





Read to your supervisor.

### My Goals

To learn about honeybees

- I. Why Do Bees Sting?
- II. How Do Scout Bees Find Nectar?
- III. How Long Do Bees Live?
- IV. Why Do People Keep Bees?
- V. What Kinds of Bees Live in a Hive?
- VI. What Functions Do Worker Bees Perform?
- VII. How Do Bees Use Their Wings?
- VIII. Do Bees Have Enemies?
- IX. Are Bees Mentioned in the Holy Bible?

To learn to work or live with others in unity—to be cooperative

Read these words and tell what they mean.

ankle	lick	tie
calm	mouse	treat
flight	sold	wish
jelly	starve	



### Learn this Scripture Verse

Behold, how good and how pleasant it is for brethren to dwell together in unity!

Psalm 133:1



### Cooperative

If more than one are doing what is needed to be done, It takes cooperation from the time it is begun.

The co-working operation is depending on you . . . From planning to completion, work together 'til you're through.

### Cooperative



### Symbol and Sound Chart

ō glad  
ā save  
ā fair  
ā barn  
ē best  
ē bee

ī sit  
ī kind  
ō box  
ō go  
ō soft, order  
ō look

ō tool  
ū cup  
ū use  
ch much  
kw queen  
ng sing

oi coin  
ou out  
sh she  
th thin  
ur burn  
z has

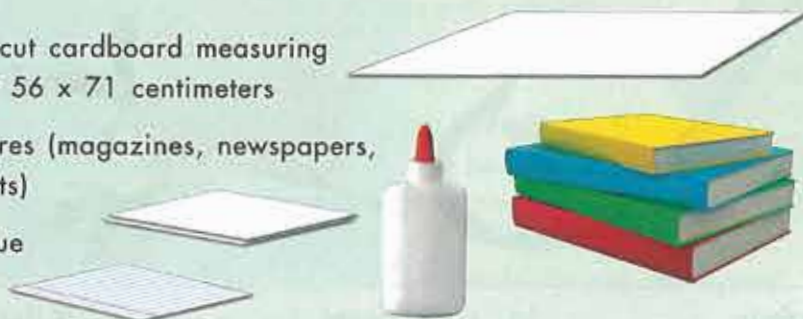
zh Asia  
e a in above  
e e in the  
a i in easily  
e o in lemon  
e u in Jesus

## A Project to Do at Home

Make a chart showing some of God's provisions for people.

### Materials needed:

1. a poster board or nicely cut cardboard measuring about 22 x 28 inches, or 56 x 71 centimeters
2. a source for animal pictures (magazines, newspapers, books, or Internet printouts)
3. plain white paper and glue
4. notebook paper



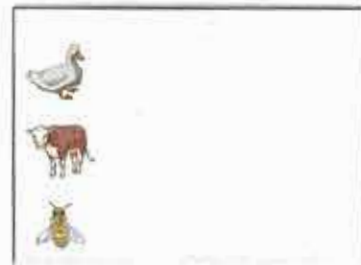
### What to do:

1. On the notebook paper, make a list of animals from which people get food or something useful. Add to the list animals that aid, or are a help to, people.

Remember: Insects are animals, so include some insects that help people.

2. Find a picture of each animal you listed. Draw or trace each one onto white paper. (If your parents give you permission to cut out a picture, ask them for a pair of scissors you may use.)
3. Neatly arrange your pictures on the poster board or cardboard. Leave room between pictures for labels. Leave room at the top for a title. When you have the pictures arranged, glue them on.
4. Under each picture neatly print the animal's name. Beside the picture write one sentence telling what the animal provides or does for people. (You may write the sentences on separate paper or on file cards; then glue them to the poster board.)
5. Some animals have both wild and tame family members. You may want to use different pictures for each of them.
6. In larger letters print a title at the top of your poster (for example, God Provides for Our Needs).
7. Near the bottom of the poster, neatly print your name.

	bee
	duck
	cow
	sheep



#### God Provides for Our Needs



duck

The duck gives eggs for food and down for clothing.



cow

Parent signature \_\_\_\_\_

Supervisor initial \_\_\_\_\_





Ask Jesus to help you as you take your Test. Do your best.



Fill in the blank, or draw a line under the right answer.

(3 points each)

- (1) The three kinds of bees are the queen, drones, and \_\_\_\_\_.
- (2) In summer, when bees work hardest, worker bees live only about (40, 80, 100) days.
- (3) In the (hotter, wetter, cooler) season, a worker bee may live six months.
- (4) A worker bee's first job is to (guard, clean, build) the wax cells of the hive.
- (5) A worker bee's second job is to act as a (drone, queen, nurse) to the young larvae.
- (6) A worker bee's third job is to (make, store, carry) nectar and pollen in the honeycomb.
- (7) A worker bee's fourth job is to (build and repair, guard and clean) the hive.
- (8) A worker bee's fifth job is to guard the (honey, queen, hive).
- (9) Field mice, frogs, birds, and some insects are (friends, enemies, food) of bees.
- (10) The guard bees may act in defense of the hive by \_\_\_\_\_ the enemy.
- (11) If an enemy gets into the hive, the guard bees may sting it to death, and then they will (heat, cool, entomb) the body in bee glue.
- (12) A worker bee's sixth job is to (call, scout, nurse) for nectar and gather nectar for the hive.
- (13) A \_\_\_\_\_ bee explores the fields and woods to sip nectar and gather pollen.
- (14) When a scout bee returns to the hive, it shares nectar with other worker bees and gives them a message about the (amount, weight, location) of the nectar supply.
- (15) If the location of the nectar supply is farther away than 55 yards, or 50 meters, the scout bee moves in a (figure eight, circle).
- (16) If the location of the nectar supply is no farther away than 55 yards, or 50 meters, the scout bee moves in a \_\_\_\_\_.
- (17) The rate at which the scout bee moves its (body, tail, head) gives the exact distance.
- (18) A bee's wings carry nearly \_\_\_\_\_ times the weight of the bee an average of ten times a day.



"Bee" sweet.



- (19) When a bee (uses, works, locks) its wings together, the locked wings each act as a single wing during flight.
- (20) (Single, Double, Thinner) wings help a bee fly at faster speeds.
- (21) A bee's (wings, legs, muscles) wear out after it flies many miles, or kilometers.
- (22) God designed honeybees with the ability to \_\_\_\_\_ and cool their hives.
- (23) The (hive, pollen, queen) must be kept at a constant temperature of 93°F to 95°F, or 34°C.
- (24) If food supplies become low, the \_\_\_\_\_ will not be allowed to stay in the hive.
- (25) There is/are \_\_\_\_\_ queen bee(s) to a hive.
- (26) Some queen bees lay as many as 1,500 or more (eggs, cells, barbs) a day.
- (27) Worker bees constantly (eat, lick, attack) the queen and pass queen substance throughout the hive.
- (28) \_\_\_\_\_ bees live from two to five years.
- (29) When a queen bee dies, a royal (guard, cell, sell) is prepared for a new queen, and a day-old larva is placed inside it.
- (30) The larva is fed royal (jelly, cells, honey), which causes it to become a queen.
- (31) People raise bees for the honey they produce and because they help with (nursing, entombing, pollination).
- (32) Bees pollinate by carrying \_\_\_\_\_ on their legs from one blossom to another blossom.



Read and fill in the blanks. Say the verse to your supervisor.

(4 points)

(33) Behold, how \_\_\_\_\_ and how \_\_\_\_\_ it is for \_\_\_\_\_  
to \_\_\_\_\_! Psalm 133:1



Lord, You have helped me do my best. Thank You.

Supervisor initial \_\_\_\_\_ Have student say verse by memory.



Read the word and its definition; then underline the sentence that uses the word correctly.

air-condition

âr'kən-dīsh'ən

- (1) Air-condition means to cool air within a space.  
a. Is the air-condition of your tires accurate?  
b. It is nice to air-condition a room when it is hot.

beeswax

bēz'wāks'

- (2) Beeswax means a wax made by bees.  
a. Beeswax has a honey taste when chewed.  
b. Do the beeswax their floors?

burial

bēr'ē-əl

- (3) Burial means the art of burying.  
a. That strange burial has a long beak and large wings.  
b. After the soul leaves, the empty body needs burial.

Canaan

kā'nən

- (4) Canaan is the Bible homeland of the Jews.  
a. Canaan you come out to play?  
b. Moses could only look at the beautiful land of Canaan.

Egypt

ē'jīpt

- (5) Egypt is a country in northern Africa.  
a. He saw a small Egypt on the side of the tree.  
b. Moses led God's people out of Egypt.

entomb

ēn-tōm'

- (6) Entomb means to bury.  
a. Entomb do we owe the honor of this call?  
b. They will entomb him in a cave.

famine

fām'īn

- (7) Famine means a time when there is not enough food.  
a. During a famine, people may die.  
b. There are six people in our famine.

glue

glō

- (8) Glue means a sticky substance.  
a. Becky used glue to fasten the pictures to the page.  
b. The sky is very glue today.

Joseph

jō'zef

- (9) Joseph was a man of the Old Testament.  
a. God used Joseph to save many people during a famine.  
b. Grandpa has a warm Joseph to wear in winter.

single

sīng'gəl

- (10) Single means only one.  
a. That single means a train is coming down the track.  
b. The strong wind blew every single leaf off the tree.

sorry

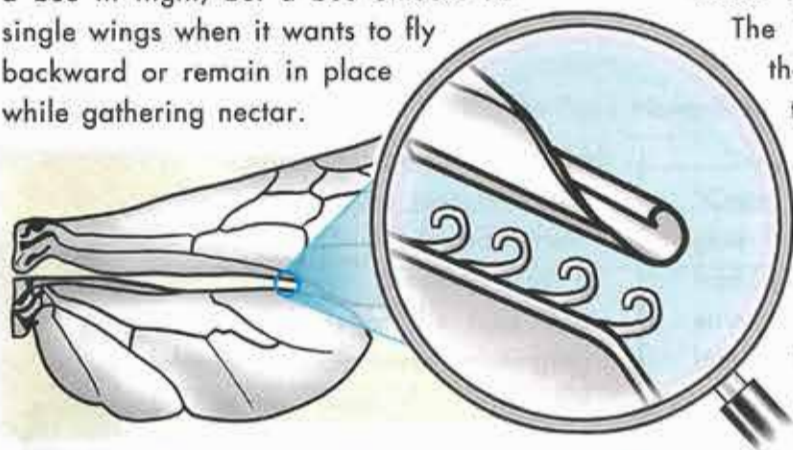
sōr'ē

- (11) Sorry means wishing an action or word could be undone.  
a. He picked up his sorry and took a drink.  
b. I am sorry I spoke unkindly to you.



## VII. How Do Bees Use Their Wings?

"Let's examine a bee's four wings under a strong magnifying glass," said Grandfather. "A bee can lock the two wings on each side together with little 'hooks and eyes' that God has placed along the edges of the front and back wings. When a bee locks its wings together, the locked wings each act as a single wing during flight. Single wings help a bee fly at faster speeds. However, there are times when a bee needs more than single wings. Single wings help a bee in flight, but a bee unlocks its single wings when it wants to fly backward or remain in place while gathering nectar.



"God has designed the bee's wings for another very important function besides flight," said Grandfather. "Bees can cool, or air-condition, their hive in a natural way. In hot summer weather, it becomes necessary for some of the bees to work together constantly to air-condition the hive. The bees cooperate as they work. Some workers bring back water drops, and others turn the water into water vapor. The bees air-condition the hive in a natural way by using their wings."

"That's the most unusual air-conditioning system I have ever heard about!" exclaimed Pudge. "God made each animal special."

"It is very important for the hive to be kept at a constant temperature of 93°F to

95°F, or 34°C," said Grandfather. "The bees must air-condition the hive and keep the temperature constant so that the beeswax can be worked. Beeswax can be worked only at 93°F to 95°F, or 34°C. Beeswax is necessary for the building and repairing of cells in the honeycombs.

"The bees also cooperate to provide heat in the winter. One way they create heat is by gathering in a cluster over the honeycomb. The bees at the bottom of the cluster sip the honey from the honeycomb.

The food makes heat in the bodies of the bottom bees. The heat spreads to the bees on the topside. Then the bees on the top change places with those on the bottom and begin sipping the honey into their stomachs. This changing heats the hive. In this way the temperature of a hive during very cold weather can be kept at 94°F, or 34°C.

"God designed honeybees with an unusual ability to heat and cool their hives. The bees cooperate to keep the hive at a constant temperature."

*For bees to survive, all must do their part.*

**BEES are COOPERATIVE!**

*We, too,  
can do  
great things  
if we will be  
cooperative.*



*"Behold, how good and how pleasant it is  
for brethren to dwell together in unity!"*

*Psalm 133:1*