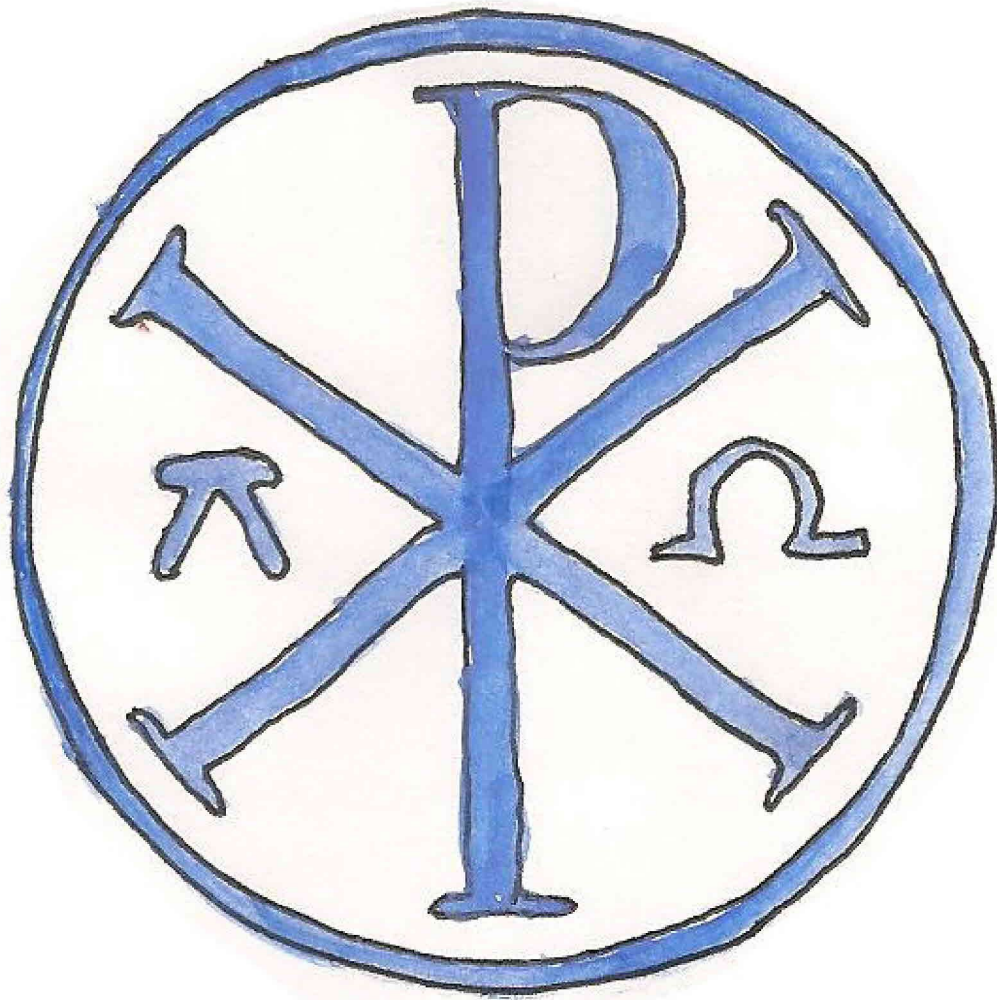


# Layers of Learning

## Year One - Unit Nineteen

Includes fun, hands-on projects in  
History - Geography - Science - The Arts



**Christianity - Australia & Oceania - Simple Plants - Instruments**

Michelle Copher & Karen Loutzenhiser



# LAYERS OF LEARNING

## YEAR ONE • UNIT NINETEEN

CHRISTIANITY  
AUSTRALIA & OCEANIA  
SIMPLE PLANTS  
INSTRUMENTS

HooDoo Publishing  
United States of America  
©2014 Layers of Learning  
Copies of maps or activities may be made for a particular family or classroom.

If you wish to reproduce or print excerpts of this publication, please contact us at [contact@layers-of-learning.com](mailto:contact@layers-of-learning.com) for permission. Thank you for respecting copyright laws.





# LAYERS OF LEARNING INTRODUCTION

This is part of a series of units in the Layers of Learning homeschool curriculum, including the subjects of history, geography, science, and the arts. Children from 1<sup>st</sup> through 12<sup>th</sup> can participate in the same curriculum at the same time – family school style.

The units are intended to be used in order as the basis of a complete curriculum (once you add in a systematic math, reading, and writing program). You begin with Year 1 Unit 1 no matter what ages your children are. Spend about 2 weeks on each unit. You pick and choose the activities within the unit that appeal to you and read the books from the book list that are available to you or find others on the same topic from your library. We highly recommend that you use the timeline in every history section as the backbone. Then flesh out your learning with reading and activities that highlight the topics you think are the most important.

Alternatively, you can use the units as activity ideas to supplement another curriculum in any order you wish. You can still use them with all ages of children at the same time.

When you've finished with Year One, move on to Year Two, Year Three, and Year Four. Then begin again with Year One and work your way through the years again. Now your children will be older, reading more involved books, and writing more in depth. When you have completed the sequence for the second time, you start again on it for the third and final time. If your student began with Layers of Learning in 1<sup>st</sup> grade and stayed with it all the way through she would go through the four year rotation three times, firmly cementing the information in her mind in ever increasing depth. At each level you should expect increasing amounts of outside reading and writing. High schoolers in particular should be reading extensively, and if possible, participating in discussion groups.

😊 😊 😊 These icons will guide you in spotting activities and books that are appropriate for the age of child you are working with. But if you think an activity is too juvenile or too difficult for your kids, adjust accordingly. The icons are not there as rules, just guides.

😊 GRADES 1-4

😊 GRADES 5-8

😊 GRADES 9-12

Within each unit we share:

- EXPLORATIONS, activities relating to the topic;
- EXPERIMENTS, usually associated with science topics;
- EXPEDITIONS, field trips;
- EXPLANATIONS, teacher helps or educational philosophies.

In the sidebars we also include Additional Layers, Famous Folks, Fabulous Facts, On the Web, and other extra related topics that can take you off on tangents, exploring the world and your interests with a bit more freedom. The curriculum will always be there to pull you back on track when you're ready.

You can learn more about how to use this curriculum at [www.layers-of-learning.com/layers-of-learning-program/](http://www.layers-of-learning.com/layers-of-learning-program/)

## UNIT NINETEEN

CHRISTIANITY – AUSTRALIA & OCEANIA– SIMPLE PLANTS– INSTRUMENTS

*All the gold which is under or upon the earth is not enough to give in exchange for virtue.*  
-Plato

	<b>LIBRARY LIST:</b>
HISTORY	<p>Search for: Christianity, church history, Christian history, Jesus Christ, Bible stories</p> <p>☺ <u>The Miracles of Jesus</u> by Tomie dePaola. A picture book.</p> <p>☺ <u>The Very First Christians</u> by Paul L. Maier. Stories from the Book of Acts alongside gorgeous art.</p> <p>☺ ☺ <u>The Children's Bible</u> in 365 Stories by Mary Batchelor.</p> <p>☺ ☺ <u>Peril and Peace: Chronicles of the Ancient Church</u> by Mindy and Brandon Withrow. Tells stories of early church leaders.</p> <p>☺ <u>Christianity</u> by Philip Wilkinson and Michael Tambini. From the DK Eyewitness series.</p> <p>☺ <u>Twice Freed</u> by Patricia St. John. Historical fiction of a slave boy who wants nothing to do with Jesus.</p> <p>☺ <u>The Children's Illustrated Bible</u> by Selina Hastings. From DK.</p> <p>☺ <u>The Bronze Bow</u> by Elizabeth George Speare. Historical fiction from the time of Christ.</p> <p>☺ ☺ ☺ <u>New Testament</u>. Especially the first four gospels which tell about the life of Jesus.</p> <p>☺ ☺ <u>For the Temple</u> by G.A. Henty. Fictional story that tells what happens to Jerusalem in 70 AD following a Jewish revolt.</p> <p>☺ <u>Church History In Plain Language</u> by Bruce L. Shelley. Written to the lay person, this book is an introduction to the history of Christianity and how it has affected the world.</p> <p>☺ <u>Eusebius: The Church History</u> by Eusebius, Paul L. Maier trans. Written by a Christian bishop sometime around 325 AD or so. This is an account of church history from Christ to Constantine. Go with the Maier translation for the easiest readability.</p> <p>☺ <u>The Story of Christianity, Vol. 1</u> by Justo L. Gonzales. Easy read.</p> <p>☺ <u>The Robe</u> by Lloyd C. Douglass. Historical fiction of Christ's crucifixion, a classic.</p> <p>☺ <u>Ben Hur</u> by Lew Wallace. Historical fiction of a young Jew and how the Messiah changes his life. Also see the movie starring Charlton Heston.</p>

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

GEOGRAPHY	<p>Search for: Australia, Oceania, South Pacific</p> <p>☺ ☺ <a href="#">Australia and Oceania</a> by Mel Freidman.</p> <p>☺ ☺ <a href="#">Explore Australia and Oceania</a> by Bobbie Kalman.</p> <p>☺ ☺ <a href="#">Fishing For Islands</a> by John Nicholson. Traditional navigation and ship-building in the Pacific Islands. Contains some old-earth dating.</p> <p>☺ ☺ ☺ <a href="#">Robinson Crusoe</a> by Daniel Defoe. Read aloud or choose an easy version for young children.</p> <p>☺ <a href="#">The Islands Time Forgot</a> by Graham Morse. In his sixties the author fulfills a lifelong dream of sailing the Pacific and shares his real life adventure.</p> <p>☺ <a href="#">History of the South Pacific Since 1513</a> by Robert W. Kirk.</p>
SCIENCE	<p>Search for: ferns, mosses, simple plants, and botany text books</p> <p>☺ <a href="#">Ferns</a> by Allen Fowler.</p> <p>☺ <a href="#">A Natural History of Ferns</a> by Robbin C. Moran. A 300 page book on ferns that manages to be entertaining and easy to read . . . amazing.</p> <p>☺ <a href="#">Gathering Moss: A Natural and Cultural History of Mosses</a> by Robin Wall Kimmerer.</p> <p>☺ ☺ ☺ <a href="#">Where the Red Fern Grows</a> by Wilson Rawls. We know it's not really about ferns, but honestly, the great genre of fern books for children has yet to be explored so enjoy yourself and read this classic aloud together.</p>
THE ARTS	<p>Search for: instruments, orchestra, symphony, Haydn, specific instruments</p> <p>☺ ☺ ☺ <a href="#">Those Amazing Musical Instruments</a> by Genevieve Helsby. Comes with interactive CD-ROM.</p> <p>☺ ☺ ☺ <a href="#">Musical Instruments Coloring Book</a> by Ellen J. McHenry.</p> <p>☺ <a href="#">Zin! Zin! Zin! A Violin</a> by Lloyd Moss. A great introduction to musical instruments set in charming, rhythmic verse.</p> <p>☺ <a href="#">The Farewell Symphony</a> by Anna Harwell Celenza. Story behind Haydn's famous 5<sup>th</sup> Symphony.</p> <p>☺ <a href="#">The Magic School Bus in the Haunted Museum</a> by Joanna Cole and Linda Beech. This story takes you on an adventure to a sound museum and teaches about how the vibration of instruments is what creates the sound.</p> <p>☺ <a href="#">The Carnival of the Animals</a> by Jack Prelutsky. Picture book to go with the famous music piece of the same name. Includes a CD.</p> <p>☺ ☺ <a href="#">Can You Hear It?</a> by William Lach. Uses great art, great music, and a CD to teach kids to listen to the instruments in music pieces.</p> <p>☺ ☺ <a href="#">Making Music</a> by Ann Sayre Wiseman and John Langstaff. Teaches kids how to make musical instruments from stuff around the house.</p> <p>☺ ☺ <a href="#">Sergei Prokofiev's Peter and the Wolf: With a Fully-Orchestrated and Narrated CD</a> by Janet Schulman, Sergei Prokofiev and Peter Malone. Picture book and CD.</p> <p>☺ ☺ <a href="#">The Story of the Orchestra</a> by Robert Levine. Comes with a CD.</p> <p>☺ ☺ <a href="#">A Young Person's Guide To Music</a> by Neil Ardley. Takes you through the instruments, orchestra, and the composer all with musical selections on CD especially composed for the book.</p>

## HISTORY: CHRISTIANITY

### Teaching Tip

This was probably the toughest section of all for us to write because it can be a very divisive and emotional subject with so many Christian sects claiming to have the truth and the correct interpretation not only of scripture but of church history. We tried hard to be as historically factual as possible, but we're sure we've probably offended just about everybody. That's where you come in. We beg you to be a mentor to your children and teach what you believe regardless of the words printed in this or any other book.

### Fabulous Fact

יֵשׁוּעַ

Above you see Jesus' name written in Hebrew characters. It is Yeshua, or if translated directly to English, Joshua. The name means “to rescue” or “to deliver.” The name is translated to Jesus in English Bibles because it came to us by way of the Greek language which took Yeshua and changed it to Iesous.

Christianity has had an enormous effect on the western world. Whether you are a Christian or not, this religion has affected your life in terms of traditions, holidays, the calendar, civil law, and the foundations of free government. Christianity is a movement named after Christ. Christ is a title, not a name. It means “anointed one” in Greek. The man who has the title of Christ is Jesus. Christians believe he is the divine son of God or manifestation of God who condescended to come to Earth in order to save all people from their sins. Christ himself did not claim to create a new religion, however. He actually came to fulfill the Jewish law and perpetuate the worship of the same being the Jews worship.

However, as a distinct movement from Judaism, the beginnings of Christianity were with Jesus. Israel at the time of Jesus was a vassal of the Roman Empire. Both Jewish and Roman authorities presided in Israel, though the Jewish political leaders were appointed by Romans. When Jesus began to teach, great crowds followed him and believed in him. The Jewish religious leaders were afraid they would lose their power as he drew the people away from them and preached against their hypocrisy. They clamored for his trial and death at the hands of their Roman overlords as they did not have the authority to hand down the death sentence. The Roman leaders, fearing a Jewish revolt, complied and Jesus was executed in the Roman manner of crucifixion, where the condemned is nailed or tied by hands and feet to a cross of wood and hung until death from pain and exhaustion. After his death Jesus had followers who kept his teachings alive



*Ancient depiction of Jesus Christ from a wall painting. On the left is the Alpha symbol and on the right is the omega symbol, which means the beginning and the end, or all encompassing.*



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

and spread them across the Roman Empire and into other parts of the known world.



*Saint Stephen, the first Christian martyr. His story is told in the Book of Acts in the New Testament.*

Christians, as a minority in the Roman Empire, were not treated well. It was obligatory to worship the Roman gods, and Christians refused to worship any god but their own. They were often punished and killed as rebels by the Roman authorities. For centuries Christians had to worship in secret and often held secret meetings in the catacombs beneath the city of Rome. In spite of their outlaw status, the Christian religion grew phenomenally as poor people flocked to it and Christians actively preached their beliefs.

In 312 AD the Emperor Constantine made Christianity legal after he

had a vision of a cross in the night sky before a battle he won. In 391 AD, Theodosius made Christianity the official religion of Rome. Much about the Christian church changed drastically when it became publicly accepted. It was now fair game as a way to gain power and favor; Christianity had to fit with the political ambitions of government heads. In 325 AD, Constantine called a council of Christian bishops from all over the Roman Empire to determine what some of the basic tenets of the Christian faith would be since over the years the various congregations had each adopted their own variations of Christian practices and doctrines.

Later, when the Roman Empire split, so did the Christian church. In the east it was called the Orthodox Church and in the west, Catholicism. The two sects became sharply divided on questions of both authority and practice. Besides the two main branches of Christianity, numerous other sects with different beliefs existed and exist today. Christianity is not a united faith with a simple history.

## Additional Layer

Muslims reverence Jesus as a prophet, believe in the virgin birth and the miracles, but reject his divinity and his sacrifice.

## Additional Layer

Catacombs are underground burial places, usually under a city. The catacombs of Rome are some of the most famous, but many ancient cities have them. The Christians used the catacombs in Rome as secret places to meet where they could be safe from Roman officials who punished Christians with the death sentence.



*Fresco painting of Jesus as the Good Shepherd painted on a wall in the catacombs of Rome by early Christians.*

## Fabulous Fact

There are over 38,000 different branches or denominations of the Christian church today.

## Deep Thoughts

Did Jesus intend for his followers to make organized churches or one organized church with a complex and unified doctrine?

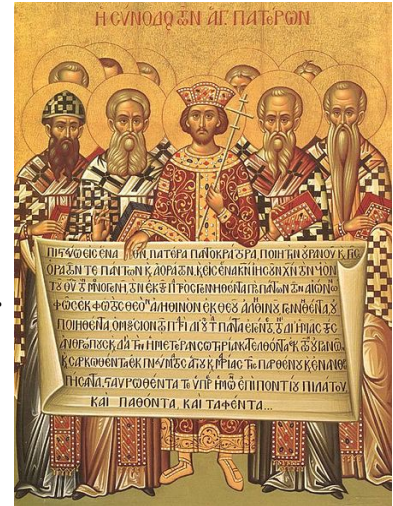
We don't know for sure. Jesus certainly commanded that the gospel be spread, but gospel just means “good news,” the good news of a savior.

The apostles certainly formed local churches in various locations all around the Mediterranean and directed and gave them advice. But there is little evidence that there was an extensive bureaucratic organization. Then again, maybe there was. The problem is that the early church writers didn't make a handbook that we know of. Their writings are mostly a collection of disjointed and random letters to various congregations.

Some people today believe there is one true church authorized by Christ on the earth—their church of course. Others believe that any Biblical Christian church can bring salvation, which is all about individuals, not a “church” per se. What do you think?

## EXPLORATION: Timeline of Christian History

Most of the dates on this timeline, as in other ancient sections, are approximate. The variation of a few years does not change your understanding of the progression of events and so such variations are unimportant for this activity. The calendar we use today is based on the date of Christ's birth, but the calendar was not in use until 525 AD, and the actual year of Christ's birth was not known for certain. The actual year of birth is still a hotly debated number in some circles. In any case, it probably does not correspond to the year 1 AD. There is no year 0, the calendar skips from 1 BC to 1 AD. The initials “A.D.” stand for *Anno Domini*, or the year of our Lord. “B.C.” stands for the English, *Before Christ*. Some people, distancing themselves from any association with Christianity, object to this and prefer “B.C.E.” and “C.E.” or *Before the Common Era* and *Common Era*. Printable timeline squares can be found at the end of this unit.



*The emperor Constantine and several powerful Bishops holding the Nicaea Creed on a banner.*

- Circa 4 BC Birth of Christ
- Circa 26 AD Ministry of John the Baptist
- Circa 27 AD Jesus begins preaching
- Circa 30 AD Crucifixion of Christ
- 30 AD -303 AD Christians were alternately persecuted and favored under Roman emperors, beginning with the persecutions of Nero, who had several apostles put to death
- 95 AD Last of Christ's apostles dies or disappears
- 312 AD Constantine converts to Christianity
- 315 AD The New Testament as we know it today is officially adopted by the church council, though the standard books were in use long before this.
- 325 AD Council of Nicea unifies Christian doctrine and turns the church into a political power

## EXPLORATION: Mediterranean World Map

Make a map of the Mediterranean World during the early Christian era. During this time Rome had just transitioned from a republic to an empire and was busily growing and trying to manage their diverse conquered peoples. The district of Judea



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

was one of the most unruly. The map below shows the Roman Empire and neighboring nations during this time. Use the Mediterranean World map from the end of this unit.



## Famous Folks

From among all his followers or disciples, Jesus chose twelve. After his death they became his apostles or messengers, sent to spread the message Jesus had taught. There were twelve to represent the twelve tribes of Israel.



*There are 11 apostles shown in this painting by Duccio (c. 1308) because Judas Iscariot has gone off to the Jewish leaders to betray Jesus.*

## EXPLORATION: The Nativity

The story says that an angel appeared to a young virgin girl in a little obscure town of Nazareth and told her that she had been chosen to bear the Messiah who had been promised would appear to the Jewish nation to save them. She agreed to be the mother of the Christ and agreed to name him Jesus. Jesus was born in a stable in the town of Bethlehem where Mary and Joseph, Mary's brand new husband (Jesus' adoptive dad), traveled in order to pay their taxes. Bethlehem was a small town just on the outskirts of Jerusalem.



*La Natività by Antonio da Correggio c. 1529*

Upon his birth shepherds were told of the miracle and went to the stable to witness the newborn baby. Some time later (the account

## Additional Layer

Most Jews of Jesus' time were looking for political salvation. They wanted their Messiah to be a great warrior; to come and overthrow all their enemies and make the Jews, who after all were the chosen people, the greatest power on Earth. But instead Jesus came, not offering political peace or economic prosperity, but personal peace in spite of politics or economics; peace that would be for all people and all time, not just for the chosen people. The Jewish leaders were disappointed.

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

## Christian Philosophy

Part of the philosophy of Christianity comes from the Jews and part has been developed by Christ and his followers. Today Christian philosophy has become so much a part of western thought that we don't even recognize that it is Christian. Here are a few:

Value for life

Value of the individual and individual rights

Rejection of slavery

Value of education for the masses, not just the elite

Loving your neighbor

## Famous Folks

Paul the Apostle is probably the most influential of the church leaders in the first century after the death of Christ. He was a Jew and also a Roman citizen. He traveled widely preaching Christianity and wrote extensively including many of the epistles of the New Testament.

## Additional Layer

With a few exceptions, art has been encouraged in the Christian world. Most of the great artists of the past depicted scenes from the Bible.

doesn't say exactly when), magi (wise men) came from the east to worship the baby as well.

The story is told in beautiful poetic language in Luke chapters 1 and 2. You can read it for yourself.

Use the nativity story to introduce your kids to great works of art and artists.

Here we show two examples. You can find many many more online. This may possibly be the single most popular topic for art ever.



*The Birth of Christ by Duccio di Buoninsegna, c. 1308*

When you look at the painting ask your kids to notice details such as the overall mood, colors used, geometric shapes, and the little details. How realistic is the painting? What do artists do to show that Jesus is holy? Finally, learn something about the artists who painted or sculpted the pieces you find. Look at several other pieces by the same artist. Do you think you could recognize their style in a line-up?

## 😊 😊 😊 EXPLORATION: Jesus' Life

There are eight essential events in Jesus' life. They are

1. Birth
2. Baptism by John the Baptist



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

3. Temptation. After fasting and praying in the wilderness for forty days Jesus was tempted by the devil, but he did not give in to temptation, the only person to go through life completely sin free.
4. Choosing of the Apostles. At the start of his ministry Jesus chose twelve men to be his special witnesses, or apostles. They went nearly everywhere He went and saw the miracles and heard the teachings and were able to testify of them to others.
5. Ministry. Jesus' ministry was the three years when he left his home and his profession as a carpenter and taught the people. He performed miracles and taught using parables and sermons.
6. Last Supper. On the night before Jesus died he gathered his disciples around him and ate the passover supper in Jerusalem. He knew he would die the next day and that one of them would betray him to the Jewish authorities.
7. Crucifixion. Jesus was put on trial. First there was a secret trial in the dead of night by the Jewish authorities. They found him guilty of blasphemy, a death sentence, but legally they could not give death sentences, so they sent Jesus to the Roman authorities to be tried as a rebel. Jesus was found guilty and executed in the Roman fashion by crucifixion.
8. Ascension. On the third day after Jesus died he rose from the dead and left the tomb. Having overcome both sin and death, he could now save anyone who would accept him.



*Stained glass depiction of the Baptism of Jesus by John the Baptist. Photo by David Castor and shared under CC license.*

## Writer's Workshop

Read one of the stories about Jesus or one of the parables he told and rewrite it in your own words in your Writer's Notebook. What can you learn from the story?

## Fabulous Fact

Many Christians use a cross as a symbol of their faith because it reminds them that Jesus died for them on a cross.

You can see crosses on churches, as jewelry, on bumper stickers and tattoos, and about a thousand other places.



*Cross on a church steeple  
P.E.I., Canada*

## Additional Layer

Approximately 2 billion of the world's 7 billion consider themselves Christian, making it the world's largest religion.

Make an illustrated timeline of Jesus' life using the above events. You can print pictures from the Internet or draw your own. If you'd like you can include some of the specific teachings and parables and miracles of Jesus in your timeline.

## Christian Symbols

Α Ω

The two symbols you see above are the first and the last letters of the Greek alphabet, alpha and omega. These two letters are often used in different ways to represent Christianity or Jesus. Revelation 22:13 and similar verses that refer to Christ reference them.

*I am the Alpha and the Omega, the First and the Last, the Beginning and the End.*

✠

This symbol is called the Chi ro and combines the first two letters in Greek of the word Christ: ΧΡΙΣΤΟΣ .

🐟

This symbol is known as the Ichthys and was used by early persecuted Christians in Rome as a secret sign that the Christians could be found there. Color the Christian symbol page from the printables section.

## 🌞 🌿 🌺 EXPLORATION: Christian Teachings

Learn some Christian teachings. Below are some of the teachings of Jesus from the New Testament. Many of them are common with other faiths, but a few are uniquely Christian. Discuss them with your kids. If you want to read the words for yourself you can find these teachings in Matthew Chapters 5 through 7.



- Love your neighbor as yourself
- Be pure in heart
- Be merciful
- Be a good example
- Do not be angry with others, even those who harm you
- Make peace with those who would harm you
- Do not lust after others
- Divorce is wrong, except in extreme circumstances
- When others persecute you, bear it meekly
- Love your enemies
- Do charity in secret, not for the glory of men
- Pray to God for forgiveness and strength from temptation
- Have faith that God can take care of you
- Do not judge others

Discuss these teachings and give examples of what they mean.

## 🌞 🌿 🌺 EXPLORATION: The Bible

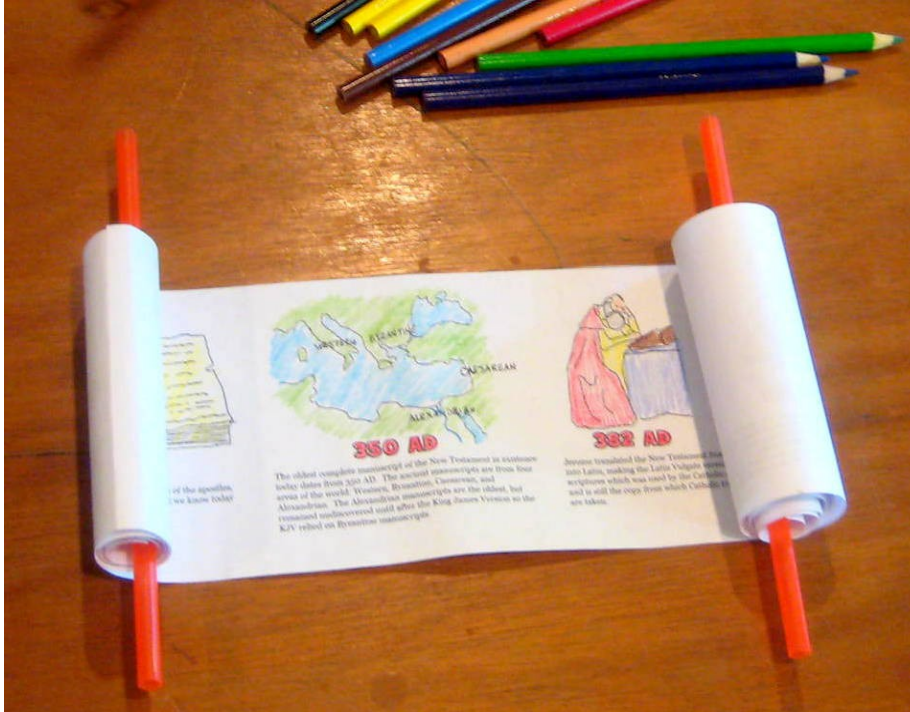
The Bible is the Christian holy book compiled piecemeal over centuries by religious councils and priests. Certain writings were included while others were rejected. Changes were made over the years for various reasons. The Christian writings are unique in that their founder, Jesus, never wrote anything. All the writings are from his followers.

The Old Testament of the Bible was originally written on scrolls, not in a bound book. Make a Bible scroll craft.



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

Each end of a long piece of paper is attached to straws with tape or glue. Then the paper is rolled around the straws. The template at the end of this unit can be printed, cut in half the long way, colored and attached to the sticks.



The scroll shows the history of how the Bible was written and preserved until today. We only show some of the most major events in the Bible's history and many more translations and people were involved. You can delve more deeply with books on the subject.

## 😊 😊 **EXPLORATION: Christian Martyrs**

A martyr is someone who dies for their faith or beliefs. The early Christian martyrs, accused only of being Christian, often had only to retract and renounce their faith and they could save their lives. Some did retract, but many others did not and endured horrible tortures before being killed. The accounts of martyrs are disturbing and not for young children, but any age can discuss whether there are things worth dying for.

Some of the Christian martyrs were thrown into the Colosseum with wild animals and mauled and eaten by the enraged animals.

Make a lion craft. While the kids are working tell them about the Christian martyrs and have a discussion about what you think (if anything) is worth dying for. After it's dry, write what you would die for on the back of your paper plate lion.

## **Memorization Station**

Many Christians memorize and help their children to memorize verses or passages from the Bible. Even if you're not a Christian, some of these verses are beautifully poetic and hold wisdom worth committing to memory.

1 Corinthians 13:4-7 is about love

Psalms 23 is about peace

Luke 30: 30-37 is the story of the Good Samaritan

## **On The Web**

You can read and compare different translations of the Bible at <http://www.biblegateway.com/>

Look up John 3:16 in three or four different translations to compare.

## **Fabulous Fact**

Huge crowds would show up for the Roman gladiator games and executions in the Colosseum.

Do modern people participate in gruesome public shows? What about violent movies? Why do you think people find violence and suffering of others to be entertaining?

## Famous Folks

Nero was the emperor of Rome from 54 to 68 AD. He is rumored to have deliberately set fire to the city of Rome to make way for his own extravagant building projects. He is known to have persecuted, tortured, and killed Christians.

## Additional Layer

You can visit [http://panoramicearth.com/305/Rome/Colosseum\\_of\\_Rome](http://panoramicearth.com/305/Rome/Colosseum_of_Rome) to see a panoramic picture of the Colosseum. You'll notice in the center it looks like a maze. Those are the tops of walls that would have been under the floor of the Colosseum. That is where the animals would have been kept. Find out more about the Colosseum here: [http://www.bbc.co.uk/history/ancient/romans/launch\\_ani\\_colosseum.shtml](http://www.bbc.co.uk/history/ancient/romans/launch_ani_colosseum.shtml)

## Fabulous Fact

One of the most important developments of the Nicene Council of 325 AD was the Christian concept of the trinity: God is three people - the Father, the Son, and the Holy Ghost while simultaneously being one Being. Most, but not all, Christians believe this doctrine.



1. Paint a paper plate out completely in yellow. Make the paint thin so it will dry quickly.
2. Cut yellow or orange tissue paper into squares approximately 2 inches by 2 inches.
3. Spread a thin layer of white school glue along the edge of the paper plate. You'll want to do a small section at a time so the glue doesn't dry on you.
4. Using the back of a pencil wrap a piece of tissue paper around the eraser and then stick it into the glue. Go all the way around the edge of the plate.
5. Make a lion's face on the plate. Start with a triangle right in the center for the nose, then draw a simple mouth and eyes. Remember this is not a smiling tame lion, but a hungry, abused beast ready to attack any human it sees.

## 🕒 EXPLORATION: Research Paper

Write a research paper. The accounts of the Nicene Council by modern authors are confused and contradictory. An excellent major research project for a high schooler would be to research as many original sources and secondary sources as possible and recount what actually went on at the Nicene Council.

## 😊🕒 EXPLORATION: The Pope

The leaders of the Christian churches started to gain more and more power as their followers increased. They built churches and



cathedrals. Missionaries spread the word of Christianity. The church just grew and grew. The local church leaders were called bishops. One of the bishops, the Bishop of Rome, became known as the Pope. “Pope” comes from Latin and means daddy, a diminutive and familiar form of father, such as what a little child would call their father.

The Catholics claim that the bishop of Rome was given power to lead the church by St. Peter who had been given the authority to be the head of the church by Jesus. Others disagree and think the Bishop of Rome merely grew more powerful because of politics and so took the lead of the church by force. The records from that very early time are not at all complete or clear so we can't tell for certain either way.

What we do know is that Rome became the preeminent head of the church, at least in the west, and as the Roman Emperors were losing power, the Pope was gaining it.

## Additional Layer

The apostle Peter was supposedly the first bishop of Rome. Peter had received his authority to act in God's name directly from Christ. The line of authority from Peter to the present Pope is unbroken. So the Catholic church believes that they are the only source on Earth with actual authority from God to act in his name.

## Pope's Mitre Craft

1 Fold paper in half the short way.



2



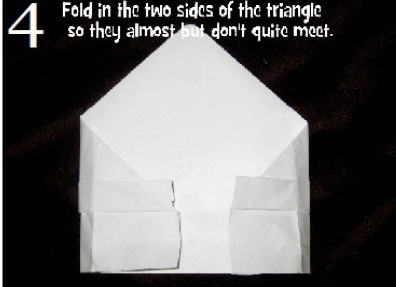
Fold down the corners from the folded end of the paper like you're making a paper airplane.

3



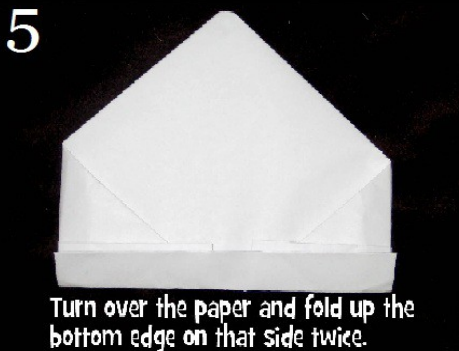
Fold up the bottom edge twice.

4



Fold in the two sides of the triangle so they almost but don't quite meet.

5



Turn over the paper and fold up the bottom edge on that side twice.

6



That's it! Your finished hat!

## Famous Folks

Pope Gregory the Great (540-604 AD) was one of the most powerful and influential leaders of the early church. His policies and interpretation of scripture shaped the medieval church. John Calvin called him the last good pope. He is known for his focus on missionary efforts, his love of a quiet contemplative life, an increase in the involvement of the church in political life, and the Gregorian chant which is named after him (maybe, or it could have been propaganda from Charlemagne to get the chant popular).

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

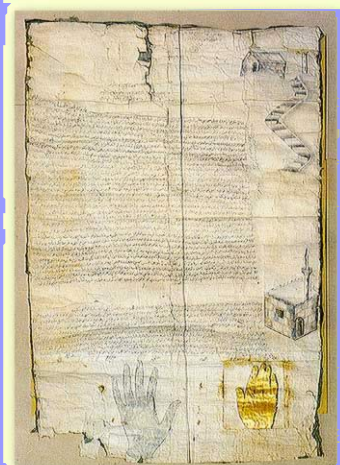
## Fabulous Fact

Not all early Christian martyrs were unwilling. There were some, caught up in the idea that if they suffered enough they would be exalted by God, who actually provoked Roman authorities into executing them.

A Christian hermit, Anthony the Great, who lived in Egypt, tried unsuccessfully to provoke the local Romans into a crucifixion or perhaps a stoning, but the governor refused to be provoked and poor Anthony died a natural death in his old age.

## Additional Layer

The monastery of Saint Catherine holds a letter of protection issued by Mohammed the prophet.



*The patent of Mohammed, 622. This is a copy made in 1517.*

## EXPLORATION: The Monasteries

The first communal monastery was in Tabennisi, Egypt and was founded by Pachomius. The first monastery in Europe was founded in 344 AD in what is today Bulgaria. The monasteries were first designed as places where extreme Christians, those who were living the ascetic lives of hermits, could gather. Life was rigid with prayers all day long, writing manuscripts or working in the fields the rest of the time. They lived simply without possessions and eating very plain food.

The Roman Empire was crumbling, but the monks busily wrote scriptures and kept literacy alive at a time when without them all of the writings, religious and otherwise, might have been destroyed. It was the monasteries that gave rise to the universities much later.

The oldest continuously used monastery is that of Saint Catherine on Mount Sinai. It is here that the oldest extant copy of the Bible was found in 1844. The monastery has never been sacked and escaped the Byzantine iconoclasm and so holds some of the oldest and most precious documents and art in the Christian world.

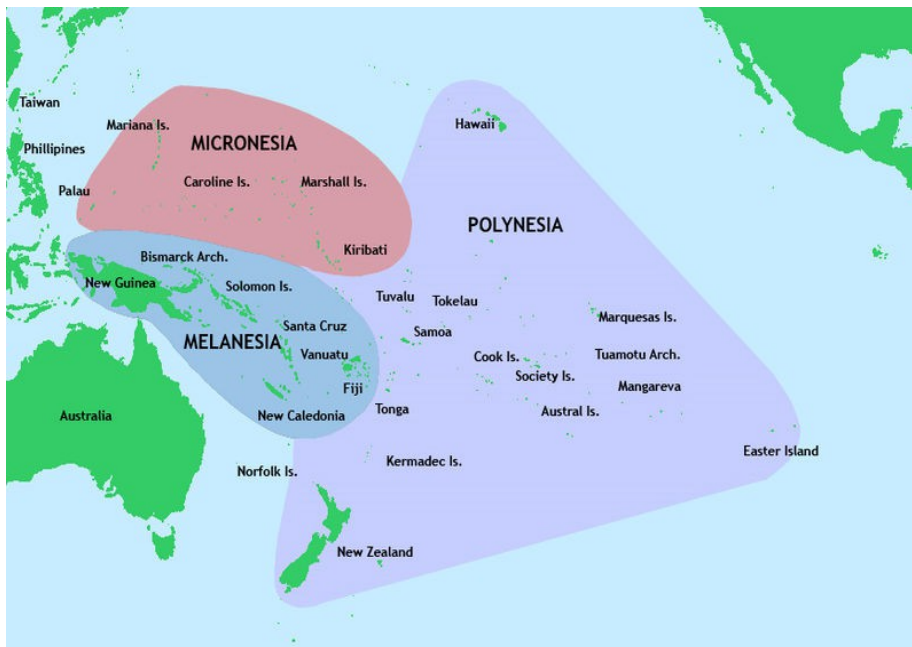


Take a virtual tour by visiting the Monastery online at [www.sinaimonastery.com](http://www.sinaimonastery.com)



## GEOGRAPHY: AUSTRALIA & OCEANIA

Oceania and Australia cover more than six thousand miles to the east and west and more than four thousand north and south. This vast section of the Pacific Ocean is filled with thousands of islands, most of them small. Indigenous and European people are mixed on these islands as they were all held at one time by various European or American powers. Most of the islands now are independent. The islands are a mixture of volcanic and coral. They are grouped together into nations consisting of many islands each. Their main exports are tropical fruits, spices, and seafood.

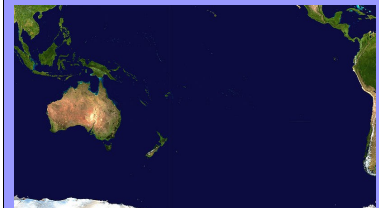


*This map of Oceania shows three major cultural areas: Micronesia, Melanesia, and Polynesia.*

Australia is the smallest continent and the only continent that is one country. Australia is entirely in the southern hemisphere. It is very dry overall. One of its main exports is wool and mutton from the sheep farms of the interior, or outback region. In fact, there are over 150 million sheep there and only around 20 million people. The north coast has a tropical climate with mangrove swamps and seasonal monsoons. The east coast is wetter as well and supports most of the population. There is also a mountainous region called the Australian Alps where it actually snows more than it does in Switzerland, though its snow is only seasonal, unlike the snow of the Swiss Alps. Australia is also home to the famous Great Barrier Reef, the largest living structure on the earth.

### Where is Oceania?

There's not a good consensus of what constitutes Oceania. For the sake of this unit we're including Australia and the islands that lie to the east and north east of Australia, but south of the equator and ending with the Pitcairn Islands in the east. Easter Island and the Galapagos Islands we will consider to belong to South America and the Hawaiian Islands as being far north of this region. Indonesia and the Philippines we will consider to belong to Asia.



### Additional Layer

Pour wax into a sea shell and set in a wick for an adorable island theme craft or accessory for your island theme banquet when you show off your work from this unit.

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

## Additional Layer

Learn about a unique Australian weapon, the boomerang, which was used to stun or kill animals by Aborigines.

## Fabulous Fact

The andesite line is a circular boundary of the Pacific oceanic plate. It follows parallel to the volcanic “Ring of Fire” and is the cause of the volcanic activity as the oceanic plate is subducted below the continental plates.

## 😊 😊 EXPLORATION: Pacific Island Beach

Make a beach with foot prints. Start with a long piece of brown or yellow butcher paper. Dip the kids feet in paint (you might want to do this outside with a drop cloth beneath) and have them walk the length of the butcher paper. At the opposite end have a chair and a bowl or bucket for a foot wash ready. Let the paint dry, then as you complete this unit add pictures and facts to your Pacific Island beach to showcase everything you've learned.



## Additional Layer



The flags of Brazil, New Zealand, Papua New Guinea, Australia and Samoa feature the Southern Cross.

## 😊 😊 😊 EXPLORATION: Puzzle Map

Make a puzzle map of Oceania and Australia. Color the map from the end of this unit in bright colors, a different one for each nation. Cut apart the nations and then try to remember how they fit together again. It's easier if you glue the whole map onto another piece of construction paper. For younger kids you may want to just color the map and find the islands on a globe.



## Additional Layer

Abbé Nicolas Louis de Lacaille was a French astronomer who set up an observatory on the Cape of Good Hope and named most of the present constellations of the southern hemisphere.



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

## 🌞 🌙 EXPLORATION: Island Latitude and Longitude

Review latitude and longitude as you find the islands at these coordinates with a student atlas.

- 14° 20' S 170° 00' W (American Samoa)
- 18° 00' S 152° 00' E (Coral Islands)
- 18° 00' S 175° 00' E (Fiji)
- 6° 23' N 162° 25' W (Kingman Reef)
- 41° 00' S 174° 00' E (New Zealand)
- 20° 00' S 175° 00' W (Tonga)

## 🌞 🌙 EXPLORATION: Islands Islands Everywhere

The islands of Oceania are of one of four types: continental islands, high islands, coral reefs, and uplifted coral platforms.

Continental Islands are part of continental plates and extend up from the edges of the continent's shelf. New Guinea is a continental island.

High Islands form from volcanoes and often still have active volcanoes on them. The Solomon Islands are of this type.

Coral reef islands are usually small and are formed when coral animals create large colonies in shallow seas that eventually break the surface of the water, making a low lying island.

Uplifted coral reefs are coral islands that have been raised up by tectonic activity to form larger and higher islands than the little low lying coral islands. The islands of French Polynesia are of this type.

Make a paper maché display built on a cardboard base, of the four types of islands. You can make large islands like the volcanoes using crumpled up wads of newspaper under the paper maché strips to give it some body. Once your paper maché is dry, paint the islands and then label the island types directly on your project.

*Paper maché: Dip long 1" wide strips of newspaper into paste made from 1 part flour and 1 part water. Cook and stir with a whisk until the paste thickens. Let it cool completely before using. If you use plain white paper as your last layer of paper maché your project will be easier to get good paint coverage with one coat.*

## 🌞 🌙 EXPLORATION: Marsupials

Make a marsupial collection book. Marsupials aren't exclusive to

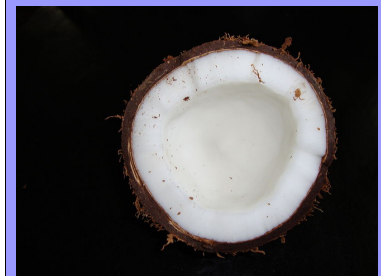
## Additional Layer

Many teams from the Pacific islands perform traditional dances before the rugby matches . . . then they proceed to clean up the competition.



*Pacific Islanders performing the sipi-tau before a game vs. Scotland. Photo by Tony Randall and shared under CC license.*

## Tip



How to crack open a coconut:

Drain the liquid from the coconut by poking it in the eye, one of those dark spots on the end, with a metal skewer or long screwdriver. Then bake at 400 degrees F for 15 minutes. Often it will crack open of its own accord. If not, bang it with a hammer. Then scoop the flesh out with a spoon. Alternatively, try a sawzall.

## Additional Layer

Most of the money coming into these Pacific Island nations comes from tourism. Can't think why . . .



Oh, yeah.

*Photo by Pascal Guiraudou and shared under CC license.*

Australia, but there are more on that continent than anywhere else. Marsupials give birth to live young when they are still in a very early developmental stage, then the young complete their development in a special pouch on their mother. Check out some books from the library to learn more about marsupials, then make a marsupial collection book. The book should have one page about marsupials in general, and then one page for each marsupial animal you learn about. Include a picture and a few facts about each animal like where it lives, what it eats, and which animals prey on it.

## 😊 😊 EXPLORATION: Southern Constellations

If you live in the Southern Hemisphere you can't see the same stars that we see in the Northern Hemisphere. The northern constellations were named in ancient times by the Greeks and Romans, but many of the southern constellations were named in modern times.

Color the worksheet about two southern constellations at the end of this unit.

## 😊 😊 😊 EXPLORATION: Rugby

The most popular sport in this region is rugby. It's a rough game similar to American football, but faster paced, more violent, and there are more ways to move the ball. Oh, and the players don't wear protective gear.



*Photo by Paul Gallen and shared under CC license.*

You can play a modified version.

1. Divide into two teams.
2. Choose end zones on either end of a rectangular field.
3. Play with an American football or rugby ball, which is oblong.
4. To start the game, a player bounces the ball off the ground at the center of the field and then kicks it off the bounce.
5. In rugby players can throw, catch, run with, or kick the ball to get it to the other players' end zone. It's fine if the ball touches the ground, anyone can then pick it up (unless it has already made it into the end zone). But you can't throw the ball forward. The team mate you throw to must be even with or behind you.
6. You can kick the ball forward, but this almost always

## Additional Layer

All of these island nations except for Australia and New Zealand are struggling economically. The Solomon Islands rely on foreign aid for half of their government budget. Learn more and discuss what you think of international government welfare. Good? Bad? Ineffective? Worthwhile? Are there other alternatives?

## Fabulous Fact

Inexplicably, SPAM (you know, the luncheon meat cooked AFTER it enters the can, creating a nicely congealed cushion of fat) is hugely popular in the Pacific Islands.



means you will lose possession of the ball, since when you kick all your team mates must be behind you. Most of the forward momentum of the ball happens as you run it down the field.

7. If the ball goes out of bounds on the sidelines the referee throws it back in between the lines of opposing players who all try to gain possession of the ball.
8. Once a ball is in the end zone it must touch the ground in order to score a point.
9. You can stop other players, normally by tackling them, but you can play tag rugby instead. Once a player is tagged he or she is out for the rest of that play.
10. Decide how many points you want to play to or how long you want to play and make sure everyone is included.

## ☺ ☺ **EXPLORATION: Ocean**

Looking briefly at a map will tell you that the ocean is a big part of life in this bit of the world. Much of the food eaten traditionally, and still today, comes from the ocean. More than 300 varieties of fish are eaten. Most fishing happens with small nets cast from the shore, fishing poles with bait, woven traps, and spearing. There are large commercial fisheries in the islands as well, but most islanders live a subsistence life, living off the sea and their home gardens. Other sea creatures like crabs, shellfish, shrimp, and seaweed are collected at low tide.

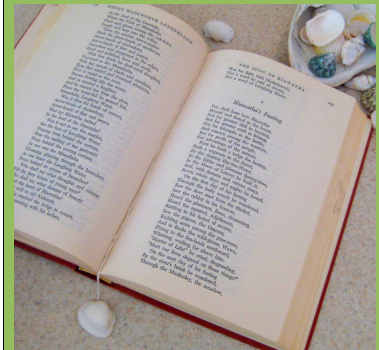
Learn more about the types of sea creatures that the people of the islands live off of, and make a fan book. Start with five identical circles cut from construction paper, then draw one sea creature on each circle with oil pastels, chalk (use spray set if you chose chalk), or crayons. Write the name of each creature on the front



of the card and on the back write a few facts. Punch a hole in each of the cards and fasten them all together with a brad. Fan them out to see all of them at once.

Older kids can write a research paper about environmental concerns in this part of the world. You might consider focusing on fisheries, pollution, or storm damage.

## **Pacific Islands Bookmark**



Make a seashell bookmark with string or embroidery floss and shells drilled with holes or hot glued on. Start with three 18" lengths and tie knots every 2 inches or so, holding all three strings together. Then tie the shells through the pre-drilled holes or hot glue them to the ends of the strings. Trim off any excess string.

## **Greetings**



People in the Pacific islands are more touchy feely than westerners in general. They kiss both cheeks, press forehead to forehead and nose to nose, hug, and touch in greeting. The traditional Maori greeting is called Hongi. Learn more about its significance.

## Additional Layer



The Pacific Islands Forum is an intergovernmental agency between Pacific Island governments to promote the economic and social well-being of the Pacific Islands.

## ☺ ☺ ☺ EXPLORATION: Feast!

Pacific Islanders are all about the food. They love holding feasts and do it often. Whenever there's a get-together there will be copious quantities of food 24-7. In fact, several islands in this region are known as some of the most obese places on the planet. Here's a feast menu:

### Roast pork

Marinate for about 2 hours in a couple teaspoons of liquid smoke and copious amounts of salt, then thoroughly wash before you cook it at 300 deg for two hours, covered tightly with foil. After it's cooked, shred it easily with a fork.

### Sweet potatoes and bananas

Peel fresh sweet potatoes (not canned, please) and cut into large chunks. Simmer in water for 20 minutes or until soft and tender. Heat butter or margarine in a skillet and toss in sliced bananas to fry and coat, then toss in your sweet potatoes, getting everything all nice and crispy.

### Kelequin from Guam

Roast a whole chicken in a 375 degree F oven for 1 hour. Remove and allow to cool for about ten minutes. Pull the meat off the bones with a fork, shredding as you go. Chop the meat into little bits and add in 1 cup shredded coconut, 1/4 cup lemon juice, 2 T. chopped green onions, red pepper, and salt to taste. Serve it with rice and/or taro rolls and fresh tropical fruit smoothies.

## Additional Layer



This fire dancer is from the Baining Tribe of New Guinea. The fire dance is held in honor of a birth, a harvest and sometimes to remember the dead. Learn more about it.

*Photograph by Taro Taylor and shared under CC license.*

## ☺ ☺ ☺ EXPLORATION: Dreamtime Stories

Listen to a dreamtime story. Australian natives are known as Aborigines. Their dreamtime stories are the stories of their history and the stories of their beliefs. Visit <http://www.rmwebed.com.au/hsie/y10/abc/dreamtime/dreamtime.htm> to read stories of Aboriginal people.

Your kids may like video version too. You can find many on YouTube. Here is one: <http://youtu.be/Sle62XVoBOo>

After you listen to a story, paint a picture showing the scene as you imagined it. Explain your picture and re-tell the story. Discuss as a group what you think the message of the story was.

## ☺ EXPLORATION: The Land Down Under

Let the kids guess why Australia got the nickname "The Land Down Under." The reason is that the whole continent lies south of the equator in the southern hemisphere. Because it's in the southern hemisphere, they have opposite seasons from us in the north. While it's summertime here, they are having winter weather. During our winter, they have summer.



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

Divide a sheet of paper in half. On the top write “northern hemisphere” and draw a picture of the current season's weather. On the bottom write “southern hemisphere” and draw what the season's weather would be like there.

## 🌍 🌊 EXPLORATION: The Great Barrier Reef



*Satellite picture of the Great Barrier Reef, courtesy NASA.*

One of the natural wonders of the world, Australia is home to the Great Barrier Reef. Tiny animals called corals are what form the Great Barrier Reef. Lots of fish and animals make their home there in that giant underwater area – thousands of species of plants and animals, in fact. The reef is an important part of Australia's economy, providing both food and jobs. Scientists have

researched organisms living on the reef to help find treatments for cancer, AIDS, and other illnesses. It's also very valuable to Australia because of the tourism industry it feeds.

The reef is in danger though. Pollution, oil spills, run-off from land development, tourism, disease – all of these things threaten the health of the reef. Parts of the reef are dead, and other parts are dying. It is definitely a natural world wonder that we should be protecting.

Discuss the value of the Great Barrier Reef and watch this video from National Geographic on YouTube:

<http://youtu.be/wbNeIn3vVKM>

If you ever visit there, you should know there is a mailbox located on the Great Barrier Reef. The mailbox is on the Agnicourt Reef, 72 kilometers offshore at the Coral Sea. To send a letter from there you have to take a ferry.

## 😊 🌍 🌊 EXPLORATION: G'day Mate!

Australians speak English, but they have a number of local terms that have unfamiliar meanings to us. Learn some of these terms:

Aussie: native Australian

Mate: a friend

Togs: swimsuit

Sheila: a girl

Biscuits: cookies

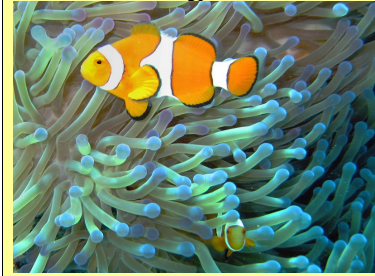
Tucker: food

Nipper: child

Bloke: man

Barbie: barbecue

## Finding Nemo



The famous Disney movie, *Finding Nemo*, was made with various species that live on the Great Barrier Reef near Australia. Are the species used in the movie really found there?

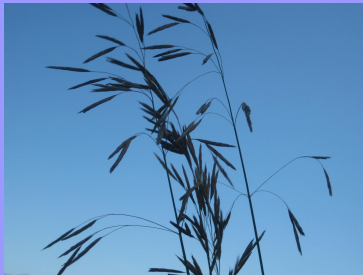
## Prison Colony

The first Europeans in Australia were actually prisoners. The Revolutionary War brought an end to the practice of sending British prisoners to the colonies in North America, so they sought out a new location. Eleven ships carried hundreds of prisoners to the island of Australia to be held there. They worked on farms during the days and spent their nights in jail. Once their sentences were complete they were given some land and many stayed there. Ships continued to bring thousands more prisoners who cleared the land and turned it into productive farmland. It was a prison colony for about 80 years.

## SCIENCE: SIMPLE PLANTS

### Additional Layer

Grasses seem like simple plants, but they actually do have flowers, they're just not showy. Here is a grass flower:



What scientists call “simple plants” actually have complex life cycles. They do not have flowers, but instead reproduce with spores or by releasing new cellular colonies. Spores are different from seeds because spores arise from a single individual (without fertilization from another individual), they have very little nutrients stored in them, and they are designed to withstand harsh conditions for a long time until conditions become correct for growth.

Ferns have true roots and vascular channels, and also reproduce sexually with spores. They have a complex life cycle. The fern plant gives off spores which then grow into a prothalus, which then creates sperm and egg cells, which fertilize to create a new fern plant.



### Fabulous Fact

Ferns have rhizomes, thick roots that grow horizontally and give rise to new plants, which are exact clones of the parent plant. This is a form of asexual reproduction.

### Writer's Workshop

Ferns do not have flowers, but there are ancient slavic legends about a magic fern flower that appears only on the eve of the summer solstice. Anyone who finds the flower will have good luck, wealth, and the ability to understand the language of the trees.

Write your own tale of what happens on the night you go looking for the magic fern flower.

Botanists group mosses and liverworts into one family. They are found in moist mild climates, have thin (often only one cell thick) leaves and no roots. Instead, they fasten themselves to rocks and soil with rhizoids. They can reproduce in two different ways: asexually or sexually. Asexual reproduction occurs when a piece breaks off and replants itself, growing in the new location.

Sexual reproduction in mosses is complex. The mosses have a male organ called the antheridium where special gamete cells are produced. They swim through water to the female cells, the archegonium, where the males cells fertilize the female. They then form a spore. The spores grow in capsules on a tall stalk and are then spread through raindrops that hit the moss. Mosses are considered simple plants because they have no vascular tissue for water and nutrients to flow through; instead each cell absorbs water and nutrients on its own, and they have no roots or flowers.





*Moss spores. Photo by Lordgrunt and shared through CC license.*

Scientists have decided that algae aren't plants at all, but protists. But since they have chlorophyll and respire like other plants, they will be discussed here. Algae can be single celled organisms or giant seaweeds. Algae have no vascular tissue, no true roots, and do not reproduce with flowers. They live in aquatic environments, in either salt water or fresh water depending on the species. There are thousands of different species of algae in three main groups: green, brown, and red. They reproduce by either releasing complete cells to recolonize in a new place or by creating sex cells which are then released to haphazardly find partners in the aquatic environment.



## Fabulous Fact

Liverworts are related to this group, the Bryophytes. Like mosses, they have no root system. Each of their rhizoids are a single cell and serve to anchor the tiny plant to a rock. There are over 8,000 species of liverworts.



They get their name from the medieval belief that these plants could cure diseases of the liver. This belief was based on the “Doctrine of Signatures.” Look it up to learn more.

## Definition

Lichens are actually two organisms working together in a symbiotic relationship: a fungus and an algae.

## Additional Layer

Algae often live with coral, producing energy through photosynthesis which the coral uses for food. In return the algae has a home.

When coral loses its algae we say the coral has been “bleached.”



## Explanation

Studying life cycles aids the student in seeing the big picture of all life that happens on the earth. Continuing to reproduce means that even though a particular butterfly may only last for a season, the species can continue for countless years and will continue unless something interrupts.



Studying life cycles also helps us be aware of how we can learn to take care of the place we live. We can't do that in ignorance.

*Michelle*

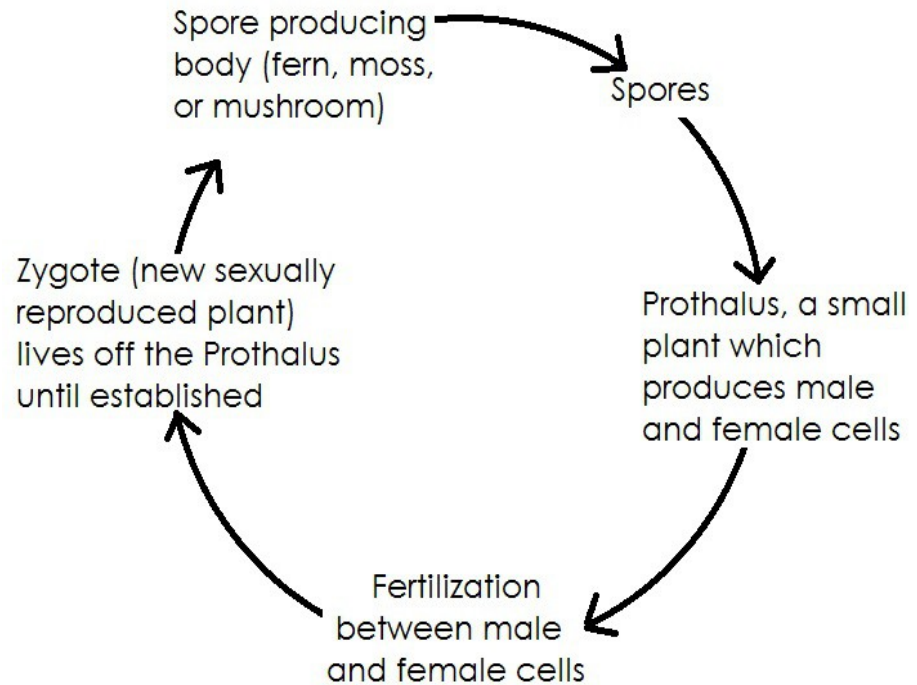
## Additional Layer



There is one variety of algae that produces bio-fuel. People have begun experimenting with this alternative to diesel fuel on a commercial scale. Research "Algae Bio-fuel" online to learn more.

## EXPLORATION: Spore Plant Life Cycle

Make a spore plant life cycle chart. All spore producing organisms have some similarities in their life cycle, whether they are mosses, ferns, fungi, or molds. They have an asexual spore producing phase followed by a sexual gamete phase.



## EXPLORATION: Fern Study

Study a fern in spore stage. In the late summer ferns go through their spore creating stage. The spores are easy to see on the underside of leaves. Find a fern in your garden or at a nearby nursery and take a close look at the spores with a magnifying glass. See if you can spot the little spores.



## EXPLORATION: Fabric Fern Prints

You need:

- rectangular piece of white cotton cloth (an old sheet works well), at least 8" x 7"
- fern frond
- flat board
- hammer



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

Place the fern frond on the board, then the cloth on top of the frond. Pound all over the frond with the hammer, imprinting the fern onto the cloth.



You can use your fern print glued to the cover of a nature notebook, on a pillow, framed on the wall, or print directly on to a t-shirt or pillowcase.

## 😊 😊 😊 **EXPLORATION: Koru**

The Maori of New Zealand use a new unfurling fern frond as a symbol of life, growth, strength, and peace. The unfurling frond, called a koru, shows up on their art, their icons, and their skin in the form of tattoos.



*Unfurling fern frond, photo by Jon Radoff, CC license.*



*Proposed flag of New Zealand showing the koru.*

Make your own koru using oil pastels or crayons, black paint, and a large sheet of thick paper. Plastic coated freezer paper works well.

1. First draw the basic spiral shape very large on the paper with a pencil.
2. Now double your line so in the end you will end up with a thick outline. It can be very stylized and include more than one curling frond if you wish.
3. Color the entire paper thickly with your oil pastels or

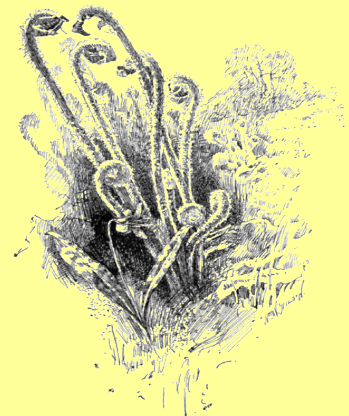
## **Additional Layer**

Because of its absorbency moss has been used at different times as bandages for bleeding wounds and diaper filler for babies. What else do people use moss for?

## **Additional Layer**

Algae is used in toothpaste, cosmetics, ice cream and more. Find out what you use that has algae in it.

## **Fern Food**



Ferns are poisonous, unless you get 'em young. The uncurling fern fronds, called fiddle heads in some parts of the world, are edible and can be fried.

## **Famous Folks**

Gordon Walters is a New Zealand artist famous for his depictions of Koru, the unfurling fern frond, in abstract art. Look up some of his art online.

## Additional Layer

Cryptobiotic soils occur in arid regions like the deserts of Arizona. A thin layer of organisms, including cyanobacteria, mosses, algae, fungi and/or lichens create a crust over the soil, protecting it from too much moisture loss, stabilizing the soil, and fixing nitrogen so other plants can live.

The cryptobiotic soils are very easily damaged by tire tracks, footprints, and other human activities.



Photo by Nihonjoe and shared under CC license.

## Additional Layer

In *Where the Red Fern Grows* by Wilson Rawls, an Indian legend stating that the red fern is only planted by angels making the spot where it grows sacred, is used to give comfort to a young boy who tragically loses his dogs. Read the book aloud together.

crayons, leaving your thick lines blank.

4. Make a paint wash by watering down your black paint. Brush the paint rapidly over the entire drawing. The paint will stick only in the lines and on the edges, wherever you did not color.



## ☺ ☹ ☹ EXPERIMENT: Moss Magnified

Look at the various structures of a moss. Moss grows in most parts of the country. If you can, collect some and look at the structures under a microscope. If no microscope is available, use a hand lens or magnifying glass. You should be able to see individual cells and possibly some of the male and female reproductive parts.

## ☺ ☹ ☹ EXPERIMENT: Algae Farmer

Grow your own algae. You need pond water, an aquatic plant, and a clear glass or plastic container. Place the aquatic plant and water in the container. Set it in a sunny place and wait. In a week or so you should notice lots of green growth.

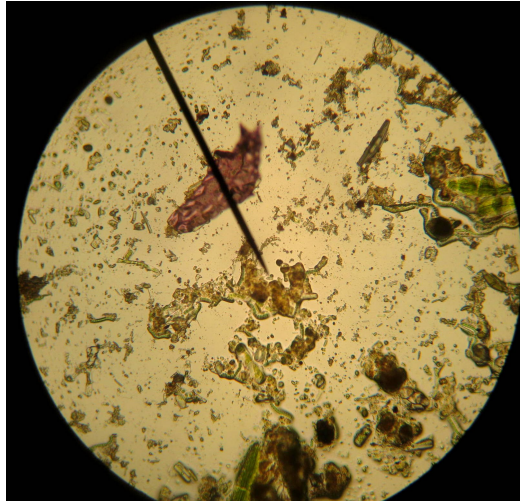
There were a few algae cells in your water to begin with, but until



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

the concentration increases you can't see them. The algae in your jar is single celled. You can see the cells under a microscope. Just place a drop or two of the pond water on a microscope slide and cover with a cover slip before viewing.

Algae needs water, light, and warmth to grow. If you put the jar in a dark cupboard do you think it would grow? How does algae get food for growth?



## ☺ ☹ ☹ **EXPERIMENT: Pollution and Algae**

How does pollution affect algae? Now that you have your algae growing well from the previous experiment, you can do some further tests to see how different conditions affect algae growth. Collect a half dozen or more jars and add pond water to each jar to the same level. Add in a half cup of your algae-rich water from the previous experiment. Put some or all of these additives into the jars, one per jar:

- 1 T. laundry detergent with phosphates
- 1 T. laundry detergent without phosphates
- 1 T. multi-purpose fertilizer
- 1/2 c. multi-purpose fertilizer (use the same fertilizer as above)
- 1 T. vinegar (to create an acidic environment)
- 1/2 c. vinegar
- two or three control jars to which nothing is added

Be sure to properly label the jars, then set them in a place with warmth and sunlight for 1-2 weeks and observe the growth.

You can observe the different amounts of growth by eye or if you want to be really accurate, strain out and weigh the algae to check the differences.

Which conditions created greater algae growth? Which created less? What does this tell you about the effect of things like fertilizer and detergent pollution? Acid rain? What affect does rampant algae growth have on a pond or a lake environment? What does too little algae growth mean for a pond or lake

## **Famous Folks**



Norman Borlaug single-handedly saved billions of lives by developing hardy, high yield, disease resistant wheat strains for third world countries including Mexico, India and Pakistan, plus other Asian and African nations. He was awarded the Nobel Peace Prize in 1970 in recognition of feeding billions of the world's poorest.

## **The Green Revolution**

... wasn't about saving the environment, it was about feeding the world. Find out more.

## **Teaching Tip**

Get to the point with kids as often as you can. You want the stuff they're learning in books to make sense in the real world. If they can't translate the study of algae to their everyday life then at some point they're going to say, "Why should I bother?"

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

## Additional Layer

Moss has a magical feel. It's bright green and soft and coats everything from trees to soil to rocks, melting it all into a soft green mass. Sometimes it is used intentionally in gardens to create a soft peaceful feeling.

## Memorization Station

Memorize the plant families chart and reproduce it without looking.

## Additional Layer

Phenology is the study of when events happen in the living world. Like the date when the first robin appears or the date the frog eggs hatch, or the date the hens become broody and want to sit on their nests, or the date the bees swarm. All these dates give a clue to larger environmental and climate conditions.

You can keep track of some of these events in your nature notebook. Make a note of when you first see algae on the pond or the fern fronds uncurling in your garden.

environment? Do you think all types of algae would respond the same way to pollutants that your variety did?

## EXPLANATION: Red Sea

Many algae are green, but some are other colors too, like brown and red. The Red Sea gets its slightly reddish color from the red algae within it. Most of the time it's actually a nice, turquoise blue, but at certain times it gets a reddish tint. This happens when the sea becomes filled with blooms of cyanobacteria algae, called *trichodesmium erythraeum*, which, upon dying, turn the usually blue-green water, reddish-brown.



## ☺ ☺ EXPERIMENT: Moss

How much water do mosses hold? Get some sphagnum moss from a garden center. Put about a cup of it into a jar and add a tablespoon of water at a time until no more water will absorb. How much water does the moss hold?

Mosses trap water in their cells for storage since they have no real root system to absorb water from the soil. Gardeners like to use mosses as mulch or mixed in with soil around plants because of its water retention capabilities.

## ☺ ☺ EXPLORATION: Plant Classification

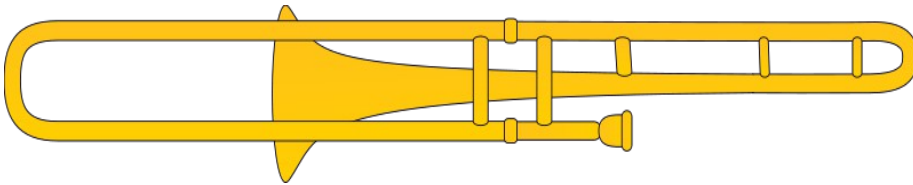
We've gone through all the plant families now, so let's re-cap the whole organization thing. On the worksheet at the end of this unit we show how the plant families are organized. We've left space for you to add your illustrations of each type of plant. You'll notice we put algae under the Protista domain, where most biologists (but not all) place them today.

## THE ARTS: INSTRUMENTS

Musical instruments are grouped into families based on how they make sounds. In an orchestra, musicians sit together in these family groupings.

### Brass

Brass instruments are made of brass or some other metal and make sound when air is blown inside. The musician plays it by making their lips buzz as they blow out through the mouthpiece. Air then vibrates inside the instrument, and that vibration is what makes a sound. Cornets, trumpets, trombones, tubas, bugles, and French horns are all brass instruments.



### Percussion

The sound from percussion instruments is made by striking them or hitting them. Others are shaken, like maracas, and still others may be rubbed, scratched, or whatever else will make the instrument vibrate and thus produce a sound. Percussion instruments include drums, tam-tam, glockenspiel, timpani, bells, cymbals, triangles, and xylophones.

### Strings

The sounds of stringed instruments come from their strings vibrating. The strings can be plucked, as in a guitar or harp; bowed, as with a cello or a violin; or struck, as with a dulcimer. This creates a vibration that causes a unique sound. The violin, viola, cello, bass, harp, and dulcimer all fall into the stringed instruments category.



### Woodwinds

Woodwinds produce sound when air is blown inside of them. Sometimes it is blown across the edge (like a flute), sometimes between a reed and a surface (clarinet), and sometimes between two reeds (bassoon). The sound happens because of the vibration of air inside the instrument. Woodwind instruments include the piccolo, recorder, flute, clarinet, bassoon, and the oboe.

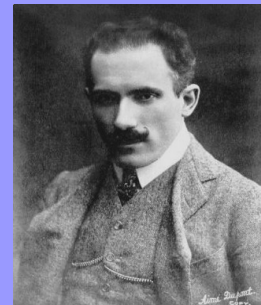
### Fabulous Fact

Not every instrument fits neatly into a group. For example, the piano has strings that vibrate, and hammers that strike. Is it a string instrument or a percussion instrument?

### Music Lessons

If at all possible, provide your kids with the chance to actually learn to play an instrument. Private lessons may be available, and some schools also provide music lessons as part of their free curriculum, even for kids who aren't enrolled in their school. More than any other source, taking music lessons will teach kids about instruments, music theory, and dedication. More importantly, they will have a lifelong skill and fun hobby.

### Famous Folks



Arturo Toscanini was a famous Italian conductor who lived and worked in the United States.



## Additional Layer

Nearly every culture throughout the history of the world has produced music for enjoyment, for religion, for celebrations, or for war.



Here are some Aztec's playing drums and dancing or marching.

## Definitions



Orchestra: large ensemble of instruments containing strings, brass, woodwind, and percussion.

Symphony: A musical composition made for an orchestra to play.

Symphony or Philharmonic Orchestra: indicates that the number of players is large, 80 or more.

Chamber Orchestra: indicates a smaller orchestra, less than 50 players usually.

## 😊 😊 EXPLORATION: Hear Them Play

Go to <http://www.sfskids.com> to hear each of the symphony instruments play. You will hear each of their sounds and learn more about each instrument. Once you've all become familiar with them, put a blindfold on the kids and play the instrument clips. See who can guess which instrument is playing.

## 😊 😊 EXPLORATION: My Favorite Instrument

Write a paragraph about what your favorite instrument is. Think about its sound and what makes it your favorite. What is it that you like? Have you ever played it? Do you have any memories about the instrument? To go along with your paragraph, draw your instrument.

## 😊 😊 😊 EXPLORATION: Homegrown Percussion

It's a trend to take random items like garbage cans, tools, and other household things and create unique sounds by turning them into percussion instruments. To see amazing examples of this, go to You Tube and search for Stomp videos. Stomp is a group that uses water coolers, brooms, car parts, and even playing cards to make cool percussion rhythms. After you've watched them, gather your own percussion instruments and put together your own sound.

## 😊 😊 EXPLORATION: Peter and the Wolf

Peter and the Wolf was originally a ballet score written by Sergei Prokofiev. In it, each character is portrayed by a different instrument. Disney created a version of it in 1946 that is animated and really cute. It brings not only the characters, but also the instruments to life. You can find the video on You Tube by searching for "Disney 1946 Peter and the Wolf."

## 😊 😊 EXPLORATION: Instruments Belong To Families

Print out the instrument cards from the end of this unit. Sort the cards into the instrument families as you talk about each one and how its sound is made. For really young children, you can describe the families and the way they make sounds by describing them with TOOT, WHISTLE, PLUNK, and BOOM.

Toot = Brass  
Whistle = Winds  
Plunk = Strings  
Boom = Percussion

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

## ☺ ☹ ☹ EXPEDITION: Music Store

Go visit a music store and ask to hear the sounds of the different instruments. Most music store owners are really familiar with instruments and will likely be able to show you how to play each one, at least a little.

## ☺ EXPLORATION: Carnival of the Animals

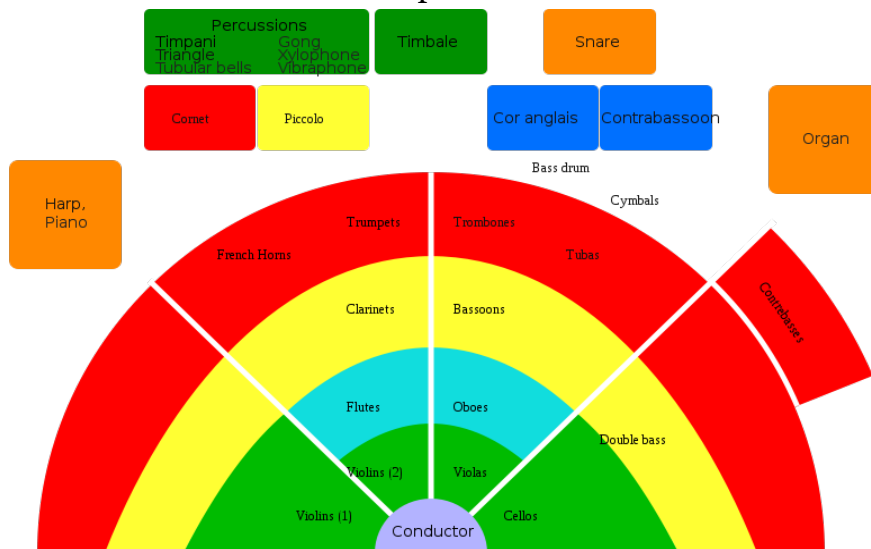
Go to this link: <http://youtu.be/hjaBGafWGSU> on You Tube for an audio recording of the Carnival of the Animals by Camille Saint-Saens. It's comprised of 14 short movements, each written with a certain animal in mind. It is kid-friendly, exciting classical music with a lot of lively variation. While listening to each new piece, have the kids guess which animal is being portrayed. Have them act out and move with the music as it is being played. Try to identify some of the instruments in the symphony.

## ☺ EXPLORATION: Old MacDonald Had a Band

Sing Old MacDonald Had a Band. Change the words to the classic song *Old MacDonald had a Farm* using instrument names instead of animals. During the sounds part, try to re-create the sounds of the instruments using your voice. It may be helpful to use different letter sounds for each family of instruments as your guide. For example, the strings could make a “vvvvvv” sound, the brass a “zzzzzz” sound, the winds an “ooooohhhh” sound, and percussion a “kkkk” sound. Within each family the instruments can also change pitch. For example, a violin will be a higher “vvvvvv” sound than a cello.

## ☺ ☹ ☹ EXPEDITION: Concert

You may be able to find local concerts in your area. Beginning in elementary school and up through colleges, most local schools have orchestras and bands that put on affordable concerts.



## Additional Layer

This unit is a perfect time to take the opportunity to just have lots of classical music playing. Even during math time, put on some classical music in the background and let kids get exposed to it. For many kids, having classical music playing actually helps them remember, learn, and recall information more easily.

To learn about composers as you listen to their music you can't beat the *Music Masters* series of CD's . . . unless of course you pull out *Beethoven's Wig*, classical music with very modern and hilarious lyrics.

## Famous Folks



Franz Joseph Haydn is known as the father of the symphony. He wrote a “Surprise Symphony” that lulled listeners with its soft melody and then suddenly blasted them with sound, waking them rudely.

## Explanation

I know a lot of homeschool moms who do school year round. They must have some kind of superhero blood running through their veins . . . I just don't have it in me.

But we DO manage to get some summer learning in.

#1 – Morning SQUIRT time – SQUIRT means Sustained Quiet UnInterrupted Reading Time.

#2 – Afternoon Art – Most afternoons of every summer day we do some kind of creative project.

#3 – Library Visits – During the school year our trips to the library are usually rushed. During the summer we are free to spend all morning there, or even take a picnic lunch to eat on their lawn.

#4 – Music, Music, Music! In the summertime I love that I can let the house be a little louder. Besides lots of singing and cranking up the tunes, we also have more time for playing music.

#5 – Discovery Activities. These can be anything really. Last summer we were reading the *Boxcar Children* and it turned into a week of outdoor life for my kids. They made a home in our fort, came into “town” (my kitchen) to work for food, and even cooked on a campfire.

*Karen*

In the previous picture you can see the traditional placement of each instrument group in an orchestra. When you go to the concert see if they're located where they're supposed to be.

## ☺ ☺ EXPLORATION: Instrument Match Game

Print out and prepare two sets of the *Instruments Belong To Families* cards. Turn all of the cards upside down and take turns flipping over two cards at a time to try to make matches. If a player gets a match they try to name the instrument family the instrument belongs to. If they are right, they get to take another turn. Continue playing until all the matches are made. The player with the most matches wins!

## ☺ ☺ ☺ EXPLORATION: Make Your Own Instruments

Provide lots of supplies and then let kids make their own instrument. You may want to read the book *The Magic Schoolbus in the Haunted Museum* before they begin.

You can also supply the homemade instrument printable from the end of this unit if they need some extra ideas or direction. Here are some supplies to consider:

- rubber bands
- waxed paper
- empty boxes (like tissue boxes)
- cans
- jars and other empty food packaging
- utensils
- paper plates, bowls, and cups
- plastic eggs
- beans, rice, BB's, and other small objects
- jingle bells
- pipe cleaners
- toilet paper rolls and paper towel rolls
- straws
- pie tins





# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

- tape, glue, scissors, markers, pens, pencils, construction paper

Once their instrument is created, even if it is a brand new made-up one, classify it into a family by how its sound is created.

## ☺ ☺ ☺ **EXPERIMENT: Sound Experiment**

Stretch a string tightly between your fingers and have someone measure its length. Then have them pluck the string. What does it sound like? Is it high, low, or something in between? Write down what you observe about the length of the string and its pitch. Now repeat the experiment with longer strings, then shorter strings. Write down your results each time. How does the length of the string affect the sound? Does the force of the plucking affect the sound too? You may want to conduct the experiment using different types of string—thick, thin, or something in between—and different materials, such as floss or wire. How do your findings relate to stringed instruments?

## ☺ ☺ ☺ **EXPLORATION: Instruments Around The World**

We are often pretty familiar with the instruments that are common to our own time and our own country, but there are many unique instruments throughout the world. Choose a country and research its traditional instruments. Learn of the origins of at least one instrument. My son, Tyler, has been playing the violin for several years and immediately picked up this erhu on our trip to China and played it with ease. Many of the instruments from around the world have similarities to our own.



## **Famous Folks**

Antonio Stradivari made stringed instruments such as violins and cellos of such incomparable quality that his instruments still sell for millions and have never been surpassed. He's been dead for over 275 years.



*Painting by Edgar Bundy (1893)*

## **Writer's Workshop**

A lot of famous musicians name their instruments like you and I name pets, or sometimes cars. Write a story about you and an instrument you own. Give it a name and a personality.

**Coming up next . . .**

## Unit I-20



# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

My Ideas For This Unit:

Title: \_\_\_\_\_ Topic: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

Title: \_\_\_\_\_ Topic: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

Title: \_\_\_\_\_ Topic: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

# CHRISTIANITY – AUSTRALIA & OCEANIA – SIMPLE PLANTS– INSTRUMENTS

My Ideas For This Unit:

Title: \_\_\_\_\_ Topic: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

Title: \_\_\_\_\_ Topic: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

Title: \_\_\_\_\_ Topic: \_\_\_\_\_

---

---

---

---

---

---

---

---

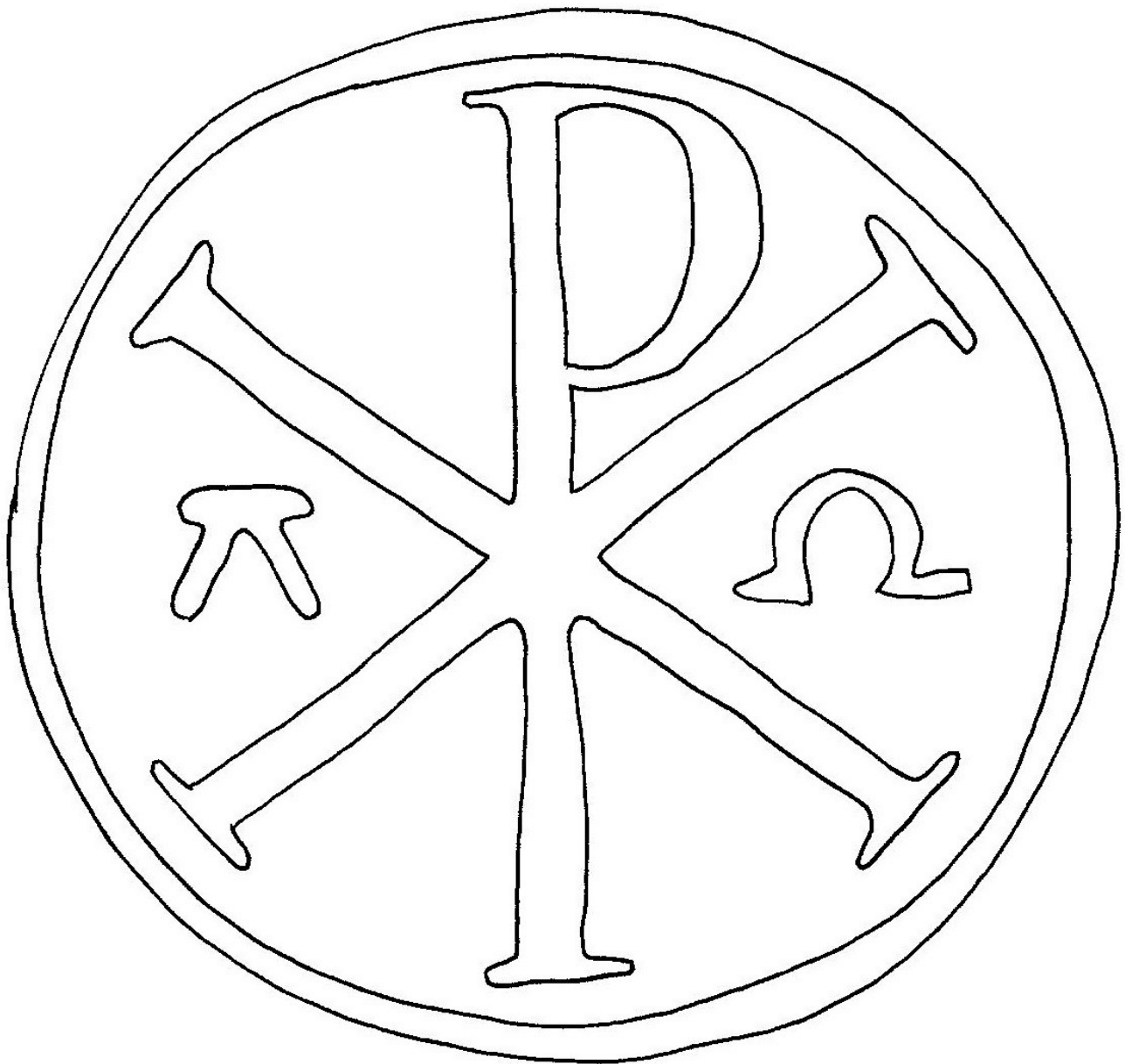
---

---



# Christian Symbol

This Christian symbol, the chi-rho, is the combination of the first two letters of Christ's name in Greek, the X and P looking symbols. It also includes the first and last letters of the Greek alphabet – Alpha and Omega, surrounded by the halo of Jesus. The Book of Revelation talks about how Christ is Alpha and Omega, the beginning and the end.



# Christianity: Unit 1-19

**Circa 4 BC** I-19



Birth of Christ

**Circa 26 AD** I-19



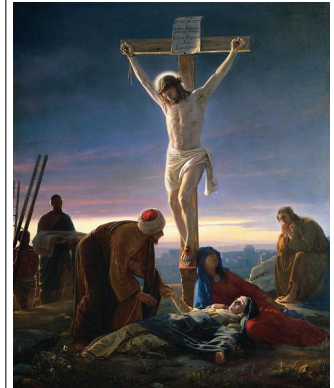
Ministry of John the Baptist

**Circa 27 AD** I-19



Jesus begins preaching

**Circa 30 AD** I-19



Crucifixion of Christ

**30AD-303AD** I-19



Christians were alternately persecuted and favored under Roman emperors, beginning with the persecutions of Nero, who had several apostles put to death

**95 AD** I-19



Last of Christ's apostles dies or disappears

**312 AD** I-19



Constantine converts to Christianity

**315 AD** I-19



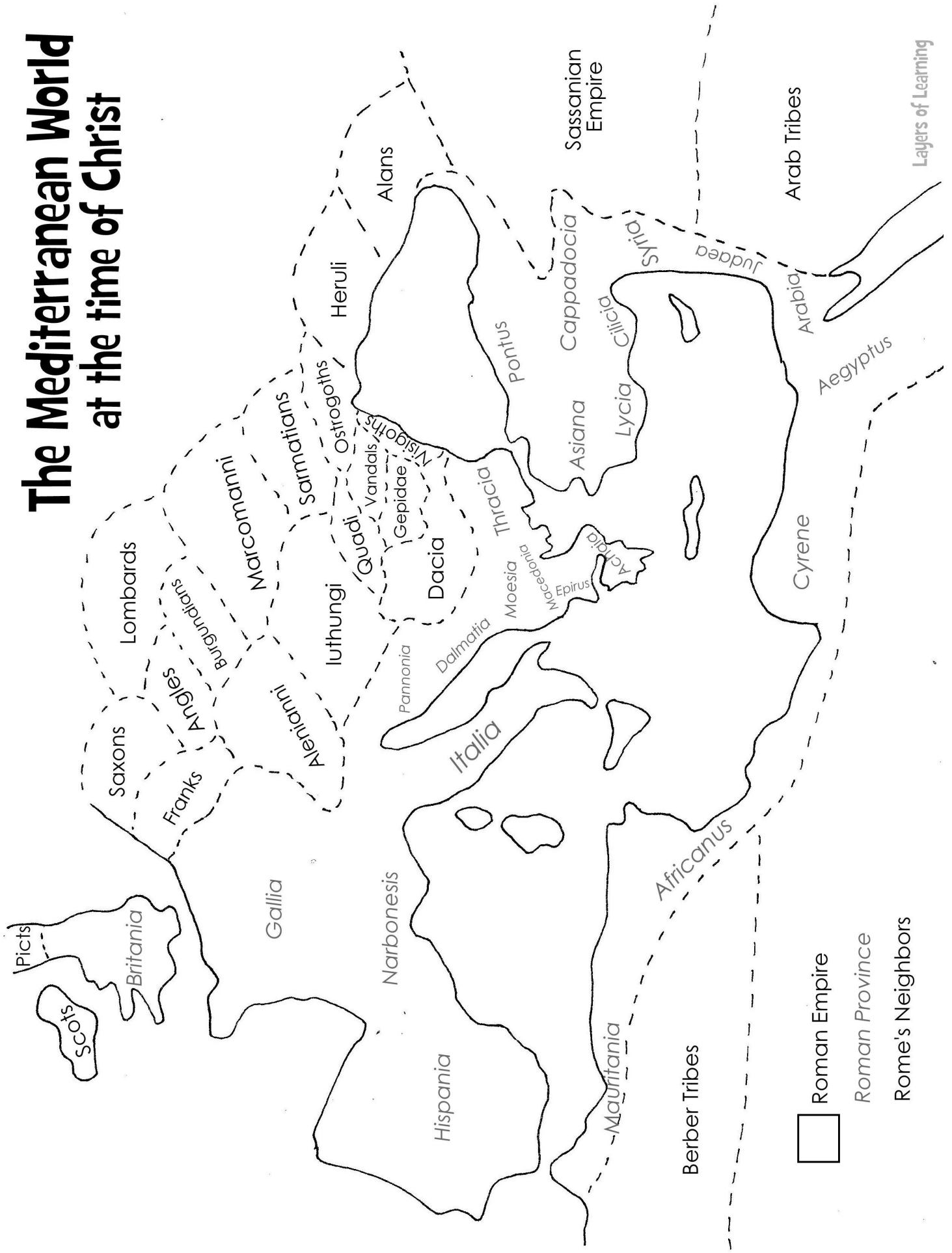
The New Testament as we know it today is officially adopted by the church council, though the standard books were in use long before this.

**325 AD** I-19

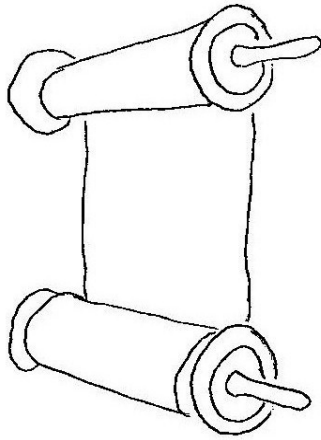


Council of Nicea unifies Christian doctrine and turns the church into a political power

# The Mediterranean World at the time of Christ

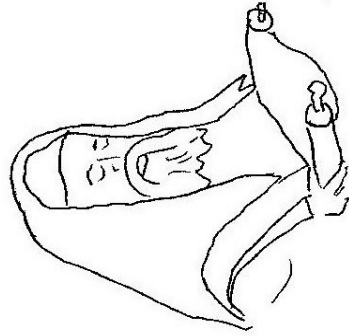






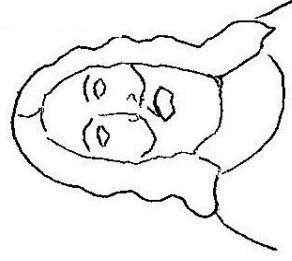
## 1400-1500 BC

The five books of Moses (Genesis through Deuteronomy) are written in ancient Hebrew on scrolls made from animal skins.



## 500 BC

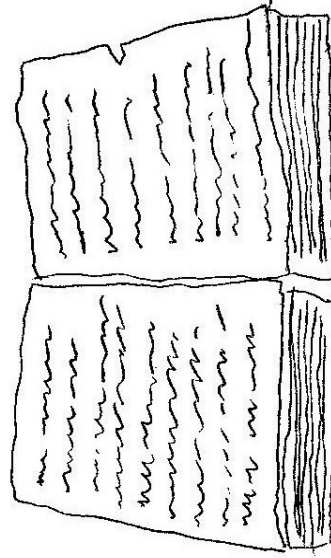
By this date the Old Testament is complete. The books known as the Apocrypha will be completed by 200 BC. Hebrew scribes were extremely careful and perfect when they made copies of the scriptures so it is thought they came down unchanged through the centuries. The Apocrypha was written in Aramaic, which by this time was the spoken language of the Jews.



## 100 AD

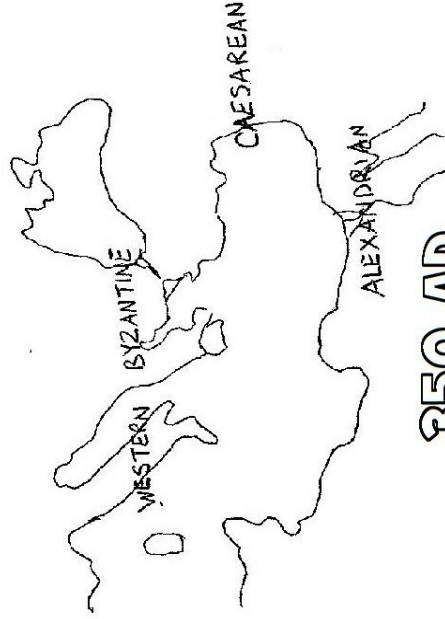
The New Testament writings are completed by this time. The writings are on papyrus, in something more like book form and written in Greek.

All the writers are either apostles, special witnesses of Jesus and leaders of the church, or people very close to the Apostles.



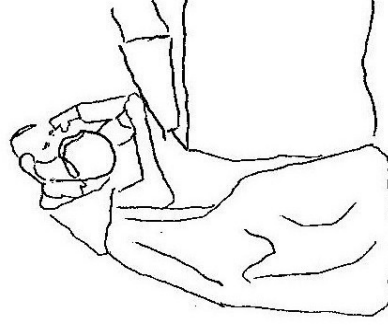
## 315 AD

From among all the writings and letters of the Apostles, the 27 books of the New Testament that we know today are chosen as scripture and preserved while other writings are lost.



## 350 AD

The oldest complete manuscript of the New Testament in existence today dates from 350 AD. The ancient manuscripts are from four areas of the world: Western, Byzantine, Caesarean, and Alexandrian. The Alexandrian manuscripts are the oldest, but remained undiscovered until after the King James Version, so the KJV relied on Byzantine manuscripts.



## 382 AD

Jerome translated the New Testament from Greek into Latin, making the Latin Vulgate version of the scriptures which was used by the Catholic church and is still the copy from which Catholic translations are taken.



GOO AD



1516 AD

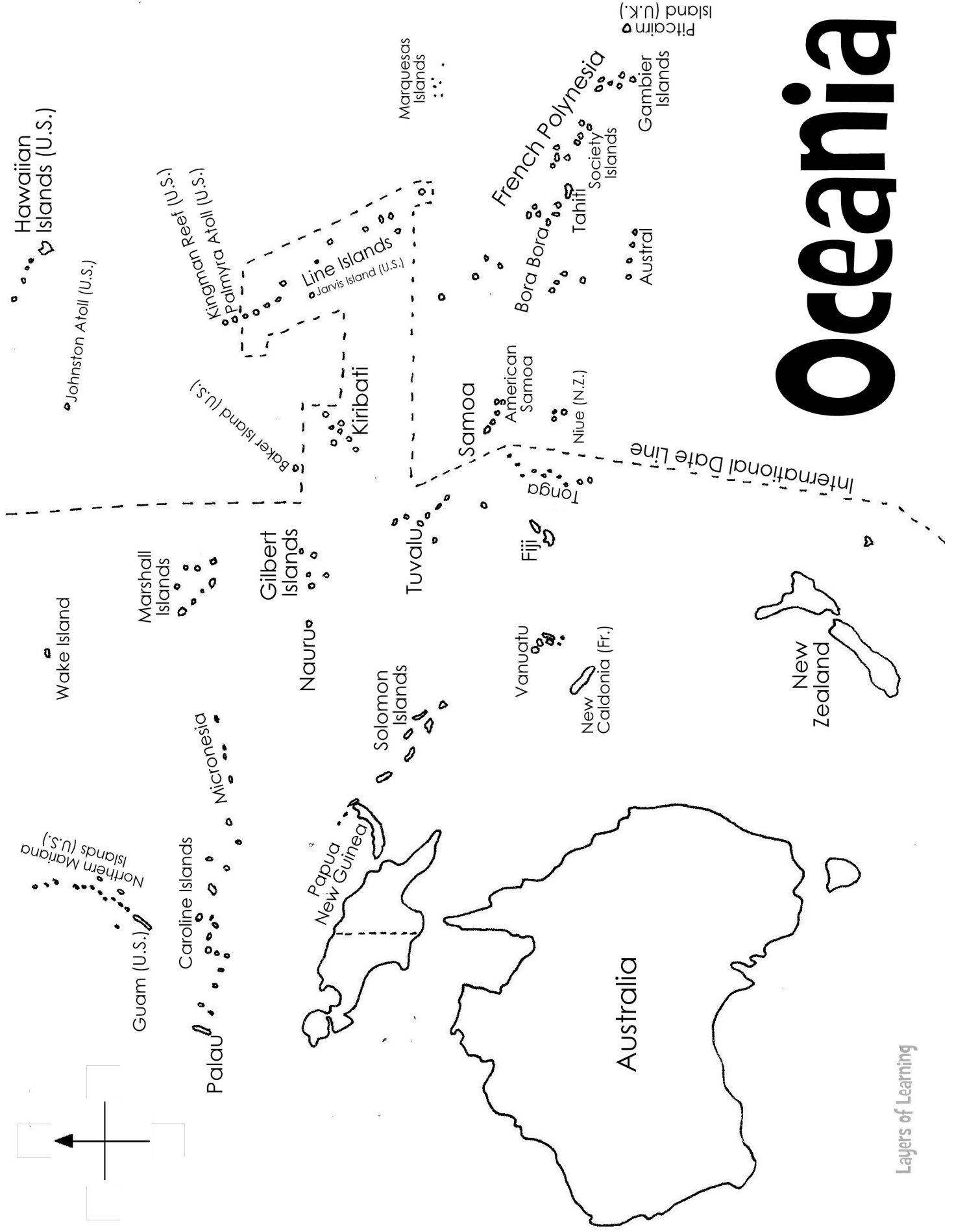


# IGII AD



# 1971 AD

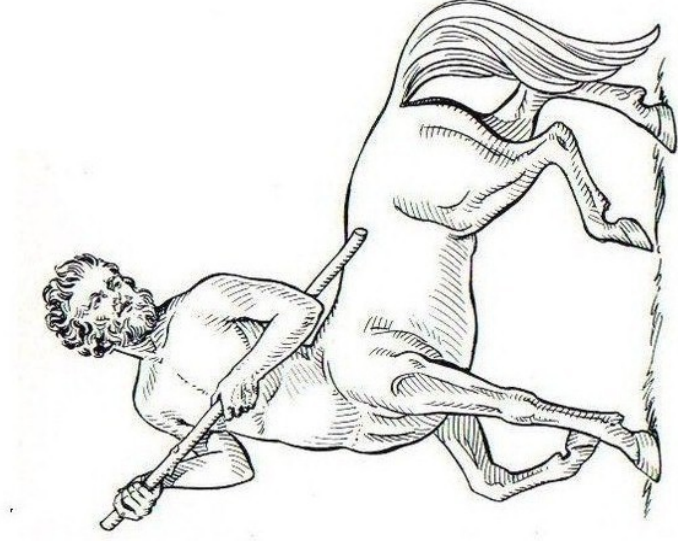
# Oceania



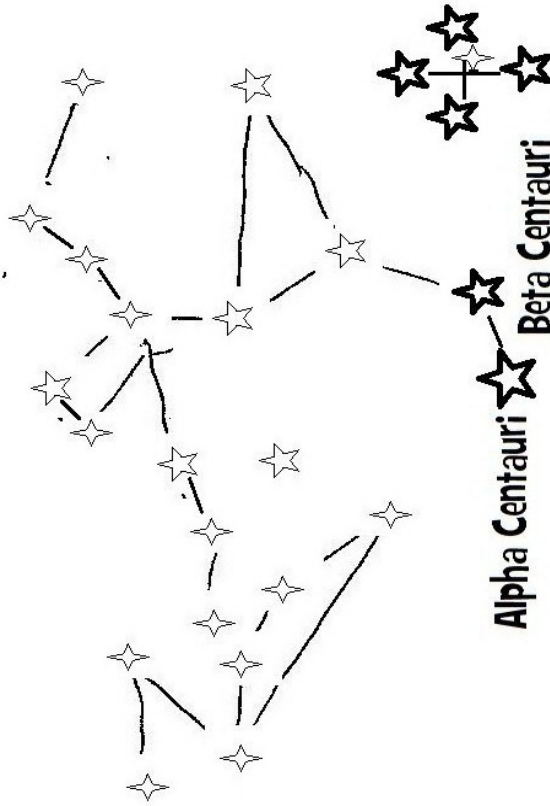


# Southern Constellations

Cenaturus was included in Ptolemy's list of constellations in ancient times. It represents a half-man, half-horse, creature. Centaurus has moved south since Ptolemy's day because of the precession. It can be found in the Milky Way and is one of the easiest constellations to spot in the south because of the two bright stars, Alpha Centauri and Beta Centauri.



## Centaurus



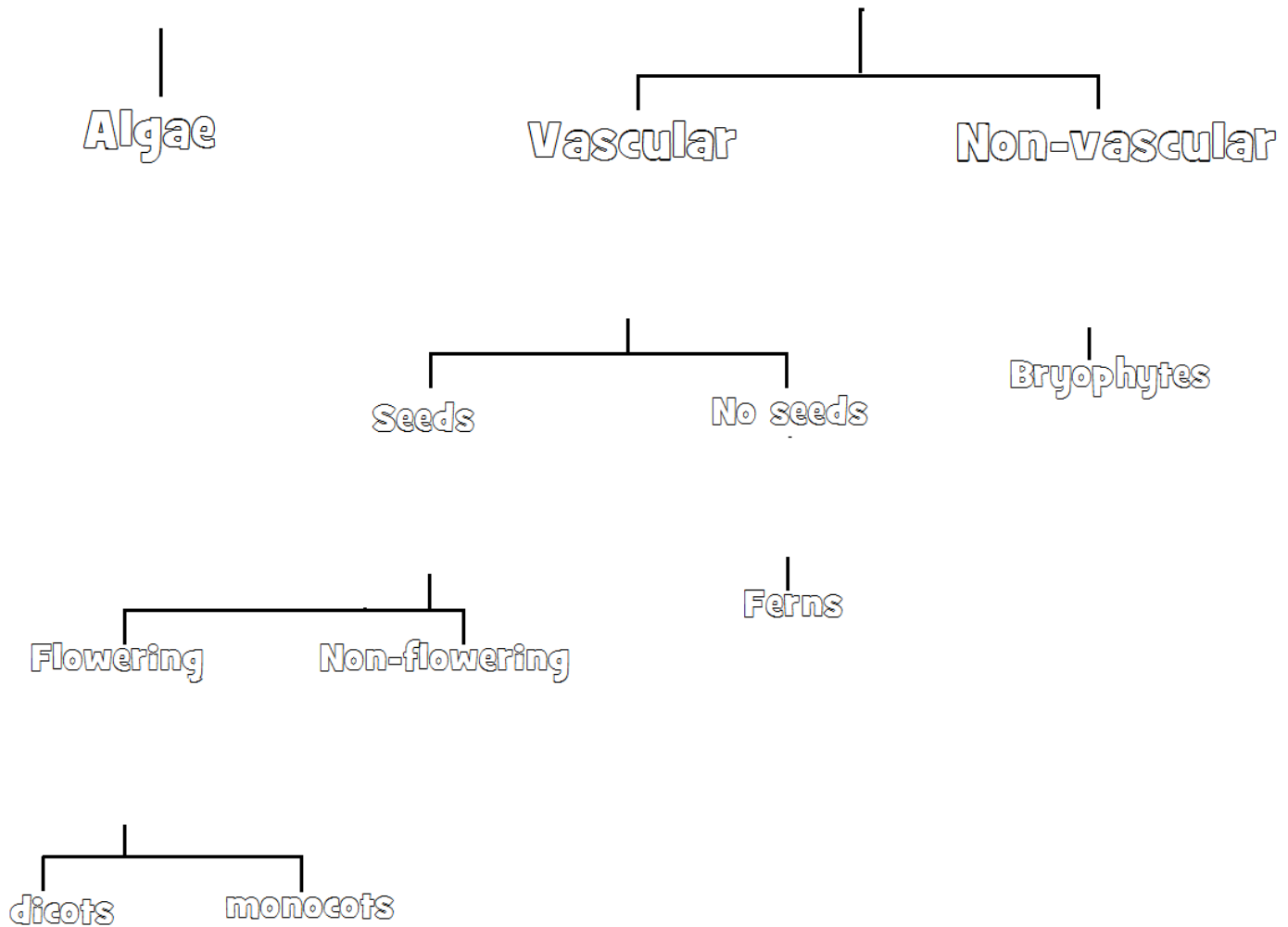
## Crux

Alpha Centauri and Beta Centauri form pointer stars for the southern cross, officially named Crux, making it easier to spot. Crux used to be visible in the northern hemisphere but has moved south as well and can now only be seen from tropical locations in the north.

# Plant Classification Worksheet

Space has been left for you to illustrate each plant group.

## Protista ——— Plants



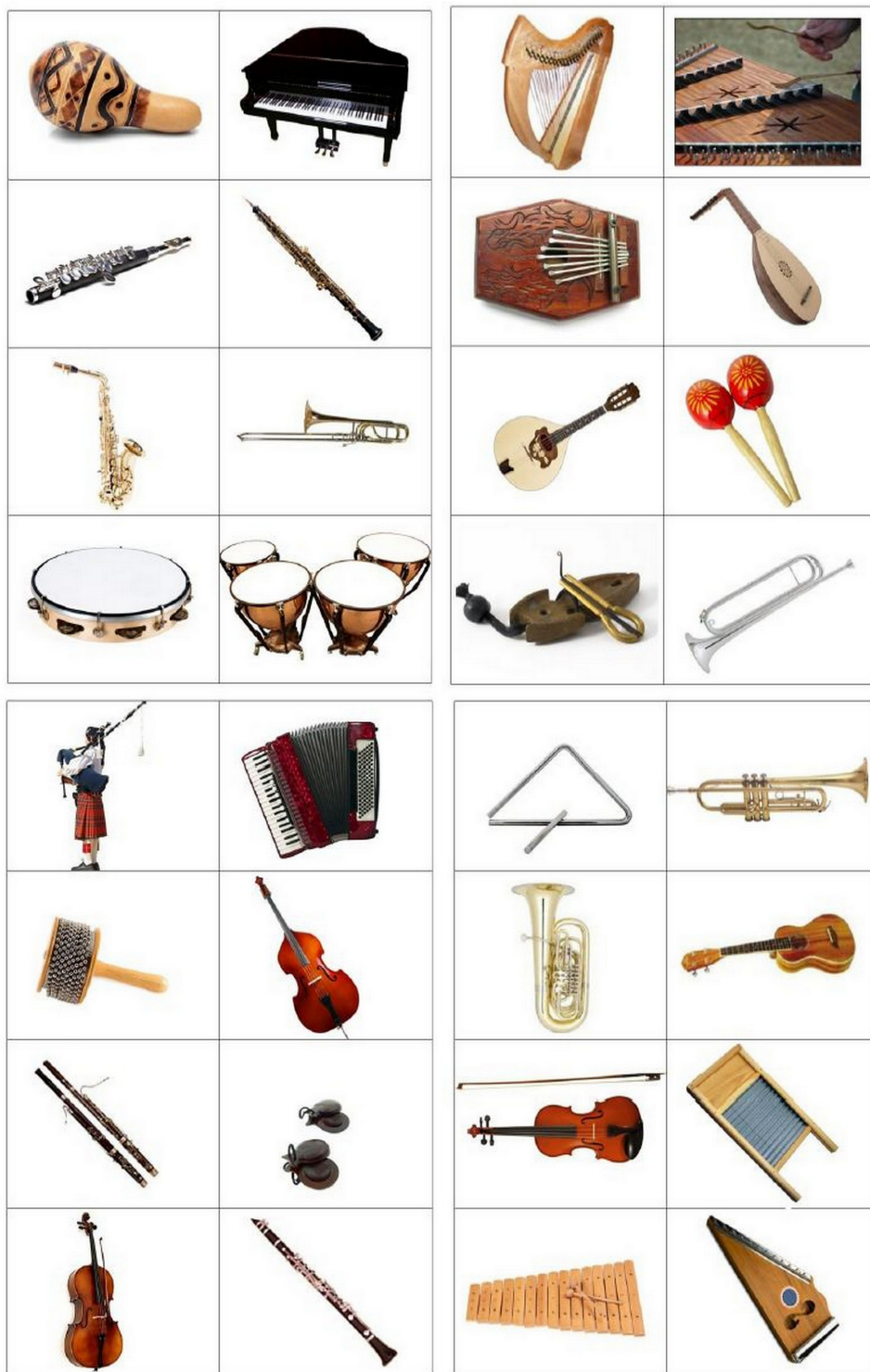
most complex

least complex



# Instruments Belong To Families

**Instructions:**  
Copy the cards  
and laminate them.  
Sort them into  
their families.





# Handmade Instrument Ideas



# ABOUT THE AUTHORS

Karen & Michelle . . .  
Mothers, sisters, teachers, women who are passionate  
about educating kids.  
We are dedicated to lifelong learning.



Karen, a mother of four, who has homeschooled her kids for more than eight years with her husband, Bob, has a bachelor's degree in child development with an emphasis in education. She lives in Utah where she gardens, teaches piano, and plays an excruciating number of board games with her kids. Karen is our resident Arts expert and English guru {most necessary as Michelle regularly and carelessly mangles the English language and occasionally steps over the bounds of polite society}.

Michelle and her husband, Cameron, homeschooling now for over a decade, teach their six boys on their ten acres in beautiful Idaho country. Michelle earned a bachelor's in biology, making her the resident Science expert, though she is mocked by her friends for being the *Botanist with the Black Thumb of Death*. She also is the go-to for History and Government. She believes in staying up late, hot chocolate, and a no whining policy. We both pitch in on Geography, in case you were wondering, and are on a continual quest for knowledge.

*Visit our constantly updated blog for tons of free ideas,  
free printables, and more cool stuff for sale:*

[www.Layers-of-Learning.com](http://www.Layers-of-Learning.com)