Adventist Spider Honor

Adapted from Wikibooks

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This packet will give you the information needed to complete the Pathfinder Spiders Honor. Activities that fulfill the honor will be woven into the Spider Unit.

Spiders

1. Do one of the following:
   - **a.** Collect, identify, and preserve at least 16 species of spiders. Place on each specimen bottle a label showing the locality and date of capture and the spider's common or scientific name.
   - **b.** Make colored drawings or paintings of at least 16 species of spiders, life size or larger and in natural coloring. Label each with its common or scientific name.
   - **c.** Take color photos of at least 16 species of spiders. Identify each picture as to its locality, date taken and the common or scientific name of the spider.
2. What is the largest member of the spider family?
3. Write or give orally a description (forty words or more) of a spider that has gained notoriety in your region.
4. Give three ways in which spiders differ from insects.
5. Make a careful drawing of an orb web.
6. What other kinds of webs are there besides the orb web?
7. What do spiders eat? Make a list of victims found in spider webs.
8. For what is a spider web useful?
9. Find two references in the Bible to spiders and their webs.
10. What are the chief enemies of spiders?
11. How do spiders:
    - **a.** Help us?
    - **b.** Hurt us and our property?

Skill Level 2

This is an old honor (1945) and today there are many options for studying spiders. Students may enjoy creating a presentation about spiders using Powerpoint or iWeb or other programs.

Cat-faced spider

Cat facing spider

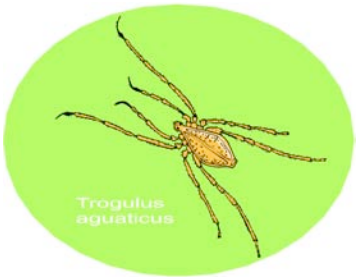
Adventist Youth Honors Answer Book/Nature/Spiders
From Wikibooks

1.Identifying Spiders.

Do one of the following:

(Spiders are frequently NOT easy to identify. There are, after all, about 90,000 species, at least half unnamed. Due to the fact that we now have many endangered species of spiders, you may want to encourage the selection of options b. or c.)

a. Collect, identify, and preserve at least 16 species of spiders. Place on each specimen bottle a label showing the locality and date of capture and the spider's common or scientific name.



b. Make colored drawings or paintings of at least 16 species of spiders, life size or larger, and in natural coloring. Label each with its common or scientific name.

c. Take color photos of at least 16 species of spiders. Identify each picture as to its locality and habitat, the date taken, and the common or scientific name of the spider.

These sites give many images of spiders. There are a lot of other places!

http://www.cirrusimage.com/spider.htm
http://www.umich.edu/~esupdate/library/97.03-04/skerl.htm Lots of images of spiders.

http://www.amonline.net.au/spiders/collections/collecting.htm Here are instructions on how to safely capture spiders for identification. This site also lists other places that will assist with identification of the captured spider.

http://www.byteland.org/spiderfest/index. This site has an ongoing spider photo contest along with pointers on how to take photos of spiders. If your camera has a macro mode, be sure to use it when taking close-up photos. This feature is marked with a flower icon on many cameras. Most cameras cannot focus on closeup objects unless they are in the macro mode. To identify the spiders you find, you may need to consult a field guide.

If you are baffled, you can also post photos of spiders at www.SpiderIdentification.org The helpful community there will gladly attempt to make an identification for you.

Argiope trifasciata

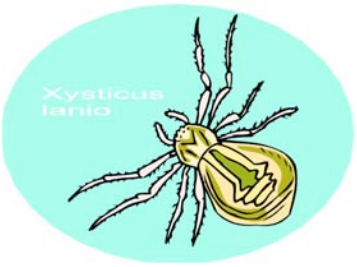
Nephila clavipes

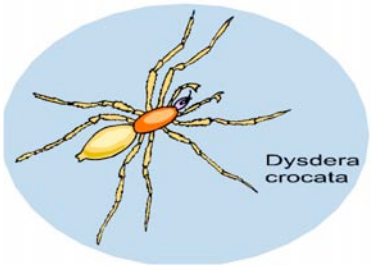
Peucetia viridans

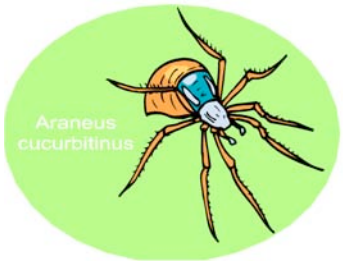
Loxosceles reclusa

Leucauge venusta

Micrathena gracilis







Tetragnatha laboriosa

Phidippus otiosus

Latrodectus geometricus

Agelenopsis sp.

Schizocosa mccooki

Dolomedes orion

Pisaurina mira

Steatoda triangulosa

Lycosa Tarantula

Latrodectus sp.

Misumena vatia

Theridion impressum

2. What is the largest member of the spider family?

The ***Goliath Bird Eating spider***, also called the Birdeater, (*Theraphosa blondi*) is an arachnid belonging to the tarantula family and is the largest spider in the world. The spider was named by explorers from the Victorian era, who witnessed one eating a hummingbird and reported the sighting to the Western world. The largest ever found had a leg-span of more than 28cm. Take a meter stick and measure 28 cm. Draw an oval that side and draw a tarantula on it. Now you have an idea of just how big this spider is!

3. Write or give orally a description (forty words or more) of a spider that is famous or notorious in your region. Notorious means that a spider is famous, but for bad things.

The spider would depend on where you live. It may be a poisonous one, one that is useful, or one that is simply an annoyance. Use the suggested resources and your local library for books on spiders of your area. You may also wish to use an Internet search engine, and search for something like "notorious spider" + the name of your region, country, or continent. Many spiders are common across a country, but many others live only in certain areas.

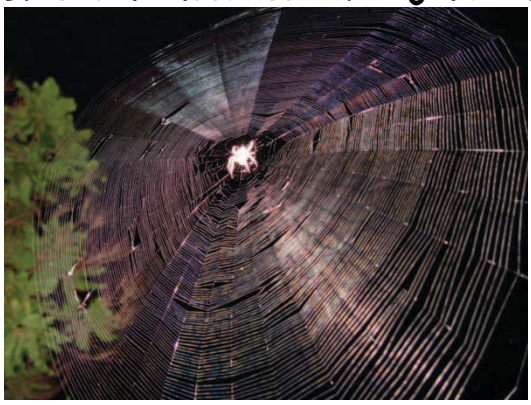
4. Give three ways in which spiders differ from insects.

a. Spiders have 8 legs while insects only have 6.
b. Spiders have singular eyes with lenses; insects have compound eyes.
c. Spiders don't have antennas and insects do.
d. Spiders have bodies with two parts: a combined head and thorax that is called the cephalothorax, and the abdomen. Insects have bodies with three body parts: the head, thorax and the abdomen.

http://www.xs4all.nl/~ednieuw/Spiders/InfoNed/The_spider.html
http://www.explorit.org/science/spider.html

5. Make a careful drawing of an orb web.

It should look something like this:



Orb weaver spider web at night

Spider in Joshua's yard 1

6. What other kinds of webs are there besides the orb web?

Funnel & Sheet webs spun by grass spiders, Family Agelenidae. The Sheet web is used to catch prey while the spider hides in the attached Funnel web for just the right time to scurry out to the helpless victim.
Nursery Webs, used as a nursery or special nest carried around by the female until the eggs are about to hatch, spun by Family Pisauridae
Cobweb, irregular webs spun by comb-footed spiders, family Theridiidae

7. What do spiders eat?

Make a list of victims found in spider webs.

Here are some of the things that spiders eat:
Flies, Grasshoppers, wasps, bees, mosquitoes, geckos, small lizards, other spiders, insects, snakes, small birds, mice, frogs, small fish, tadpoles, crickets, beetles, mealworms, cockroaches.

Locate a web either at the location of the meeting or have each student watch one near his home. Write down what is caught in the web.

8. For what is a spider web or silk useful?

- Cross hairs for optical instruments (Gun sites, microscopes, telescope finder scopes)
- Birds use webs for constructing nests.
- Spider webs can be used to cover an injury and help the blood to clot.
- Scientists are experimenting with using spider webs in repairing torn human ligaments.

9. Find two references in the Bible to spiders and their webs.
Here are three possibilities:
Job 8:13-15 (New International Version) "Such is the destiny of all who forget God; so perishes the hope of the godless. What he trusts in is fragile; what he relies on is a spider's web. He leans on his web, but it gives way; he clings to it, but it does not hold.

Proverbs 30:24-28 (New King James Version) "There are four things which are little on the earth, but they are exceedingly wise: the ants are a people not strong, yet they prepare their food in the summer; the rock badgers are a feeble folk, yet they make their homes in the crags; the locusts have no king, yet they all advance in ranks; the spider skillfully grasps with its hands, and it is in kings' palaces.

Isaiah 59:1-6 (Contemporary English Version) "The Lord hasn't lost his powerful strength; He can still hear and answer prayers. Your sins are the roadblock between you and your God. That's why He doesn't answer your prayers or let you see His face. Your talk is filled with lies and plans for violence; every finger on your hands is covered with blood. You falsely accuse others and tell lies in court; sin and trouble are the names of your children. You eat the deadly eggs of poisonous snakes, and more snakes crawl out from the eggs left to hatch. You weave spider webs, but you can't make clothes from those webs or hide behind them. You're sinful and brutal.

10. What are the chief enemies of spiders?
1. Almost every small carnivore is the spider's enemy.
2. Due to excessive habitat destruction, man is the spider's worst enemy.
3. Round worms and mites are parasites that attach themselves to the spiders, sucking them dry of their vital fluids.
4. Birds enjoy tasty spider snacks, as do lizards, wasps, and other spiders.

11. Even though there are some poisonous spiders, except for a few rare cases, they bite humans only in self-defense. We need spiders to survive.

How do spiders:

a. Help us?

1. Spiders are predators and so they eat flies and other small annoying insects. Many of these insects destroy our crops and gardens. Other insects caught in their webs can cause disease in humans.
2. Dust mites live in our homes and eat the dead skin that comes off our bodies. Many people are allergic to dust mites. Spiders eat the Dust Mites, thereby, assisting in allergen control.
3. Spiders are an integral part of the food chain. Because the spider eats and is eaten, it helps to keep the ecosystem balanced. Without spiders the ecosystem would become imbalanced, killing all living things, including the human race in a relatively short period of time.

b. Hurt us and our property?

1. Some spiders are venomous. Their bites can range from painful to deadly if the correct treatment is not used within a short time after the bite.
2. Most people are afraid of spiders, so if a property has either too many spiders or poisonous spiders, it would be hard to sell that property.
3. Spiders make webs in unwelcome places, like corners of rooms or between limbs of trees over a path. These webs cause us to spend time and money removing them. Their webs also trap dust that can cause an allergic reaction in some people.

The next few pages can be used for backgrounds for reports or pictures.

References

http://www.cirrusimage.com/spider.htm
Great information and large clear photographs of spiders.
http://www.spiderzrule.com
A great site devoted entirely to spiders. Pictures, info, poetry, etc.

http://www.explorit.org/science/spider.html
Information is given in a question and answer form.

http://www.everythingabout.net/articles/biology/animals/arthropods/arachnids/spiders/index.shtml
Focuses on well known dangerous spiders

http://www.ezprezzo.com/crazypics/spider_eats_snake.html
This is a video of a spider eating a snake. This site has other video clips, not all of them very kosher. If you use the site, you should download it so students are not exposed to the other things on the site.

http://cybersleuth-kids.com/sleuth/Science/Animals/Arachnids/Spiders/
http://sciencebulletins.amnh.org/biobulletin/biobulletin/story991.html

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Stephanie East is an educator with a Master's in Education with an Outdoor Education emphasis, an Elementary, Middle School & High School Teacher, a Corporate Computer Trainer, Co-Director of Wilderness Adventure Camp for the Illinois Conference of Seventh-day Adventists and Co-Creator with Rodney East of "Why Knot? an introduction to knots, splices & rope" DVD which has all the information needed to complete the Knot Tying Honor. Available through Advent Source.
Honor has been retrieved from: http://en.wikibooks.org/wiki/Adventist_Youth_Honors_Answer_Book

Supplemented and adapted by Rebecca K. Fraker, Teacher Bulletin.