- A. Do the spelling cards so the student can begin to build his own spiritual dictionary.
- B. Mark Your Bible.
- C. Evaluate Your Student’s Character in relation to the character quality of **discernment**.
- D. Familiarize Yourself With the Kidneys. Notice the Projects.

E. Review the Scripture references for “The Kidneys.”

F. Notice the Answer Key.

A. Spelling Cards

Spelling Lists

Health Words	kidney
Place I	nephrons
cleanse	reins
filter	renal artery
kidney	renal vein
nephrons	tubule
reins	waste

Place II	Bible Words
basin	Anna
capsule	custom
cleanse	consolation
filter	devout
kidney	Gentiles
nephrons	glory
reins	Jerusalem
renal artery	light (lighten)
renal vein	name
waste	peace

Place III	pigeon
basin	pierce
capsule	prophetess
cleanse	redemption
filter	sacrifice
glomerulus	Simeon
	widow

See the book
Spelling from the Scriptures
for instructions
about the spelling cards.

B. How to Mark the Bible

1. Copy the list of Bible texts in the back of the Bible on an empty page as a guide.

2. Go to the first text in the Bible and copy the next text beside it. Go to the next one and repeat the process until they are all chain referenced.

3. Have the student present the study to family and/or friends.

4. In each student lesson there is one or more sections that have a Bible marking study on the subject presented. (See the student’s section, pages 14 and 38.)

C. Evaluate Your Student’s Character

This section is for the purpose of helping the teacher know how to encourage the students to become more **discerning**.

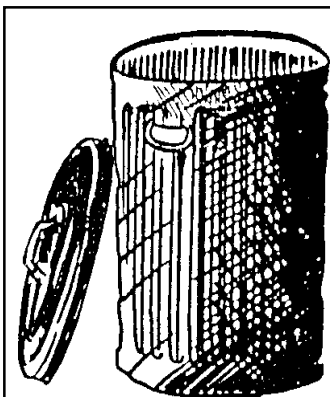
See page 7.

Place I = Grades 2-3-4
Place II = Grades 4-5-6
Place III = Grades 6-7-8

D. Familiarize Yourself With the Kidneys – Notice the Projects

Projects

1. Observe how fruits are prepared in the kitchen for a meal. The scraps are put in the garbage and emptied. We must be **discerning** so as not to throw away any usable parts of the food. The good part is eaten and used by the body for good health. Explain to your child this is like the work of the kidneys. Remind him of the Bible lesson.
2. Let the student be on garbage detail for one week. That means emptying the trash, taking out the compost, and setting out the garbage cans.
3. Find lessons in nature that teach how things cleanse themselves just as the kidneys do the human body. (Example: Leaves take our waste, carbon dioxide, and purify it. Then they give it back as oxygen which we breathe. We need to be **discern-**
- ing** and recognize the great service leaves perform for man just as Simon and Anna were **discerning** of God's loving purpose for mankind when they saw baby Jesus in the temple.)
4. Teach your student how the plumbing in the house works. As a family, visit a building site where the plumbing is being put into a building. (Make prior arrangements.) If possible, do a plumbing project in your own home, the student doing as much as possible. Remember the Bible lesson, the kidneys, and **discernment**.
5. Visit a plumbing supply store. Learn more about the names of plumbing fixtures.
6. Find pictures of animal or human kidneys.



“Morning exercise, in walking in the free, invigorating air of heaven, or cultivating flowers, small fruits, and vegetables, is necessary to a healthful circulation of the blood. It is the surest safeguard against colds, coughs, congestions of brain and lungs, **inflammation** of the liver, **the kidneys**, and the lungs, and a hundred other diseases.” *My Life Today* 136

E. Review the Scripture References for “The Kidneys”

Teacher, read through this section before working on the lesson with the student.

See pages 14 and 38 from the Student Section.

F. Notice the Answer Key

The answer key for the student book is found on page 8.

Step 3

Read the Lesson Aim.

Lesson Aim

The purpose of this lesson is to teach how the kidneys cleanse the blood stream like God’s Word cleanses our lives. The kidneys “pass judgment” on all the elements of the blood, **discerning** and separating the good from the bad. They teach us the importance of separat-

ing sin from the life if we are to be spiritually healthy.

The body must remain clean if it is to be in good health. This lesson’s aim is to teach the child about the kidneys and their **discerning** job.

Because Anna and Simeon were cleansing their lives from sin, they had spiritual **discernment**. The priests were lacking **discernment**. They “passed judgment” on themselves by their response to Christ.



Step 4

Prepare to begin the Kidney Lesson.

To Begin the Kidney Lesson

As an introduction to the lesson, it would be helpful if the teacher could have the child look at the plumbing under the sink in the kitchen. It can be compared to the function of the urinary system in the body temple. The kidneys are a part of the urinary system.

Step 5

Begin the Kidney lesson. Cover only what can be understood by your student. Make the lessons a family project by all being involved in part or all of the lesson. These lessons are designed for the whole family.



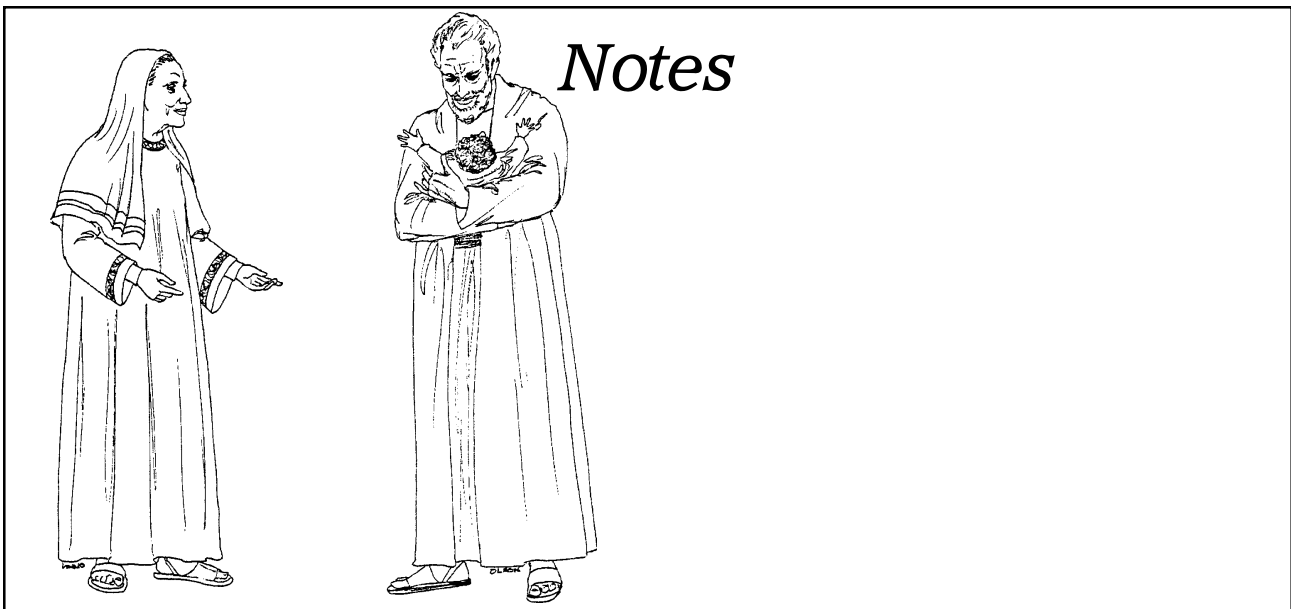
Steps in Bible Study

1. Prayer
2. Read the verses/meditate/memorize.
3. Look up key words in *Strong's Concordance* and find their meanings in the Hebrew or Greek dictionary in the back of that book.
4. Cross reference (marginal reference) with other Bible texts. An excellent study tool is *The Treasury of Scripture Knowledge*.
5. Use Bible custom books for more information on the times.
6. Write a summary of what you have learned from those verses.
7. Mark key thoughts in the margin of your Bible.
8. Share your study with others to reinforce the lessons you have learned.

“The skin cannot perform its office; the studied habit of shunning the air and avoiding exercise, closes the pores—the little mouths through which the body breathes—making it impossible to throw off impurities through that channel. The burden of labor is thrown upon the liver, lungs, **kidneys**, etc., and these internal organs are compelled to do the work of the skin.” *5 Testimonies* 524

Review Questions

1. How old was Jesus when He was named? (Luke 2:21)
2. When was He taken to the temple? For what purpose? (Luke 2:22-24)
3. Describe what took place in the temple when Jesus was brought in. (Luke 2:22-38)
4. What offering did His mother make? Why? (Luke 2:24-38)
5. Who was Simeon? What had been revealed to him? (Luke 2:25-26)
6. How did Simeon know that the baby was Jesus? (Luke 2:26-27)
7. What did Simeon pray for himself? (Luke 2:28-32)
8. What did Simeon say Jesus would be to the Gentiles? To Israel? (Luke 2:32)
9. At what did Joseph and Mary marvel? (Luke 2:33)
10. Whom did Simeon bless? (Luke 2:34)
11. What did Simeon say to Mary? (Luke 2:34-35)
12. Who came in at this instant? Who was this person? (Luke 2:36-38)
13. How did she serve God? (Luke 2:37)
14. To whom did she speak of Jesus? (Luke 2:38)



Evaluating Your Child's Character

Check the appropriate box for your student's level of development, or your own, as the case may be.

Maturing Nicely (MN), Needs Improvement (NI), Poorly Developed (PD), Absent (A)

Discernment

1. Is your child usually sensitive to or aware of the needs of others?

MN NI PD A

2. Does the child readily distinguish between right and wrong?

MN NI PD A

Notes

3. Does the child give evidence of the ability to **discern** God's ways of working in the circumstances of his life?

MN NI PD A

4. Does the child seek an understanding of related Biblical principles in trying to solve the problems of life?

MN NI PD A

5. Does the child show the ability to **discern** between good, better, and best, and willingly choose that which is spiritually strengthening?

MN NI PD A

Answer Key

Page 6

1. abstinence (from lack of food, or voluntary and religious)
2. The refraining from an indulgence of appetite, or from customary gratifications of animal propensities. It denotes a total forbearance, as in fasting, or a forbearance of the usual quantity. In the latter sense, it may coincide with temperance, but in general, it denotes a more sparing use of enjoyments than temperance.

Page 11

Place I - II - III

1. kidney beans
2. fist-sized
3. two
4. on each side of the abdomen, just inside the lowest, back rib
5. Teacher, check.

Page 11 continued

Place II - III

6. urinary or excretory
7. filter
8. Teacher, check.
9. Bowman's capsule
10. nephrons
11. any of these would be correct – food acids, extra salt, protein waste
12. basin

Page 12

13. glomerulus, Bowman's capsule, little tubules coming off of Bowman's capsule
14. See page 4.
15. The main waste product dissolved in the urine is urea. This is the solid ash that is left over from the burning of protein food and of the waste resulting from cellular breakdown. Uric acid is another solid waste from proteins.

Answer Key

Page 12 continued

16. Boldness/Pushy
Persuasiveness/Rude
Holiness/Punctilious
Truthfulness/Blunt
Reverent/Fearful
Availability/Idle
Discernment/Impulsive

Page 16

1. Reins = kidney (an essential organ); figuratively, the mind (as the interior self): Roots from word meaning: “something prepared; i.e. any apparatus (as a vessel, etc.)

A primary root is a word which means “to end; to be finished, perish, complete, prepare, consume; to make clean riddance, spend, quite take away, waste.”

“The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest but decays or putrefies; as a consequence, the blood is not nourished but become filled with impurities, and liver and **kidney** difficulties appear.”

Counsels on Diet and Foods 345

Page 23

Place I - II - III

1. reins
2. feelings
3. anemia
4. The remaining kidney will get bigger and become more active to make up for the loss.

5. 2, die, poisons

Place II - III

6. a kidney dialysis machine
7. kidney stones
8. from a bladder infection that spreads upward
9. It could cause inflammation in the kidneys that would permanently cripple them.
10. drug
11. constant exposure to the influence of poisons which they remove from the blood

Answer Key

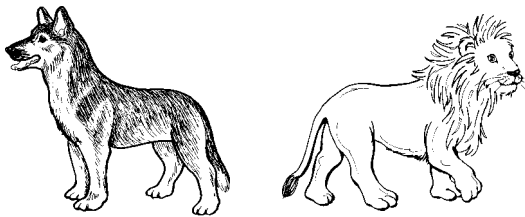
Page 23 continued

Place III

12. It can become too high.
13. salt, animal fats, and proteins
14. They convert Vitamin D from an inactive form to an active form, allowing it to be used for bone development. See Philippians 2:4.
15. They produce a hormone that stimulates the bones to make more red blood cells if they are needed.
16. hormones

Page 28

The two animals are a dog and lion.



Page 29

The student colors the apple, tomato, grapes, orange, and watermelon.

Page 30

See pages 25-26.

Page 31

Place I - II - III

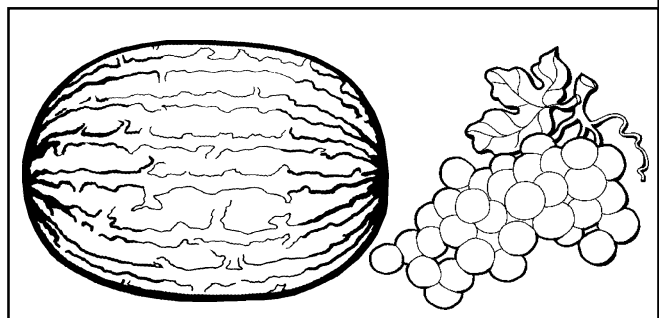
1. vegetarian
2. God did. See Genesis 1:29.

Place II - III

3. tissues
4. uric acid
5. protein

Place III

6. The functional capacity of the kidneys can be reduced to half.
7. calcium
8. the liver



Answer Key

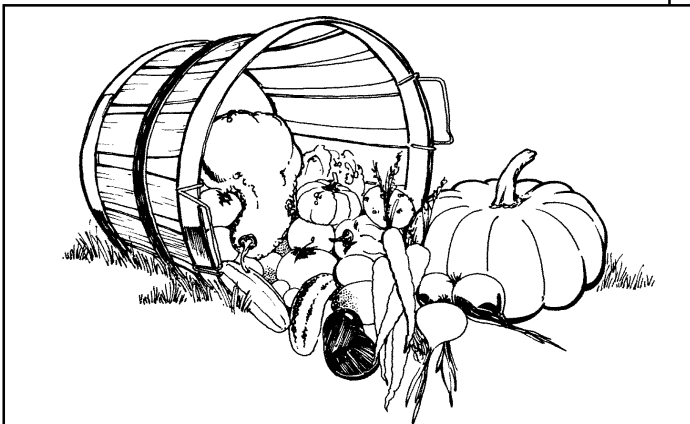
Page 35

Place I - II - III

1. two days
2. put them inside the protecting ribs
3. Teacher, check.
4. Yes; They work in shifts.

Place III

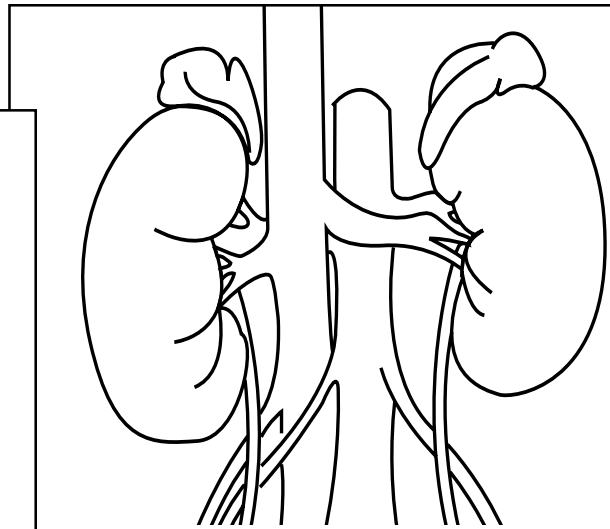
5. Teacher, check.
6. God's Word
7. Any five of these would be correct: rich food, too much liquid food, free use of dairy products, alcohol, spices, hot sauce, sugar, tea, coffee, vinegar, mustard, drugs, overeating, tight clothing around the waist, poor posture, insufficient water, lack of exercise, etc.



Page 36

8. Cells make a **waste** product called urea when certain proteins are broken down. The kidneys remove urea and **extra** water from the body. A group of **capillaries** surrounds every **nephron**. Blood **cells** and proteins **stay** inside the capillaries. A **fluid** made from the blood plasma flows into the **nephrons** through **capillary** walls. The nephrons **filter** out wastes, and this fluid then **flows** back into the capillaries. The **wastes** and extra water left **behind** in the **kidneys** become a liquid called **urine**.

The nephrons in each kidney all connect to a **tube** that takes the **urine** away from them. This tube is the **ureter** and it goes to the **bladder**.



1. 6.
2. 1.
3. 5.
4. 10.
5. 7.
6. 8.
7. 9.
8. 2.
9. 3.
10. 4.

*Habitually dwelling
upon Christ
and His all-sufficient merits,
increases faith,
quicken the power
of spiritual **discernment**,
strengthens the desire
to be like Him,
and brings an earnestness
into prayer
that makes it efficacious.*



Gardening Sheet

Lesson Five Subject Health

Title "The Kidneys"

In Season

Most gardens have beans. There are a variety to choose from such as pole types, like green and yellow snap beans, and the big meaty limas which like to grow on fences, trellises, or in tepee shapes.

Bush beans, green and yellow, large and small limas can fill neat rows as fast as they are emptied by early leaf lettuce, peas, green onions, and first rows of spinach.

Plant when the frost is past; then sow at intervals of two weeks up to July 15 in the north, to keep a fresh supply of beans coming on. Place seeds 2 to 3 inches (50 to 75 millimeters) apart in rows spaced 2 feet (60 centimeters) apart. Cover with 1 inch (25 millimeters) of soil unless soil is dry. If dry, make furrows half as deep again. Firm soil over rows by tamping with the back of a hoe.

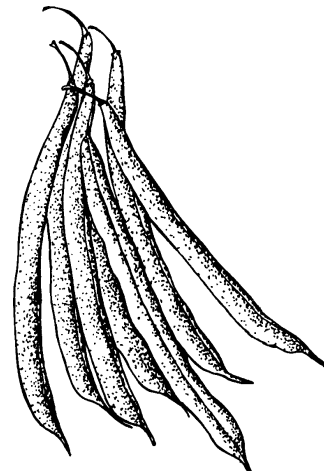
Beans need plenty of phosphorus to increase their yields.

Out of Season

Prepare a pot of lima or kidney beans in the crock pot to serve at lunch. At the meal discuss the work of the kidneys to keep the body healthy. What spiritual lessons do they teach you?

Check at a store to see the great variety of dried, frozen, and canned beans that are available for use. Look especially for kidney beans.

Find books, pictures, and other illustrations of different types of beans. You might like to make a scrapbook with the pictures and information from this lesson.



Gardening Sheet

“The Kidneys” continued

Lima beans are shaped somewhat like the kidney. Plant a row of these beans to help remind you of the work of the kidney in the body, and the lessons they will teach you.

The dried pods of beans can be used as a medicinal herb for kidney problems.

“Take thou also unto thee wheat, and barley, and beans, and lentils, and millet, and fitches, and put them in one vessel, and make thee bread thereof, according to the number of the days that thou shalt lie upon thy side; three hundred and ninety days shalt thou eat thereof.”

Ezekiel 4:9

“And it came to pass, when David was come to Mahanaim, that Shobi the son of Nahash of Rabbah of the children of Ammon, and Maschir the son of Ammiel of Lo-debar, and Barzillai the Gileadite of Rogelim,

“Brought beds, and basins, and earthen vessels, and wheat, and barley, and flour, and parched corn, and beans, and lentils, and parched pulse,

And honey, and butter, and sheep, and cheese of kine, for David, and for the people that were with him, to eat: for they said, the People is hungry and weary, and thirsty in the wilderness.”

II Samuel 17:27-29

*“And the two kidneys,
and the fat that is upon them,
which is by the flanks,
and the caul above the liver,
with the two kidneys,
it shall he take away.”*

Leviticus 4:9



*Each booklet in the series,
“Designing Your Own School Program,”
is planned for a family to study together
for their homeschool curriculum;
yet versatile enough to be used
in the conventional classroom.*

*Learn the principles
of the subject matter from the Scriptures;
discover more of the scientific facts;
then apply them to your daily life.*

*Other titles in the health series are available
in the following subjects:*

What is Health?

The Body

The Heart

The Bladder

The Cells

The Spleen

The Pancreas

The Gall Bladder

The Bones



Mark 4:29