

Hana in the Time of the Tulips

Book by Deborah Noyes

Unit study written by Wende

Go-Along Books

Hans Brinker, or the Silver Skates by Mary Mapes Dodge [Free e-book](#)
["The Pink Tulip"](#) excerpted from *Boys and Girls of Colonial Days* by Carolyn Sherwin Bailey
Stories of the Pilgrims by Margaret B. Pumphrey (especially chapters 6 – 15 which describe 1600's Holland in detail)
Discovering Great Artists by MaryAnn Kohl and Kim Solga
Getting to Know the World's Greatest Artists, Rembrandt by Mike Venezia

Bible/Character

Greed –

Greed is having a selfish or excessively eager desire to gain more money or possessions. Ask your child who it was in the story that demonstrated greed. It was Papa who devoted himself to wanting riches and more riches. Sometimes people get so focused on making (or keeping) money that they lose focus of the blessings right in front of them. And sometimes people trust in their riches instead of in God. Ask your child to tell you in his own words what this verse means:

1 Timothy 6:10 – For the love of money is the root of all evil: which while some coveted after, they have erred from the faith, and pierced themselves through with many sorrows.

Explain that money in and of itself is not evil, but loving money to the point that you forget about God or your faith in God is evil.

Now read this verse to your child:

Mark 10:24 - 25 – Children, how hard is it for them that trust in riches to enter into the kingdom of God! It is easier for a camel to go through the eye of a needle, then for a rich man to enter into the kingdom of God.

Explain that it is wrong for a person to trust in his riches instead of God. This verse does not mean that a rich person can't get into heaven, but rather a person trusting in his riches will lack the faith in God necessary to enter the kingdom.

Ask your child if there was ever a time that he felt greedy, maybe wanting more than his share of dessert, or maybe striving so hard to get something he wanted that he sinned in order to get it. Maybe you can share a time that you yourself demonstrated greed, and what you learned from that experience.

Lapbook Component: Greed Two Flap

Keeping Away Dark Thoughts –

When Papa asked for a cure for dark thoughts, Hana prescribed fireflies. While fireflies may bring a temporary smile, the real cure for keeping away dark thoughts is found in the Bible.

Dark thoughts could be sad, scary, and/or sinful thoughts. The Bible has a lot to say about what we think. Dark thoughts come from Satan, who wants our minds to be filled with bad things that dishonor God. Satan hates God, and he hates that we are made in God's image, so he tries to hurt God through us. God wants our minds to be filled with good things that honor Him, because He knows that these things will bless us and help us live fulfilling lives. So how do we get rid of dark thoughts and make them good?

First, we need to remember that everything Satan says is a lie, and he will work hard at getting us to believe them. God hates lies, and will help us sort out the lies from the truth if we just ask Him.

2 Corinthians 10:5 says:

Casting down imaginations, and every high thing that exalteth itself against the knowledge of God, and bringing into captivity every thought to the obedience of Christ;

So if we have bad thoughts, or even thoughts that we are not sure about, ask God to first take it captive, and then to confirm whether or not it is a lie from Satan. God will then replace it with a truth.

Second, we need to replace the dark thoughts with light.

Philippians 4:8 says:

Finally, brethren, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things.

These are the things God wants our minds to be filled with, not dark thoughts. In the beginning, it may be hard to change the dark thoughts to Godly thoughts, but with lots of practice and prayer it will eventually happen!

Lapbook Components:

2 Corinthians Copywork

Philippians Copywork Booklet

Dark Thoughts Shape Book

Social Studies

Holland –

This story takes place in Holland, also called the Netherlands. The people of Holland are called “Dutch” and so is their language. Have your child locate Holland on the world map, on the continent of Europe, in the lowland region near the North Sea. Most of Holland is below sea level, so all kinds of dykes and dam systems have been built to keep the waters from flooding the country. The capital is Amsterdam, and the seaside town of Haarlem can be found to the west of it. Haarlem has been the center of the bulb-growing industry for many years. Other important industries are cheese, especially Edam and Gouda, as well as radios, textiles, and pottery. One of the first things children often think of when Holland is mentioned is a windmill. Windmills were once used to pump water out of the low-lying areas. They are not as common today. Another thing children often relate to

Holland is the wooden shoe. Have child complete lapbook components about Holland:

Holland Shutterfold

Holland Flag Simple Fold

Era –

This story takes place between 1634 and 1637, during the Renaissance, which was between the Middle Ages and modern times. The Renaissance began towards the end of the fourteenth century, after approximately ¼ of the European population died from the Plague and people rethought their priorities. This period in history is marked by a renewed interest in spirituality separate from the State Church, learning, exploration, and fine arts. It began in Italy and gradually spread to the rest of Europe, including Holland.

During the late 1500's and early 1600's, the tail end of the Renaissance, Holland was under the control of Spain, then the principal European power. The Dutch did not like the oppression of Spain. They did not like how the Spanish treated the Dutch, especially Protestants living there who did not agree with the Roman Catholic Church. The reading of the Bible was forbidden, as were all gatherings for devotion or religious discussion. The Spanish Inquisition, as it was called, brought to their deaths thousands of Dutch. So, in 1568 Holland revolted against Spain to loosen its tyrannical grip. This led to a war lasting eighty years, save 1609 to 1621 when Spain and Holland had a Twelve Year Truce. Finally, in 1648 (about 12 years after this story takes place), Spain signed a treaty and Holland finally gained both political and religious freedom. The Dutch government was different than any Europe had ever seen, called a Republic among all the European monarchies. Show your child Rembrandt's "Night Watch", painted in 1642, showing the Dutch Army.

Your child may recall that it was in 1620 that the Pilgrims came to America from Europe. Ask her if she remembers where they had first visited, Holland, just 10 or so years before Hana was born. This was during the Twelve Year Truce with Spain. The Pilgrims felt safe there, because the Dutch people believed in freedom of religion. What they didn't expect to find was a country where without the laws of religion, there were many who felt licensed to do as they pleased. While freedom is a good and necessary thing, there will always be people that think they have freedom to sin. Much good comes out of a free society though, prosperity, education, and invention being among them. It was this freedom that propelled

the Dutch into becoming great merchants and starting the historical economic phenomena called “Tulipmania.”

Complete Timeline Accordion. Key dates are as follows:

1300's – Renaissance Begins

1568 – Holland Revolted Against Spain

1600-1750 – Baroque Period

1606 – Rembrandt Born

1609-1621 – Twelve Year Truce

1609-1620 – Pilgrims in Holland

1634 – Beginning of Tulipmania

1637 – End of Tulipmania

1648 – Holland Gains Freedom

1669 – Rembrandt Died

Occupations –

There are many different kinds of workers throughout this story. The job somebody does for a living is called his or her occupation. Some of the occupations mentioned or pictured were physician, merchant, nurse, artist, cook, and gardener. Discuss with your child which of the occupations he finds most appealing and why. Older children may want to conduct an interview with someone working in the various occupations, either in person or on the phone.

Lapbook Component: Occupation Interview Bi Fold

Father-Daughter Relationships –

Hana and her father have a special relationship. They play pretend together, they feel each other's pain, and they love each other very much. Bedtime every night was a special, anticipated time for Hana. Ask your daughter (or son) if she has any special games or routines that are reserved for just her and her father. Review Hana's bedtime throughout the story. Does your daughter have a similar routine? Maybe a special memory of a specific bedtime tradition? If so, describe it in Bedtime Memory Shutterfold. If not, try to start a routine for some special Daddy-Daughter time.

Science

Tulips –

Tulips are popular spring-flowering bulbs. They are often associated with Holland, and are frequently imported from there, but they actually originated in the Middle East. Tulips come in just about every color except blue. They have cup shaped flowers that can be double or single, fringed or twisted, perfumed or non-scented. They can grow up to 2 ½ feet tall and have broad, smooth leaves that will quickly fade in summertime heat. Tulips bloom in April and May, and the flowers are short lived, lasting only about a week.

Tulips grow from bulbs. Inside the bulb is a solid stem, flower bud, and leaf bases where the plant's food is stored. Roots will grow from the bottom of the bulb, to hold the plant in place. The flower bud will push up through the top of the bulb and grow into a beautiful blossom.

The flower has four parts:

Petals - the lovely, colorful blossom that attracts bees, insects and birds to help with pollination.

Pistils - the female reproductive part, which stores the egg cells.

Stamens - the male reproductive part that produces the pollen that is needed to produce seeds.

Sepals - small green leaf-like petals that surround the flower to protect a young flower.

When a bulb grows into the flower, the original bulb will disappear, but a small bulblett forms in its place, as do several buds. Properly cultivated, these buds will become bulbs of their own. Bulbs can be uprooted and moved about from June to September. Tulips need a cold winter in order to go dormant and store up enough food for their spring blossoms. If you live in a warmer area, you can purchase pre-cooled bulbs that can be planted. If you are sharing this book during the fall months, it would be fun for your children to plant a tulip garden to bring some beautiful color to your spring yard.

Complete Tulip Components (includes bulb flapbook, tulip graduated book, and tulip parts bi-fold)

Herbs, Rosemary –

Hana's family had an herb garden. Herbs are plants that sometimes grow wild and can also be cultivated. They have been used since the beginning of time to season foods, for medicinal purposes, and for products such as soap, shampoo, lotion, and perfume. One herb grown in Papa's garden was Rosemary.

Hana prescribed rosemary to help Papa's memory. There has always been much superstition surrounding this herb. Ancient Grecians used to wear the herb around their necks to improve their memories. During the Middle Ages it was believed to ward off evil spirits. The rosemary branches were burnt to prevent the Plague. What exactly is this wonder herb?

Rosemary, *Rosmarinus officinalis*, is a pretty evergreen perennial grown from seed or cuttings that grows to 72" and spreads up to 24". The needle-shaped foliage is gray-green. The plant likes a sandy soil in full sun. The leaves and flowers can be used either fresh or dried. As a seasoning, the herb goes well with fish, chicken, tomatoes, eggs, and bread. The dried leaves are also used for facials, lotions, potpourri, and hair rinses. There has been much advancement in the medical field since the 1600's, and while there is no medical proof that rosemary aids memory, it is known to help arthritis, and minor wounds and bruises when used externally. Recent studies suggest that a dietary supplement of rosemary extract greatly decreases the occurrence of mammary tumors (breast cancer).

Fresh rosemary can often be found in the produce section of the grocery store, and dried can be found in the spice section. Encourage your child to smell the leaves, and maybe even wear some to see if it helps the memory!

Lapbook Component: Rosemary Graduated Book

Fireflies –

Hana thought fireflies may chase away Papa's dark thoughts. Fireflies, also called lightening bugs, are not flies at all but rather beetles. They add to the pleasure of a warm summer's night. Complete Firefly Components as you learn more about this interesting insect.

Classification –

Kingdom – Animal

Phylum – Arthropoda (jointed foot)

Class – Insecta (3 body parts, 6 legs)

Order – Coleoptera (Beetles - sheathed wing, chewing mouth parts)

Family - Lampyridae

Habitat –

Fireflies are found on every continent except Antarctica. They only come out when it is warm. The larvae live underground or in rotted wood or rubbish. The adults live in vegetation.

Anatomy –

Like all insects, fireflies have three main body parts, the thorax, head, and abdomen. They have six legs. Adult male fireflies have two sets of wings, while the females have only one, or sometimes none at all. They are usually a dark brown or black, with red or orange markings. They are about a half inch long.

Reproduction –

Using their lights to attract a mate, the female will lay eggs that are fertilized by the male. A metamorphosis takes place with the egg changing into a larva, then a pupa, and then an adult.

Diet –

The larva and pupa feed on small insect. The adults eat the same, but not as much.

How do they light? –

A firefly's light comes from two juices that it makes inside of its own body. Neither of the juices glow by themselves, but when they are mixed together a chemical reaction takes place and they begin to glow. The light is cool, like the light of a fluorescent bulb. Ask your child if he has ever had a glow tube, which he had to break and shake to get it to glow. This is the same basic principle. In some species, the eggs and larva of the firefly can also glow. They are often referred to as glowworms.

Worms –

The Gardener recommended putting worms in the earth to give it life. Worms are constantly burrowing and tunneling through the earth, gobbling up bits of dead leaves, insects, and other debris as they go. They then digest this mixture and the

waste they cast out is loaded with minerals and nutrients that plants love. Worms also improve the soil by loosening up the dirt so that roots can spread easily, and the castings retain rainwater that the plants need to thrive. For many, many years, gardeners around the world have known the power of the worm in garden soil. Worms are intriguing animals to study, so share as much or as little information as your child finds interesting. Child can complete Worm Components as desired. If your student wants to learn more about worms, try the [Earthworm Lapbook](#) at HSS.

Classification –

Kingdom – Animal

Phylum – Annelida (segmented worms)

Class – Oligochaeta (“few long hairs”; having setae)

Order – Lubricum (earthworm)

Species - Scientists believe that there are up to 8,000 different species of segmented worms.

Habitat – Worms live anywhere in the world where there is moist soil. You won’t find them in dry deserts or places where the ground stays frozen most of the time. Some varieties, usually the smaller ones, tend to live near the surface of the soil, while the larger ones can make tunnels as far as 6 feet down.

Size – While most worms are just a few inches long, there is a type living in the Pacific Northwest that grow up to 3 feet long, and a humongous type living in Australia that grows to 11 feet!

Anatomy – A worm’s body is divided into rings, or segments called annuli. Each segment has four pairs of hair like hooks, called setae, used to help pull the worm forward. Worms have 2 muscles, one running lengthwise and one running around the worm. These muscles expand and contract to help the worm inch through the soil. Worms have no eyes, ears, or lungs. They find what they need through temperature and touch and they take in oxygen through their skin. They do have a mouth at one end, and an anus at the other.

Reproduction – Worms are asexual, meaning that they are both male and female. Two worms still need to mate to reproduce, and they do this by exchanging sperm

cells, which are secreted along with the eggs into little cocoons. About three months later new worms wriggle out.

Food Chain – Worms are an important part of the food chain. Plants are eaten by worms that are eaten by birds that are eaten by cats. Worms are even part of a human's food chain! We eat fowl such as chickens that eat worms, and in some South American communities, worms are actually cooked up for a special treat!

Activity – Make a worm compost bin! You can then add this compost to your garden to “give it life”. You will need:

A plastic storage bin, at least 8 inches deep

Bedding materials such as shredded newspaper, fallen leaves, and peat moss, soil

Worms (red worms will work best but any can be used)

Plastic garbage bag

Food scraps

Step 1: Put small drainage holes in the bottom of the bin, less than ¼ “

Step 2: Fill the bin halfway with bedding. Mix the different materials and moisten the bedding evenly.

Step 3: Add at least a dozen worms (about a pound of worms if you are ordering them special for this project)

Step 4: Cover the bin with the plastic bag. Put the bin in a cool, shady spot where it won't be disturbed by any critters.

Step 5: Check your bin daily, adding fruit and vegetable scraps to the bin. They could be peels, wilted lettuce, tea bags, stale bread, coffee grounds, etc. Don't use any meat or dairy products.

Step 6: Don't let the bin dry out. Spray it as needed with cool water/

After a while you will find that your worms multiplied and need more food. You will also find, in about 3 months or so, that most of the bedding was used up and turned to a rich compost. At this time, you can either dump your whole bin, worms and all, into a nice garden bed, or you can take out half of the compost and worms, and add in new bedding material, continuing your worm compost bin.

Anatomy (Human Heart) -

When Hana played doctor she listened to Papa's heart. Is your child familiar with

the function of the human heart? It is a strong muscle about the size of your fist, and never stops pumping. Your heart is actually two pumps that work side by side. The right side pumps blood to your lungs, where it picks up oxygen. The left side pumps the oxygen filled blood out and through your body more than 1000 times a day. Your cells need oxygen to keep you alive. Each side of your heart has two chambers, called auricles and ventricles. A fun and informative book about the human body is *Blood and Guts* by Linda Allison. It includes many experiments as well as instructions for dissecting a lamb heart, which is very similar to a human heart. Maybe your child would like to create a model heart or draw a sketch to add to your lapbook. Complete Heart Chambers Lapbook Component if desired. Answer key: 1. Left auricle. 2. Left ventricle, 3. Right auricle. 4. Right ventricle.

Language Arts

Vocabulary –

Renowned – famous

Merchants – one who buys and sells items for a profit

Associates – a business partner or colleague

Prescribe – to order a remedy

Means – resources or wealth

Guilders – Dutch coin (now called a gulden) used in 17th century Dutch colonies of the New World. Six guilders equaled one English pound sterling

Stuivers – Dutch coin. 20 Stuivers equaled a guilder.

Broadsheets – a large sheet of paper printed on one side

Bedchamber – bedroom

Parcel – a package that is wrapped up

Peddling – traveling about selling wares

Vixen – turbulent, quarrelsome

Lapbook Component: Vocabulary Cards and Pocket

Comprehension Questions –

1. Why did Papa stop walking in the garden with Hana? (Because he devoted himself to wanting)

2. Where was Hana forbidden to play? (In the North Garden where Papa's tulips grew)
3. What did Papa do to Hana every night? (Kissed the tip of her nose)
4. What did Hana prescribe to improve the memory? (Rosemary)
5. What did Hana prescribe to keep away dark thoughts? (Fireflies)
6. Why did Hana like Rembrandt? (Because of his hearty laugh and the treats he'd bring)
7. What did Hana prescribe to cure frowning? (A chain of daisies)
8. What did the Gardener recommend to make the flower bloom? (Worms)
9. Why were Papa's eyes shining when he was sitting alone in the library? (he was crying)
10. Why was he so upset? (because the tulips did not grow in time to market them and they lost their means)

Simile –

A simile is a figure of speech comparing two unlike things to each other using the words "like" or "as". This is usually done to give the reader a better visual idea of the subject being written about.

"And tulips in those days were as precious as gold."

"Hana tried to concentrate on his question, but her eyelids drooped and closed like petals."

Language Arts Components (includes Simile tri-fold, Perspective simple fold, and Italics three flap)

Personification –

Personification is a literary device in which the author elevates an animal, object, or idea to the level of a human such that it takes on the characteristics of a human personality. In many of the HSS and/or FIAR stories you may have read, you may have come across animals or machines that were personified (such as *Stuart Little* or *Katy and the Big Snow*) In *Hana*, the tulips "bowed their gorgeous, heavy heads, shy for once, in the dark." Do tulips have heads? Do they have the emotional ability to be shy? Of course not, but the author was personifying the tulips, giving them human characteristics, bringing the reader to imagine a shy tulip. If your child doesn't bring up this literary term on his own, just make mention of it.

Perspective –

The perspective is the position or angle from which a story is told. This story is told from the perspective of Hana. The author, Deborah Noyes, said, “...I started to wonder how the phenomenon might have looked from a child’s-eye view. Children have always witnessed history in the making, even if they aren’t often invited to comment on it.” Throughout the story we read how Hana saw her father, sad, forgetful, unwell. As a child, she doesn’t understand the complexities of tulipmania, or the financial situation of her father. She just knew she missed their games, jokes, and bedtime routines. Discuss the different ways Hana thought she could help her father. Ask your child if there was ever a time when he felt like Hana. Sometimes parents get caught up in the rigors of life and forget to look at the “child’s eye view”. If you are one of those parents, try to reconnect with your child, seeing life from his perspective, and follow the author’s advice: “I hope the book encourages families to pause more, to value each other and their time together, which is – like the tulip – fleeting and precious.”

Italics –

You will see many words printed in italics throughout this story. Italics are a style of type that is slightly slanted. It is used to indicate a foreign word that has not been adopted in the English language. Such is the case with *Semper Augustus*. They are also used for poems, such as the one Hana sang about the daisies. Italics are also used to bring emphasis to a word, examples being *her*, *the tulip*, *all*, and *frown*. As you read through the story with your child, point out this printing style.

Math –

Tulip Mania –

People paid a lot of money for the tulip bulbs during Tulipmania. Oftentimes items were traded for the bulbs. Using the following values, figure out just how much each bulb cost. (g. = guilder) (Note: prices are estimates. Keep in mind the average craftsman made only 300 guilders a year)

1 lb. Cheese	1 g.	Oxen	50 g.	Pig	15 g.	Sheep	20 g.
Load Wheat	500 g.	Load Rye	400 g.	1 ton butter	250 g.	1 bed	800 g.

Problem 1:

One man paid for just one Viceroy tulip bulb with one thousand pounds of cheese, four oxen, eight pigs, twelve sheep, and one bed. How much did the bulb cost him?

Cheese - 1000 guilders

Oxen 200 guilders

Pigs 120 guilders

Sheep - 240 guilders

Total: 1560 guilders

Problem 2:

Another man bought a bulb with two loads of wheat and four of rye, four fat oxen, eight pigs, a dozen sheep, four tons of butter, a thousand pounds of cheese, and a bed. How much did the bulb cost him?

Wheat - 1000 guilders

Rye - 1600 guilders

Oxen - 200 guilders

Pigs - 120 guilders

Sheep - 240 guilders

Butter - 1000 guilders

Cheese - 1000 guilders

Bed - 800 guilders

Total: 5960 guilders

Problem 3:

The average cost of a bulb was around 3000 guilders. Show the items a man may have traded totaling 3000 guilders.

Lapbook Component: Tulip Mania Word Problem Flaps

Graphing –

Tulip Mania went, well, crazy! It started in 1634, when a single bulb sold for 50 guilders. That seemed like a lot of money at the time, as a craftsman was only making 300 guilders a year. Can you imagine spending $\frac{1}{5}$ of your yearly salary on a single flower bulb? Well it went crazier yet, with a single tulip bulb rising to 20

times the craftsman's yearly salary! But then it fell...fast. Take a look at these prices a single bulb sold for over a three-year period:

December, 1634 – 50 guilders

November, 1635 – 200 guilders

November, 1636 – 380 guilders

February, 1637 – 750 guilders

April, 1637 – 1100 guilders

June, 1637 – 1500 guilders

August, 1637 – 5900 guilders

December, 1637 – 1 guilder

Between what two time periods was the largest peak?

Between what two time periods was the largest drop?

Using Tulip Ups and Downs Simple fold, graph the tulip prices during Tulip Mania.

Cardinal Directions –

The tulips grew beyond a fence in the North Garden. The direction “North” is pointing towards the North Pole. Discuss a compass rose with your younger child, pointing out the cardinal directions, north, east, south, and west. A good mnemonic device to remember the order of the directions going clockwise is “never eat shredded wheat”.

For older children, explain that the directions can get more specific than just north, south, east and west. The distances between each of these cardinal points is measured in degrees, separated by quadrants. Print Compass Quadrant Fold on cardstock. Show your child how a circle is 360 degrees, and each quadrant is 90 degrees. This system of measuring is especially needed for navigation and surveying, when very specific locations are needed. Instead of just saying “south” you would say specifically “190 degrees south”, or simply “190 degrees”. The top of the compass, will say either 360 degrees or 0 degrees, and will always point north. 90 degrees is east, 180 degrees is south, 270 degrees is west.

Look with your child at the picture of the estate. Can he find Hana and the dog playing? (SW corner) Have your child give you directions from the gate where Hana is playing to the bed of tulips, and then back again. For the younger child they may sound something like: Go northwest. Turn east at the first road. Take that until the road splits. Make a left, going north until you come to the next road. Turn right and travel northeast until the road ends. Etc. etc. For the older child they may sound something like this: Leaving the gate, go 315 degrees till the road splits. Go 90 degrees east until road splits again. Travel 360 degrees north and make your first right, etc. etc. Complete Corner Flap Direction Fold.

Economics –

Read the *Author's Notes* in the back of the book. It gives further details of the phenomenon called “tulipmania”. Some of the terms may be difficult for your child to understand, so here are some definitions to help you:

Imported – when a product is brought in from another country. The tulip bulbs were originally imported to Holland from the Middle East. Ask your child if he can think of any items that are imported to this country. Today, many of tulips sold in America are imported from Holland.

Supply and Demand – The demand for tulip bulbs skyrocketed. Introduce to your child the law of supply and demand. There was a demand for the tulips, as people thought of them as status symbols. The supply, however, was lacking, which made the prices go up even further. Had the supply been plentiful, the demand would have decreased and so would have the prices.

Capital Resources - Capital resources are machines and tools used in producing a good or service. The growers scrambled to perfect methods for cultivating and transporting their tulips.

Speculation – Speculation is an investment involving risk with hopes of a large profit. Speculators would sell bulbs that were not in existence yet, on the promise that they would be produced. When the bulbs did not produce, the speculators had to refund the money, and became poverty stricken in doing so.

Loan Collateral – Tulips were used as collateral for loans. Collateral is an object of worth that is used to secure a loan. Often times land and/or cars are used for

collateral on loans. During tulipmania, the bulbs were worth as much and more than land!

Crash – A crash in the business world is a complete collapse. The tulip bulb business crashed in 1637.

Bankruptcy – When a person is unable to pay his debts, even after exhausting all his resources including his property in an effort to pay his creditors, he is considered bankrupt.

Planting Tulips –

Tulips should be planted 5 inches apart. If a tulip bulb is 2" wide, how many tulips will it take to plant a row 35 feet long? $35 \times 12 = 420$ inches; $420 / (5+2) = 60$ bulbs needed

45 tulip bulbs cost \$19.95. How much is each tulip? $19.95 / 45 = .44$ each

If you have a bulb catalog, have your child make up his own word problems.

Art –

Eyes –

Hana's art assignment was to draw eyes. Eyes are one of the most important parts of the human body. Besides performing the functions of sight, they are a reflection of a person's emotions, personality, thoughts, and expressions. Artists take great care in how they draw eyes, as the mood of the whole work can be altered by the expression of the eye. Have your child look at various eyes. They may be the real eyes of family members, photographs of eyes, or paintings that show expressive eyes. If you have a book including works of Rembrandt, especially show those eyes. Ask your child what he can tell about people, just by looking at their eyes. Are they happy or sad? Are they young or old? Are they dreamy or deep in thought? What are they thinking? Have your child choose his favorite eye and use it as a model to draw from.

Step 1: Study what the eye really is. Rembrandt got good at drawing portraits by studying live (and dead) models. Look at the pupil (the black area in the center),

the area that contracts in size when light hits it. Look at the iris, the area that gives us our eye color. Look at the white of the eye. Look at the overall shape of the eye, with its curves, its depth, and its sheen. Look at the skin on the eyelids, and the eyelashes. All eyes are different.

Step 2: Draw an outline. Lightly sketch the basic oval shape of the eye.

Step 3: Draw the eyeball within the oval shape. Fill in the inner and outer corners.

Step 4: Draw the pupil. Place it to be looking in the direction you want it to.

Step 5: Draw in skin texture details around the eye such as lids, lines, wrinkles, etc.

Step 6: Look at the reflections and shadows on your model eye. Shade in the left and right curved areas of your eye to give it roundness. Leave some spots on the eyeball white to show reflections.

Step 7: Examine the model eye's eyelashes and eyebrows. Look at the direction the hair grows, and the thickness of each hair. Carefully add eyelashes and eyebrows to your eye drawing.

Drawing eyes takes a lot of practice, but the more you practice the better you will get.

Lapbook Component: Eye Art Oval Fold

Baroque Period –

The Baroque Period came after the Renaissance and lasted from 1600 to 1750. This era of art is known for its heavily ornate décor found on furniture, walls, and architecture. The greatest Baroque painters were Rembrandt and Rubens, both from Holland. They used heavy detail, dramatic lighting and facial expressions, and a great depth of feeling. Look through the book at the decorated entryways and the ornate picture frames. These are typical of the Baroque Period.

Lapbook Component: Baroque Border Fold

Rembrandt –

Hana always looked forward to Rembrandt's visits. Rembrandt Harmensz van Rijn was a great painter born in Leyden, Holland in 1606. He was the son of a miller and studied in the Latin school of his birthplace. His parents knew he had talent and wanted him to learn with the best artists out there. In 1630 he moved to Amsterdam where he became a portrait painter and gained many pupils. During the 1600's cameras weren't invented yet. If a person wanted a picture of himself or his family, he would hire an artist to paint a portrait. Rembrandt was very good at painting these portraits.

It was in Amsterdam that he met and married his wife, Saskia, with whom he had one living child. When Saskia died nine years after they were married, Rembrandt married Hendrickje with whom he had a daughter. Rembrandt had used both Saskia and Hendrickje as models for his paintings.

In addition to painting portraits, Rembrandt enjoyed painting pictures of Bible characters and scenes, mythological characters, and groups of people. He painted many, many self-portraits, often practicing for an upcoming job. Still life paintings, such as the *Semper Augustus*, were actually not his favorite subjects. He made a good living as an art teacher and by selling his paintings. However, he went into great debt by buying a large house and many famous works of art for his personal collection. All of his furniture and art, and even his house, were sold at auction. He died a poor man in Amsterdam on Oct. 8, 1669.

Rembrandt created over a thousand works during his lifetime. His paintings are in museums and galleries all around the world.

Lapbook Component: Rembrandt Report and Pocket

Sepia –

The insides of the front and back covers, as well as the smaller inset illustrations found throughout the story, are done with a reddish brown pigment. This style of art is called sepia. Originally, these colors were obtained from the secretions of the cuttlefish, found most often in European waters. The secretions were made into a pigment that could be used straight, to make the fine, dark lines, or could be

watered down to use as a filler color. Today, sepia artwork can be done using synthetic pigments. Many computer programs also can change any picture to “sepia”, giving it only the reddish brown hues. Encourage your child to make his own sepia illustration, either with brown paints or on the computer.

Lapbook Component: Sepia Accordion Fold


Comparing Artists –

The illustrator of *Hana in the Time of the Tulips*, Bagram Ibatoulline, studied the paintings of seventeenth century Dutch artists in order to duplicate the style and tone. After you have examined numerous works of Rembrandt, compare the works to the illustrations in our story. How did he do? Encourage your child to make a masterpiece of his own, duplicating the same style and tone. Use it for the cover of lapbook, if desired.

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Material may not be used for resale or shared electronically.

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Annuli	Clitellum	Gizzard	Setae	Aortic Arches	Skin
<div> <div> <div>Worm</div> <div>Anatomy</div> </div>  </div>					

Cut out as one piece on solid lines. Mountain fold on dotted lines. Cut flaps on solid lines. Under each flap, have older children write definitions, and younger children glue definitions.

Cut out definitions on solid lines. Glue under correct flaps on Worm Anatomy book.

the narrow, band-like segments of a worm's body	the thick band that produces egg cocoon	Section of digestive tract where food is ground up	Small bristles spaced along length of worm to help it move	Blood vessels that pump blood, like a heart. Worms have 5 pairs.	The outer covering, through which the worm absorbs oxygen.
---	---	--	--	--	--

Cut on solid lines.

Mountain fold on dotted lines, and then fold in half so cover is on top.

Write about a worm's habitat and child's habitat under flaps.

<p>What does your habitat look like?</p>	<p>Glue here</p>	<p>WORM HABITAT</p>	<p>What does a worm's habitat look like?</p>
--	------------------	---------------------	--

<div data-bbox="1323 415 1383 684" data-label="Section-Header"> <h1>worms</h1> </div> <div data-bbox="1245 716 1485 1024" data-label="Image"> </div>	<div data-bbox="995 1083 1047 1677" data-label="Text"> <p>How do they protect themselves?</p> </div>	
<div data-bbox="899 535 951 890" data-label="Text"> <p>Where do they live?</p> </div>		
<div data-bbox="422 548 474 879" data-label="Text"> <p>What do they eat?</p> </div>	<div data-bbox="290 527 329 938" data-label="Text"> <p>www.homeschoolshare.com</p> </div>	

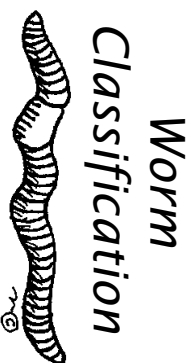
Cut out pages on solid lines. Stack with smallest page on top and staple at top. Fill out info on each page.

Cut out all pages on solid lines. Stack with cover on top and staple on left.

Kingdom – Animalia

Phylum – Annelida (segmented worms)

Class – Oligochaeta (few long hairs)

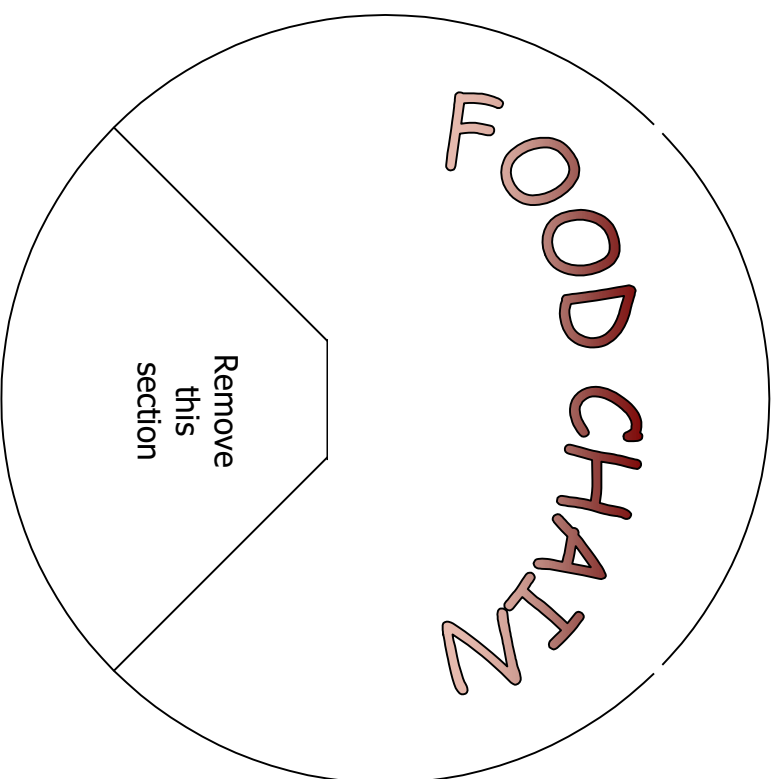
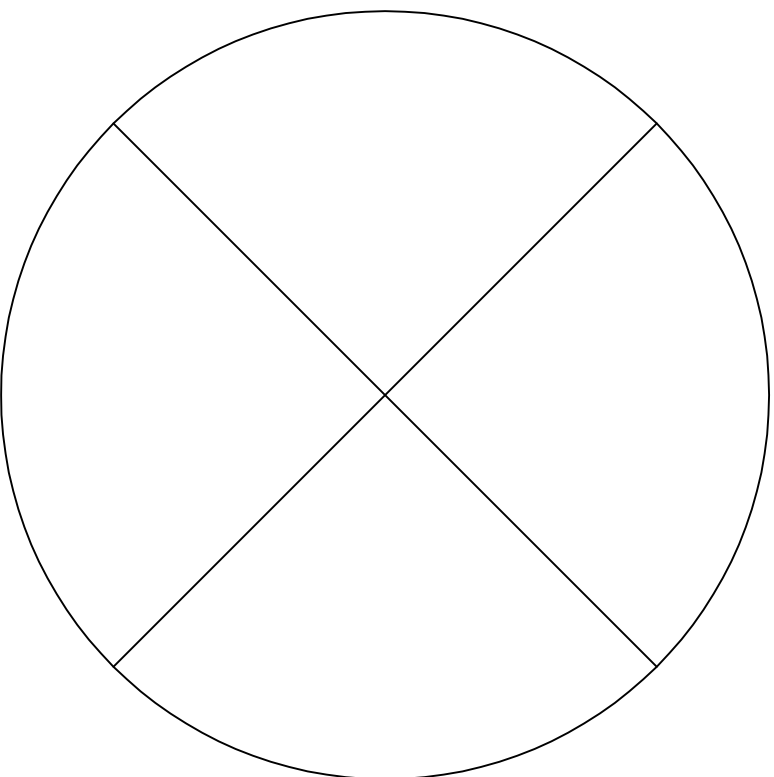
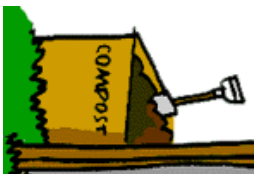
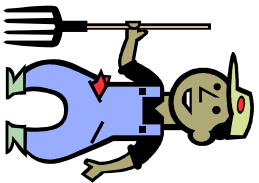


Kingdom

Phylum

Class

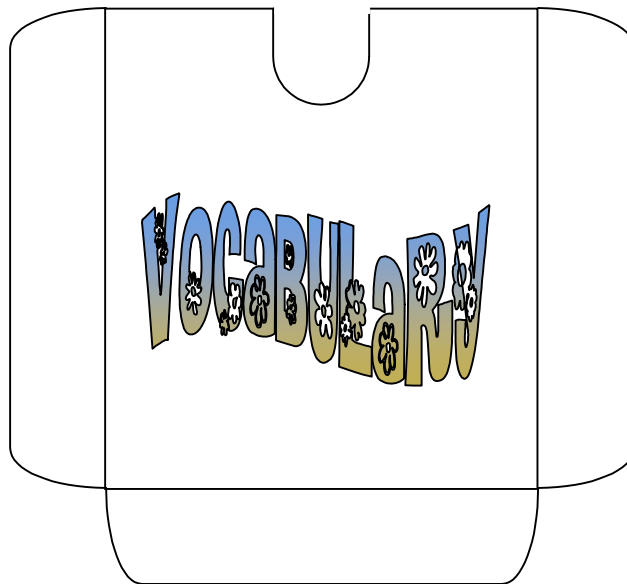
Cut out both wheels. Remove section where marked. Stack on top of each other and insert brad through center.
Glue pictures in order around wheel, to show Food Chain – Person ➡ Compost ➡ Worm ➡ Fish




Word: Definition:	Word: Definition:	Word: Definition:
Word: Definition:	Word: Definition:	Word: Definition:
Word: Definition:	Word: Definition:	Word: Definition:

Cut out cards on solid lines. Use to record vocabulary words throughout the story.

Cut pocket out as one piece. Fold under tabs and glue into lapbook. Use pocket to store cards.



<p>One man paid for just one Viceroy tulip bulb with one thousand pounds of cheese, four oxen, eight pigs, twelve sheep, and one bed. How much did the bulb cost him?</p>		
<p>Another man bought a bulb with two loads of wheat and four of rye, four fat oxen, eight pigs, a dozen sheep, four tons of butter, a thousand pounds of cheese, and a bed. How much did the bulb cost him?</p>		
<p>The average cost of a bulb was around 3000 guilders. Show the items a man may have traded totaling 3000 guilders.</p>		

Cut out book on solid lines. Mountain fold on dotted lines. Cut out price box and glue to back of cover.
 Under each flap record answers to word problems, showing work.
 Guilder = g.

1 lb. Cheese	1 g.
Load Wheat	500 g.
Oxen	50 g.
Sheep	20 g.
1 ton butter	250 g.
Load Rye	400 g.
Pig	15 g.
1 bed	800 g.

[illegible]

December, 1634 – 50 guilders

November, 1635 – 200 guilders

November, 1636 – 380 guilders

February, 1637 – 750 guilders

April, 1637 – 1100 guilders

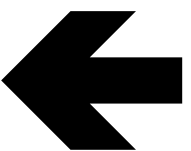
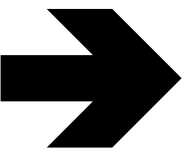
June, 1637 – 1500 guilders

August, 1637 – 5900 guilders

December, 1637 – 1 guilder

Between what two time periods was the largest peak?

Between what two time periods was the largest drop?



Tulip Ups and Downs

Cut out book on solid lines. Valley fold on dotted line. Cut out words and graphics to decorate cover of book, or design your own cover.

Cut on solid lines. Mountain fold on dotted lines. Cut out bulb picture and glue inside book below closed flaps. Under each flap, write the name of each bulb part.

Answer key:

F - solid stem; B - flower bud; S - leaf-bases

Clipart courtesy of <http://etc.usf.edu/clipart>



Parts

of a

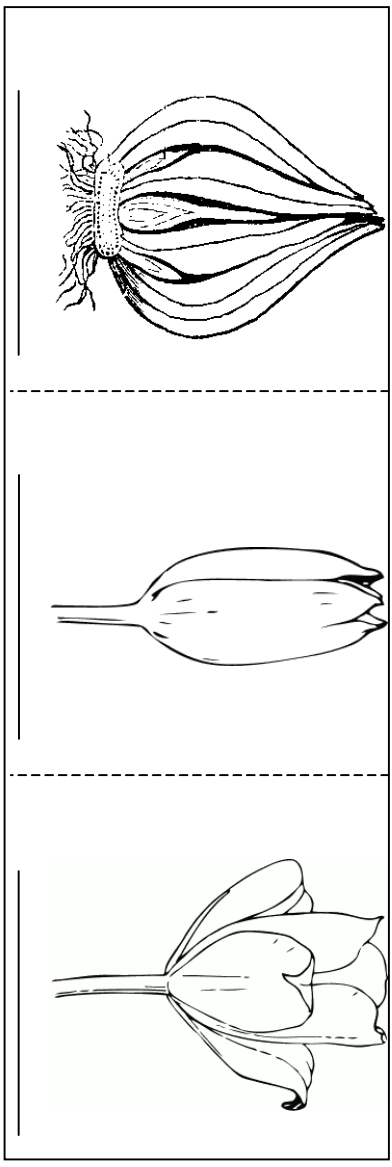
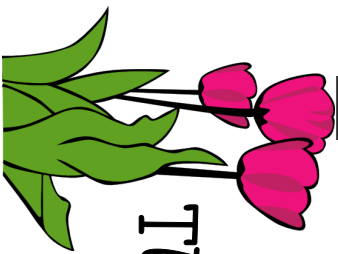
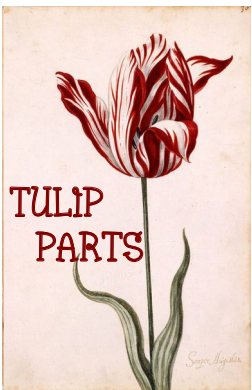
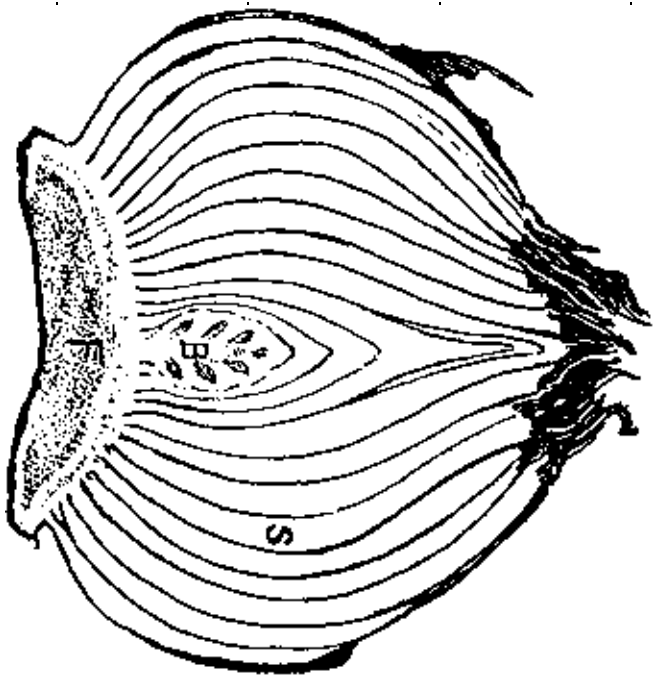
Tulip Bulb



F

S

B



Cut out bi-fold on solid lines.
Valley fold on dotted lines. Glue
Tulip Parts graphic to cover.

Cut out pages on solid lines.
Stack smallest to largest and
staple at top.

Where do tulips grow?

LOCATION

What colors are the
blooms?

What kind of leaves?
(circle one)

Jagged
Smooth
Rounded

LEAVES AND BLOOMS

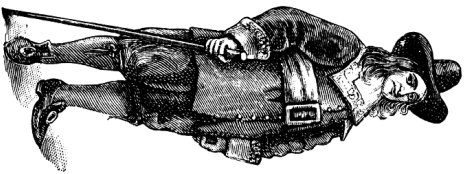
How do tulips grow?

When should the bulbs
be planted?

When will they bloom?

How long will the
blooms last?

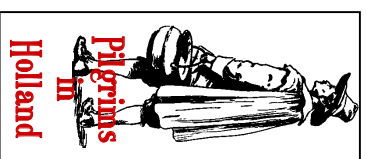
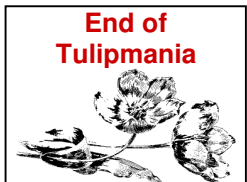
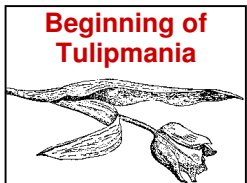
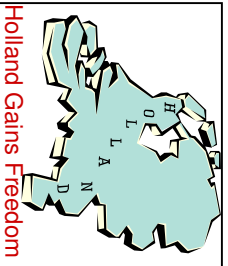
LIFE CYCLE



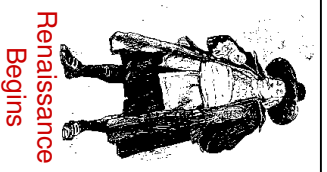
Timeline

1300's 1568 1600 1606 1609 1621 1634 1637 1642 1648 1669 1750

12 Year Truce



Cut accordion fold on solid lines.
 Accordion fold on dotted lines.
 Cut out events on solid lines and glue at
 Appropriate year on timeline.

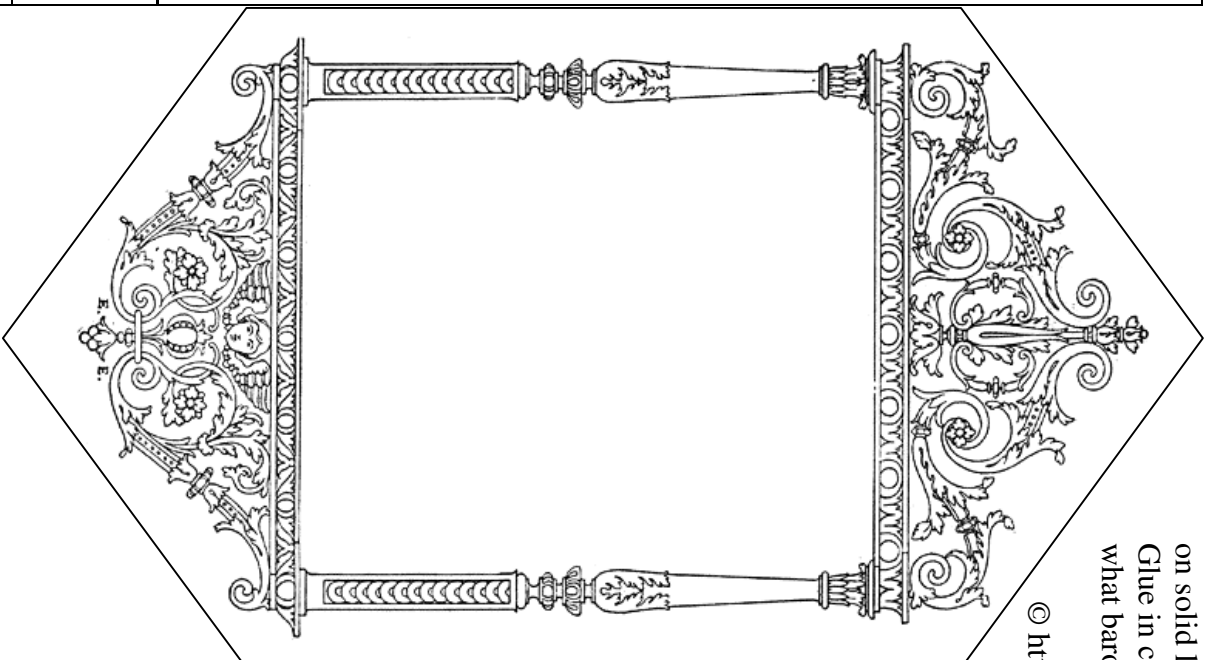


Baroque Period

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Sepia



Cut border out on solid lines. Cut simple fold on solid lines. Mountain fold on dotted lines. Glue in center of border. Inside, describe what baroque is.

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*What is
 Baroque?*



ROSEMARY

Circle One:

Annual
Perennial
Biennial

How is it propagated?

LIFE CYCLE

What shape are the leaves?

What color are the leaves?

LEAVES

How tall does it grow?

How much does it spread?

SIZE

List the various uses:

USES

Print out all pages and cut on solid lines. Stack with smallest page on top and staple at top. Fill out info on each page. Glue back of last page into lap/notebook.



Rembrandt

Born: _____

Died: _____

Nationality: _____

Occupation: _____

As a child, Rembrandt...

Rembrandt enjoyed ...

Some of his most famous works are...

Rembrandt Report



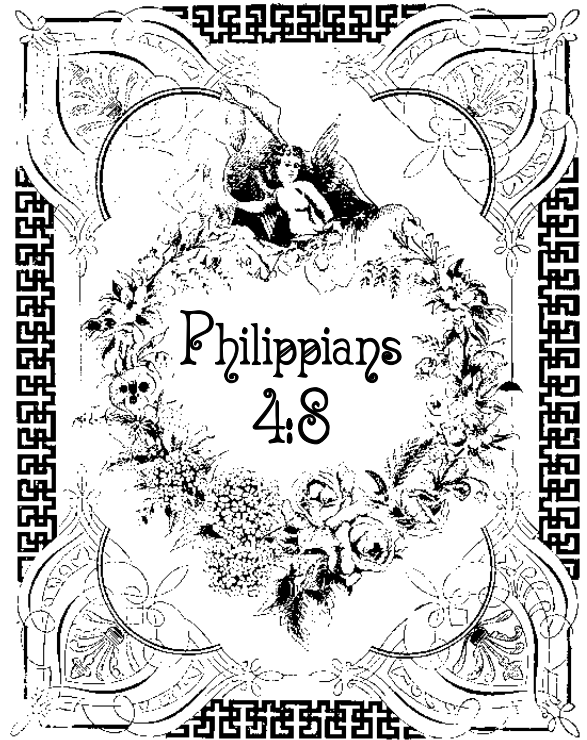
Print out and complete notebook page. Print pocket and cut out as one piece.
Fold under tabs and glue into lapbook. Store report in pocket.

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Print all pages on paper. Cut on solid lines. Mountain fold all pages on the dotted lines.
Assemble book so that each copywork quote is to the left and the blank lines are to the right.
Staple through cover, being sure to catch all pages.

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Glue this section into lapbook.



*Finally, brethren,
whatsoever things
are true, whatsoever
things are honest,*

Draw a picture of something that makes you
think good thoughts.

Whatsoever things
are just, whatsoever
things are pure,

Whatsoever things
are lovely,
whatsoever things
are of good report;

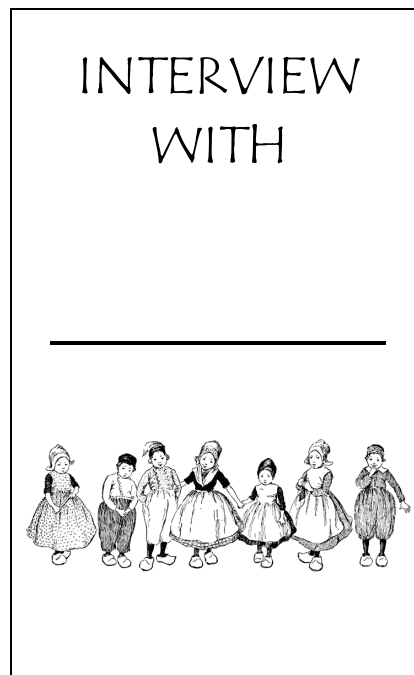
If there be any
virtue, and if there
be any praise,
think on these
things.

Copied by _____

In the year _____

	Person Interviewed:	_____
	Date of Interview:	_____
	How long have you been a _____?	_____
	What made you decide to be a _____?	_____
	How many hours a week do you work?	_____
	Did you need any special training?	_____
	What do you like best about your job?	_____
	What do you like least about your job?	_____

Cut out tri-fold and cover graphic on solid lines.
 Valley fold on dotted line (this will be your cover),
 and then unfold. Valley fold right side in half to
 the fold. Glue graphic to cover.
 Have child use form to interview a doctor, nurse,
 Gardener, artist, etc., then glue into lap/notebook.



Examples

Simile



Definition



Cut on solid lines. Mountain fold on dotted lines. Inside, describe what perspective is, and from whose perspective the story is told.

Cut on solid lines. Mountain fold on dotted lines.


1

2

3

Italics
Italics

Cut on solid lines. Mountain fold on dotted lines. Write three different uses of italics under flaps.

<p>Another Name for Holland:</p> <p>_____</p>	 <p>Locate and color in Holland.</p> <p>What continent is it on? _____</p> <p>What is the capital? _____</p>	<p>Language:</p> <p>_____</p>
<p>List important industries:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		<p>Bordering Seas:</p> <p>_____</p> <p>_____</p>
		<p>Why are dams and dykes built all over Holland?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>



Cut shutterfold on solid lines. Valley fold on dotted lines. Cut out and glue title graphic to outside of shutters.

Use extra clipart to decorate your lapbook.



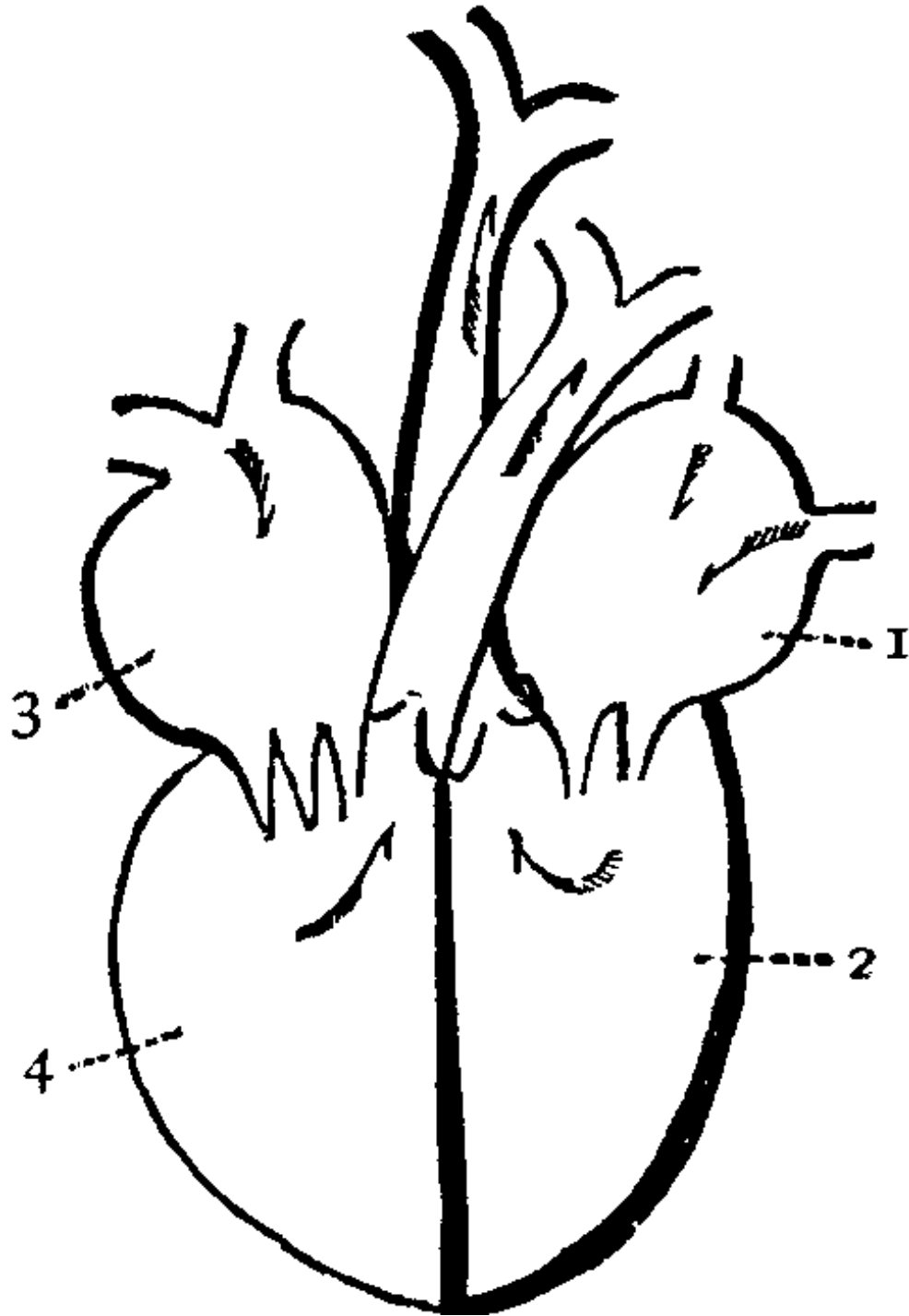
Cut "Flag of _____" book
out as one piece. Fold in half.
Cut out flag. Color. Paste in-
side book. Older students may
want to write a few flag facts
in the book as well.

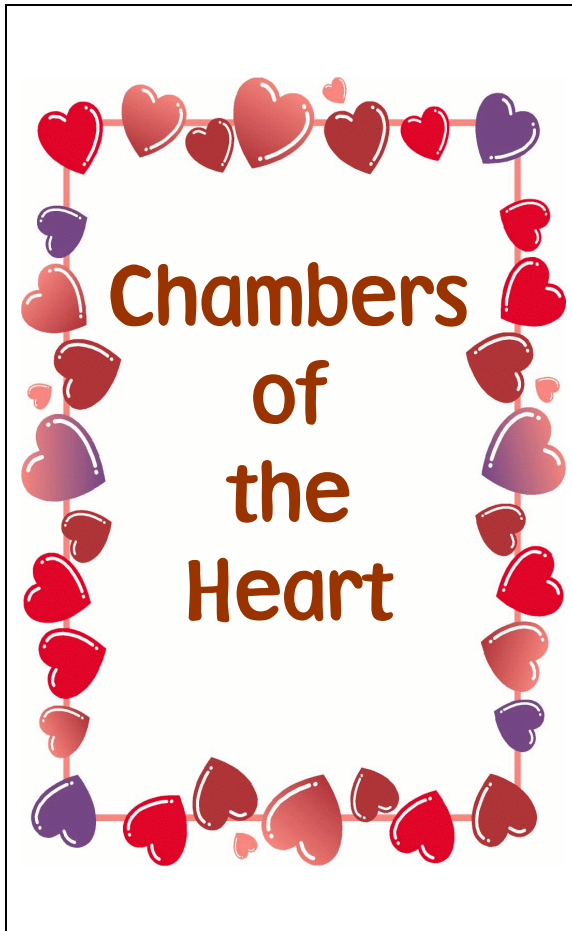
Cut out book as one piece on solid lines.
Have child follow directions for coloring in the chambers of the heart.
Fold in half vertically. Glue Graphic to cover.

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Color the Right Ventricle Red.
Color the Left Ventricle Green.

Color the Right Auricle Blue.
Color the Left Auricle Yellow.





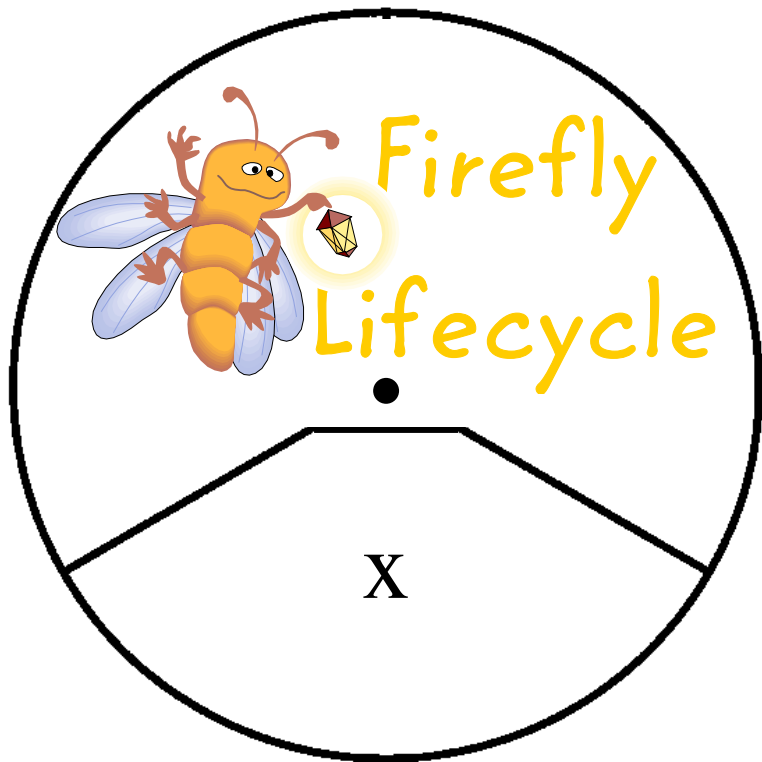
What is greed?

What does the Bible say about greed?

GREED



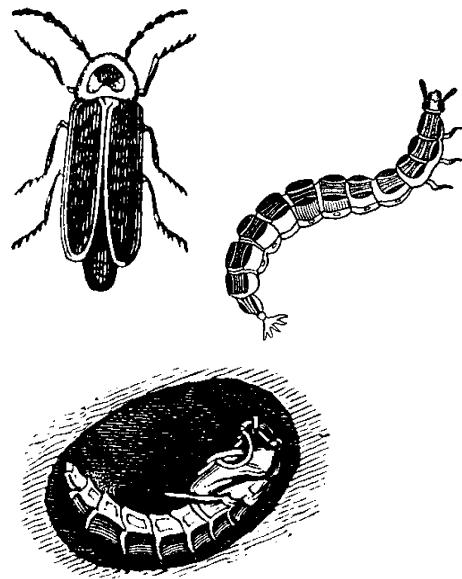
Cut on solid lines. Mountain fold on dotted lines. Record answers under flaps.



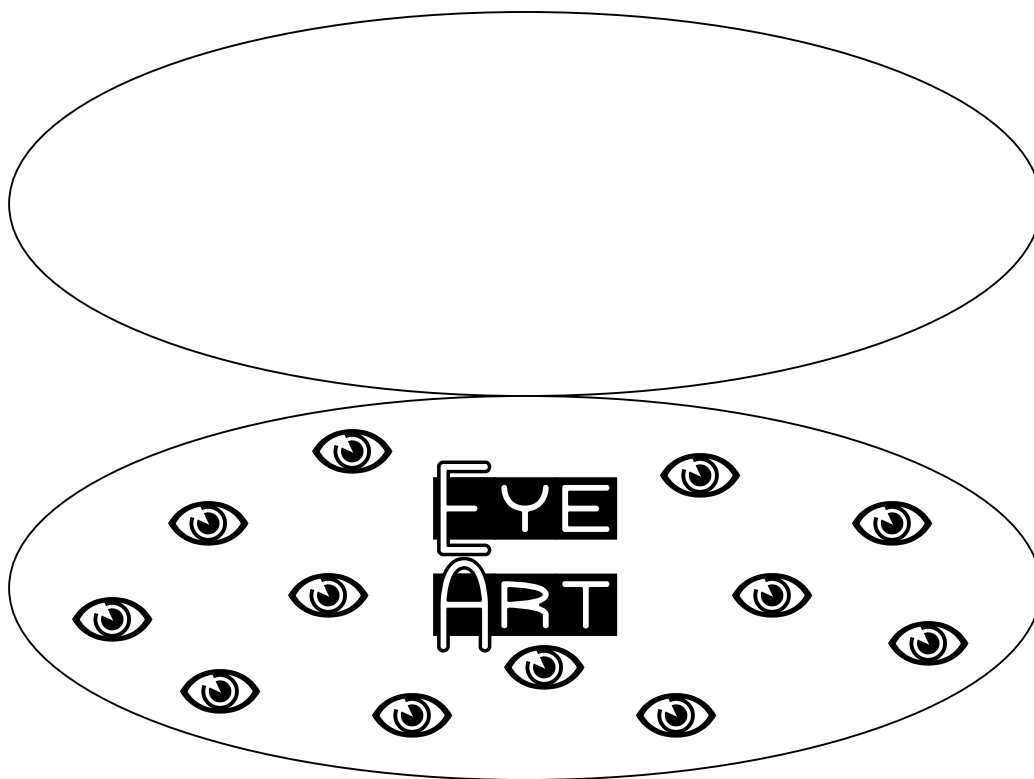
Light Simple Fold – Cut on solid lines. Mountain fold on dotted line. Inside, describe how a firefly lights.



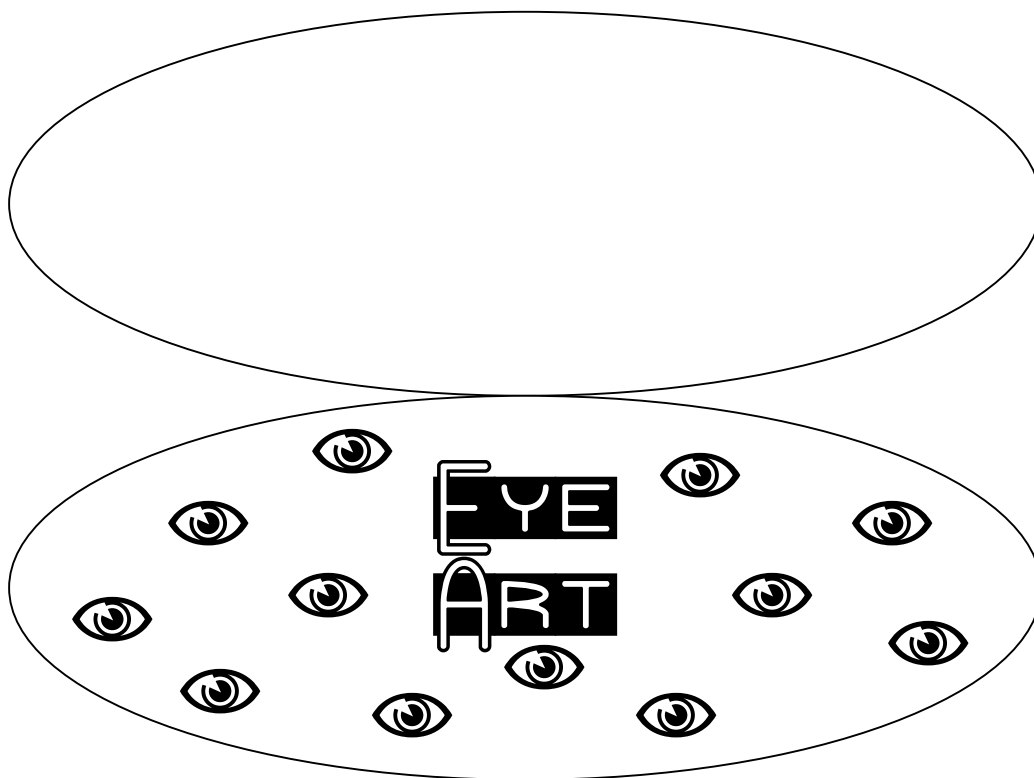
Life Cycle Wheel - Cut out both wheels. Remove section marked with an "X". Cut out and glue pictures to appropriate spots on bottom wheel. Put top wheel over bottom wheel and insert brad in center.



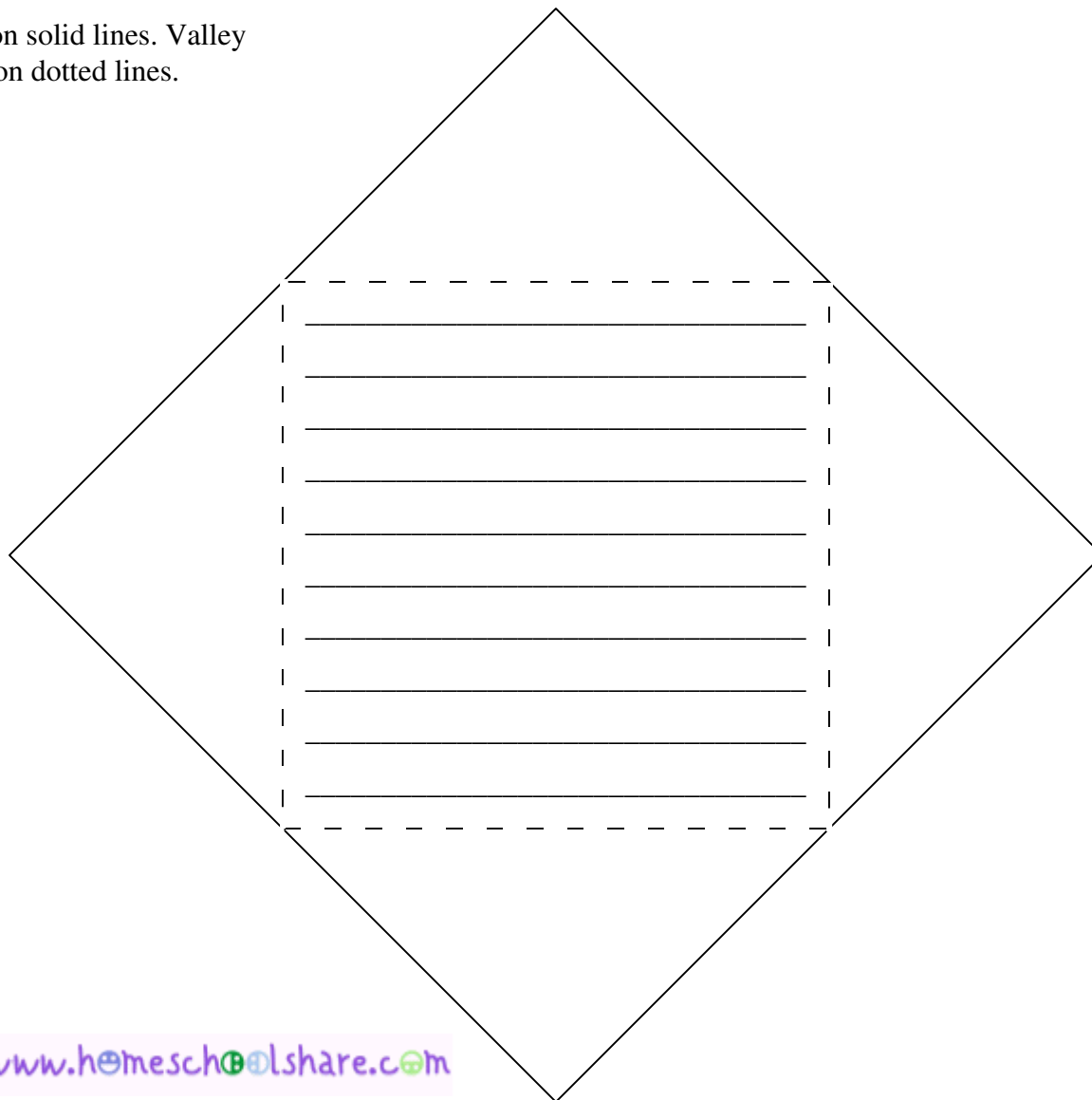
<div> <div></div> <div>firefly classification</div> </div>	Kingdom	Phylum
Class	Order	



Cut out simple fold as one piece. (Two are included) Mountain fold in half.
Use for Eye Art lesson.



Cut on solid lines. Valley
fold on dotted lines.



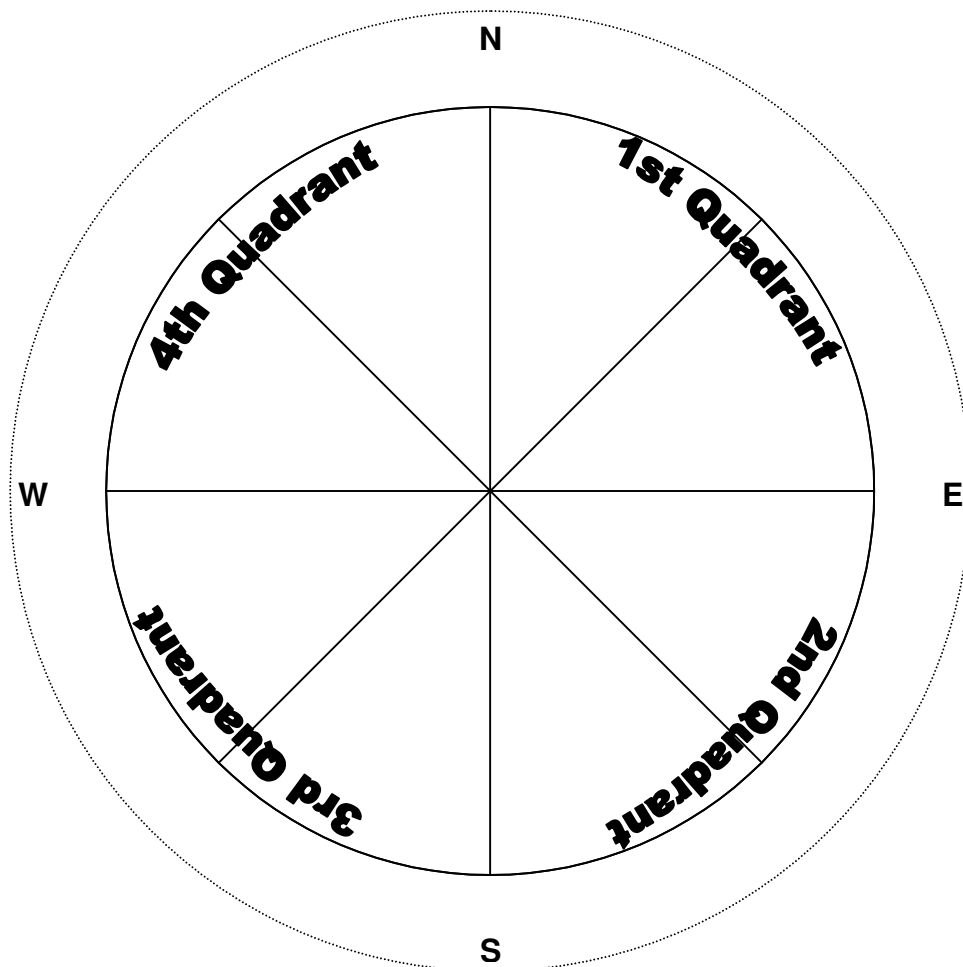
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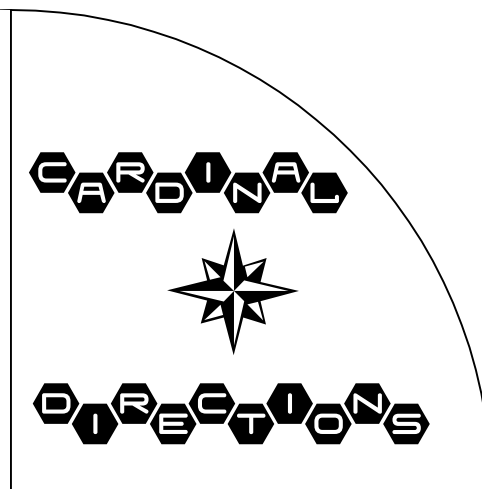
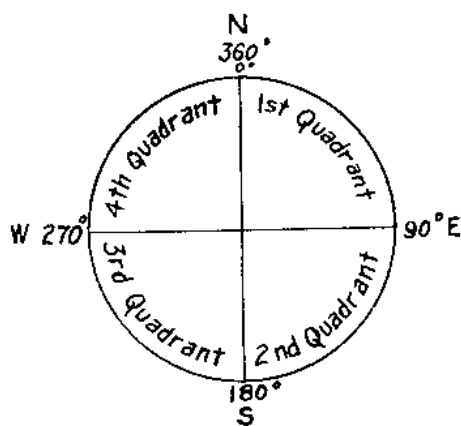
Cut out cover graphic on solid lines. Glue picture pieces to outside of cover triangles. Inside center of book, have child write directions Hana took to get to tulip garden. On each inside corner flap write North, South, East West. Color picture as desired.

Print on cardstock. Cut out on dotted line. At each point on the compass write the correct degree.
Use picture to help get you started.

Use completed compass to describe route Hana would take to get from the gate to the North Garden.



After compass is used to find route it can be stored in lapbook by folding in fourths, and gluing back of bottom quarter into lapbook. Cut out and glue title graphic to cover.





Where do dark thoughts come from?

Why does Satan want our minds filled with dark thoughts?

How do we get rid of dark thoughts?

What should we replace the dark thoughts with?

Cut out shapes on dotted lines.
Stack with cover on top. Staple at top.

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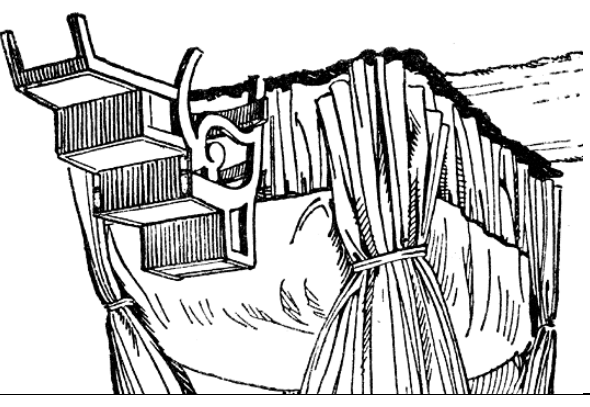
casting down imaginations, and every
high thing that exalteth itself against
the knowledge of God, and bringing
into captivity every thought to the
obedience of Christ;

2 Corinthians 10:5 says:

Cut on solid lines. Valley fold on dotted line. Cut out and glue title to cover. Copy verse in best writing.



My Favorite Bedtime Memory



Cut on solid lines. Mountain fold on dotted lines. Inside, have your child write one of her favorite bedtime memories.
Clipart courtesy of <http://etc.usf.edu/clipart> Component © <http://www.homeschoolshare.com>

Classification Graduated Book – Cut out 6 pages on solid lines and stack with smallest on top. Staple on left side. Record correct classification on each page.

Firefly Fact Tab Book - Cut out all pages on solid lines. Stack with cover on top. Staple where marked.

[illegible]