Seventh Grade Earthschooling *Written Curriculum*
Summary of the Year & Supply List

SUMMARY OF THE SEVENTH GRADE YEAR

Overview: First Half of the Year

Each planner is divided into several sections, each detailing specific subjects and methodologies for teaching. It includes a variety of lesson plans, thematic weeks, and practical advice for educators on how to manage a multi-age classroom effectively.

Main Lesson Themes

1. **Middle Ages**: The curriculum begins with an exploration of the Middle Ages, focusing on significant historical figures and events such as the Crusades, the life of Eleanor of Aquitaine, and the construction of cathedrals. The document emphasizes the transition from local to national powers in Europe during this period, highlighting the importance of critical thinking as students engage with historical narratives.
2. **Mathematics**: The mathematics section introduces algebra and geometry, building on concepts learned in sixth grade. It covers topics such as linear equations, exponents, and the Pythagorean theorem, with an emphasis on creating a strong mathematical foundation for future studies. The planner encourages educators to adapt lessons based on individual student readiness, allowing for a personalized learning experience.
3. **Creative Arts**: The creative arts component focuses on black and white drawing techniques, particularly emphasizing shading and perspective. The lessons are designed to develop students' observational skills and artistic expression through practical exercises, such as drawing cubes and other geometric shapes.
4. **Music**: The music curriculum introduces Gregorian chants, exploring their historical significance and characteristics. Students are encouraged to listen to and reflect on the music, fostering an appreciation for its role in religious and cultural contexts. The planner outlines a weekly schedule for music lessons, emphasizing the importance of repeated listening and personal reflection.

Teaching Methods

The planner provides multiple methods for structuring lessons, particularly for multi-age classrooms. It suggests various approaches to teaching main lessons, including:

- **Method One**: Alternating between younger and older students, allowing for individualized attention while managing classroom dynamics.
- **Method Two**: Focusing on shorter lessons for younger students, followed by dedicated time for older students.
- **Method Three**: Dividing the morning into three segments to accommodate different age groups, with opportunities for independent work and collaborative learning.

Weekly Themes and Activities
The planner outlines specific weekly themes that can be adapted to any month, focusing on concepts such as rhythm, time, and community guidelines. Each week includes suggested activities, discussions, and reflections to engage students in meaningful learning experiences. For example, the first week emphasizes understanding rhythm through various activities, while the second week focuses on the concept of time and its relevance in daily life.

Historical Context and Cultural References
The document includes engaging anecdotes and cultural references to help students relate to historical content. For instance, it explains the origins of common phrases from the Middle Ages, such as "the upper crust" and "saved by the bell," providing context for students to understand the historical significance of language and customs.

Practical Considerations
The planner emphasizes the importance of practical considerations in teaching, such as snack preparation and classroom management. It provides suggestions for healthy snacks that can be enjoyed by students of all ages, promoting a sense of community and shared experience during mealtimes.

Conclusion

The first half of the year is a detailed and structured guide for educators aiming to provide a rich and engaging learning experience for seventh-grade students. By integrating various subjects and employing diverse teaching methods, the planner encourages a holistic approach to education that fosters critical thinking, creativity, and a deeper understanding of historical and cultural contexts. The emphasis on adaptability and personalized learning ensures that each student can thrive in their educational journey.

Overview: Second Half of the Year

The document titled "Seventh Grade Year Part II" serves as an educational planner for seventh-grade students, focusing on physics concepts, particularly electricity and magnetism, as well as practical lessons in woodcarving. It includes detailed descriptions of various electrical cells, the principles of magnetism, and the contributions of notable scientists in the field.

Electricity and Electrical Cells

Leclanché Cell
The Leclanché cell, commonly used for ringing doorbells, consists of zinc and carbon plates in a sal ammoniac solution. It has an electromotive force (E.M.F.) of about 1.5 volts and is known for its ability to recover from polarization when left on an open circuit. The cell is economical, requiring minimal upkeep, making it suitable for devices that operate intermittently, such as doorbells and telephones.

Dry Cell
The dry cell is a modern adaptation of the Leclanché cell, featuring a sealed zinc can that contains carbon and manganese dioxide. This design prevents spillage and allows for versatile positioning, making it ideal for portable applications, such as gas engine spark coils.

Daniell Cell
The Daniell cell, often used in laboratory settings, consists of zinc and copper plates in separate solutions, maintained by a porous clay cup. It operates best on closed circuits and provides a stable E.M.F. of about one volt, making it useful for experiments and applications like burglar alarms.

Gravity Cell
Similar to the Daniell cell, the gravity cell features a zinc plate at the top and a copper plate at the bottom, surrounded by solutions that mix slowly. It is also designed for closed circuits and is commonly used in telegraph instruments due to its simplicity and cost-effectiveness.

Magnetism

Introduction to Magnetism
Magnetism is described as a physical phenomenon resulting from the motion of electric charges, leading to attractive and repulsive forces. The document emphasizes the invisible nature of magnetic fields and encourages students to experiment with various types of magnets to understand their properties.

Properties of Magnets
Students are instructed to learn and illustrate six fundamental rules of magnetism, including the existence of north and south poles, the behavior of like and unlike poles, and the concept of magnetic fields. The document explains that cutting a magnet results in two smaller magnets, each retaining the same properties as the original.

Magnetic Induction and Retentivity
Magnetic induction occurs when a magnet influences nearby iron or steel objects, aligning their molecules and temporarily magnetizing them. The document discusses retentivity, the ability of materials to retain magnetism after the magnetizing force is removed, highlighting that hardened steel retains magnetism better than soft iron.

Earth's Magnetism
The document explains that the Earth itself acts as a giant magnet, with its magnetic poles not aligning perfectly with the geographical poles. The concept of declination, the angle between the magnetic needle and the geographical meridian, is introduced, along with the idea of the dipping needle, which demonstrates the inclination of the Earth's magnetic field.

Contributions of Notable Scientists

James Clerk Maxwell
Maxwell's contributions to electromagnetism are highlighted, particularly his formulation of the equations that unify electricity and magnetism. His work laid the groundwork for modern physics, influencing subsequent theories in special relativity and quantum mechanics.

André-Marie Ampère
Ampère is recognized for his foundational work in electrodynamics, including the discovery of the relationship between electricity and magnetism. His significant publications and theories have inspired further research in the field, and the unit of electric current, the ampere, is named in his honor.

Practical Lessons

Woodcarving
The document includes a creative lesson on woodcarving, where students learn to carve simple designs, enhancing their artistic skills and patience. The lesson emphasizes the importance of understanding the grain of the wood and the technical aspects of carving, encouraging students to create their own designs based on traditional patterns.

Experiments and Exercises
Students are provided with various optional exercises to reinforce their understanding of electricity and magnetism, including creating simple magnetoscopes and conducting experiments to observe magnetic properties. These hands-on activities aim to deepen their comprehension of theoretical concepts through practical application.

Conclusion

The second half of the year serves as a comprehensive educational resource, blending theoretical knowledge with practical skills in physics and art. It emphasizes the importance of experimentation and creativity in learning, encouraging students to explore the fundamental principles of electricity and magnetism while developing their artistic abilities through woodcarving.

DETAILED SUMMARY OF THE SEVENTH GRADE YEAR

Seventh Grade Planner One
Main Lesson: The Middle Ages
Math: Algebra & Area
Creative: Black & White Drawing -- Music: Medieval: Gregorian Chants

Seventh Grade Planner Two
Main Lesson: The Renaissance
Math: The Renaissance and Math, Geometry, The Golden Mean
Creative: Renaissance Art –– Music: Medieval: Renaissance Music

Seventh Grade Planner Three
Main Lesson Block: Astronomy
Supporting Main Lesson Block: Poetry
Creative Block: Doing a Play

Seventh Grade Planner Four
Main Lesson Block: The Age of Chivalry
Supporting Main Lesson Block: Language: Short Stories
Creative Block: Woodworking

Seventh Grade Planner Five
Main Lesson: Chemistry
Complimentary Main Lesson: Fibers
Handwork: Making a Waldorf Doll

Seventh Grade Planner Six
Main Lesson Block: Age of Exploration
Supporting Main Lesson Block: Language: Interviews & World Geography
Creative Block: Modeling & Sculpture

Seventh Grade Planner Seven
Main Lesson: Physics: Six Basic Machines, Magnetism, Electricity
Complimentary Main Lesson: Influential Scientists
Handwork: Woodcarving

Seventh Grade Planner Eight
Main Lesson: Meteorology
Complimentary Main Lesson: Australia
Creative Block: Shadow Drawing

Seventh Grade Planner Nine
Main Lesson Block: Mechanics and Math
Supporting Main Lesson Block: Animal Physiology
Creative Block: Scientific Journaling

Seventh Grade Planner Ten
Main Lesson: Ecology
Complimentary Main Lesson: Circles & Cycles
Creative Work: Art & Ecology

SUPPLY LISTS FOR SEVENTH GRADE WRITTEN CURRICULUM

Basic Supplies for All Lessons All Year
These supplies are used in many grades of the Waldorf curriculum, so if you have already been teaching in the Waldorf style, you may have many of these on hand. This is also a general list to get you started. If you get everything on this list, you will not need to supplement with much else all year. *You will also need the supplies from the "specific supply list" below this one.*

Optional Supplies for the Year
These are not required in the curriculum. However, they may be suggested or can be used to supplement lessons and support creative expression.

Specific Supplies for the Year
This list was taken directly from the crafts and projects presented in the curriculum

Basic Supplies for All Lessons All Year

These supplies are used in many grades of the Waldorf curriculum, so if you have already been teaching in the Waldorf style, you may have many of these on hand. This is also a general list to get you started. If you get everything on this list, you will not need to supplement with much else all year. *You will also need the supplies from the "specific supply list" below this one.*

1 Main Lesson Book - 32 Pages, Landscape, 32x24 cm, Blank, With or Without Onion Skin.**
1 Main Lesson Book - Composition Book 21 x 29.7 cm Portrait Format – Blank**
4 Composition Books - 21x29.7 cm Portrait Format - Lined - 35 Lines Each Page**
1 Main Lesson Book - Composition Book - 21 x 29.7 cm, Portrait, Graph Paper 5x5mm**
Watercolors (Set of 8)
Watercolor Brushes (Different Sizes)
Watercolor Paper (At Least 11' x 14")
Watercolor Board (Can purchase, make, or use the back of a frame)
Instrument of Choice (Violin, Piano, etc.)
Wool Roving - At Least 16 Colors
Felt Board (At Least 11" x 14" - Can Make or Purchase)
Yarn (8-10 Balls) - 100% Cotton or Wool
Wood Knitting Needles (Size 4)
Colored Pencils - At Least 16 Colors
Drawing Paper (Minimum 8" x 10")
Pencils for Writing
Pencil Sharpener
Eraser
Protractor & Compass
Blackboard and Chalk for Teachers to Present Lessons (Recommended but Optional)

Optional Supplies for the Year
Small Blackboard & Chalk for Child
Modeling Beeswax (Stockmar or can be made at home)
Modeling Clay (Stockmar or can be purchased at a local art supply store)
Weaving Loom (Small 12" x 12" is Fine)
Origami and/or Kite Paper
Circle paper

Specific Supplies for the Year

First Half of the Year

1. **Basic Yeast Bread Ingredients**: You will need yeast, water, milk, shortening or oil, sugar, salt, and flour to make the Cornerstone Bread.
2. **Potato Cauliflower Soup Ingredients**: For the special snack of the week, gather onion, potatoes, cauliflower, carrots, stock or water, and evaporated milk or cream.
3. **Main Lesson Book Supplies**: Students will need a Main Lesson Book for documenting their learning, which includes pages for different fibers like cotton, wool, and flax.
4. **Fabric Samples**: Collect samples of various fabrics such as cotton thread, wool yarn, and other materials for the Main Lesson Book activities.
5. **Field Trip Supplies**: If planning a field trip to a fabric store, consider bringing a list of fabrics to identify and touch.
6. **Static Experiment Supplies**: For the static cereal experiment, you will need puffed rice cereal, a wool cloth, and an old record.
7. **Cooking Supplies**: For making Friendship Bread, ensure you have a live yeast starter, which can be ordered online or obtained from a friend.

Second Half of the Year

1. **Woodworking Supplies**:
    - Snibs or Dogs: These are pieces of wood that can be easily made by sawing out a piece of wood corresponding in thickness to the panel being worked on.
2. **Art Supplies**:
    - Main Lesson Book: Students will need this for drawing and writing about their lessons.
    - Pencils and drawing materials: For students to draw images and write theorems in their Main Lesson Book.
3. **Cooking Supplies**:
    - Ingredients for Vegan Poppyseed Bread: This includes dried fruit, oats, and poppy seeds, which are used to make a comforting bread.
    - Ingredients for Lentil Soup: This includes vegetables, chickpeas, white beans, red lentils, and spices like cardamom, garam masala, cumin, and fresh ginger.
4. **General Classroom Supplies**:
    - Blank paper and notebooks for notes and additional activities.
    - A large glass of water or other drink for students to start the day.

About Main Lesson Books: Although we provide a supply list, the main lesson books you use can vary according to preference. The only reason we have a list of different main lesson books on the supply list is to provide you with a variety of main lesson book experiences or the option to use different formats. There is no rule as to which book goes with which lesson. Some teachers prefer to use the lined books for writing, and others prefer to use the blank page/lined book combination for writing. Blank page books often work best for math. However, lined books can also be used. Once you become familiar with the main lesson book experience, you can choose your own books according to your preference. To decide on which lesson books you want to use/order, you can use the following list:

1. Main lesson books are used for each different subject. Every time a student does a math lesson or math practice, they write or draw in their math main lesson book. Each time a student does a language lesson, they use their language main lesson book. I usually provide my students with at least one nature journal book and one "free" book (in which they can do whatever they want or practice lessons before they put it into their main book), so base how many books you need on this guideline.
2. There is no rule as to what kind of book you need. I know one Waldorf teacher who has students make their own books with plain paper and yarn. I have seen some teachers use very specific books for each subject. I, personally, prefer the style of book with lines on one side and a blank page on the other side so the student has space to write and draw each day. Although I have seen others use the lined books exclusively (and then just glue or tape in plain paper as needed) and others use just the plain pages only, and either ask students to write without lines or create their own lines before they write.
3. For size, I usually choose the largest size available or at least medium. I find the students have a hard time opening up their creativity with the smaller books. Although a smaller book might work as a nature journal if you are carrying it with you.
4. The only requirement is that the book you create needs to be able to lie flat. Sometimes you can use a piece of the child's art or wet-on-wet watercolor as the book cover.

***Question from Member**: When should we start using lined books for writing?*

Reply from Earthschooling: We recommend second or third grade, depending on the comfort level of the child. When you do start, begin with wider lines before moving to thinner ones. You can "try them out" in second grade and observe how the child responds. If they are comfortable, then you can continue using them. Some signs of discomfort might be complaining about the restrictions of the lines, consistently writing off the line, or refusal to write in the books.

***Question from Member**: I am having trouble finding the exact main lesson book that is suggested on the "suggested supply list."*

Reply from Earthschooling: Although we provide a supply list, the main lesson books you use can vary according to preference. The only reason we have a list of different main lesson books on the supply list is to provide you with a variety of main lesson book experiences or the option to use different formats. There is no rule as to which book goes with which lesson. Some teachers prefer to use the lined books for writing, and others prefer to use the blank page/lined book combination for writing. Blank page books often work best for math. However, lined books can also be used. Once you become familiar with the main lesson book experience, you can choose your own books according to your preference.

SEVENTH GRADE WRITTEN CURRICULUM CHECKLIST

All items below have a direct link, but can also be accessed by using your main seventh-grade page

REQUIRED ITEMS	REQUIRED
I have downloaded my curriculum from the seventh-grade page by the year, or I will download each month individually. I understand this is all I need to complete the year and that everything else is extra resources. I understand there is also a page that has all the daily planners individually on an archived (older page) here.	
I understand that if I download the planners by the month that I also need to download the document called "Introduction to All Months" as this will help guide me in using the curriculum. If I download the curriculum by the year, this document is included in that download.	
I have downloaded the Ultimate Seventh Grade Written Curriculum Guide PDF. This checklist can be found within this guide so I might be using this file now.	
I understand that EarthschoolingHelp.com is the only place to submit support questions.	
I understand that if I use more lessons beyond the required curriculum, I risk becoming confused or overwhelmed. I will proceed slowly and cautiously through all extra materials. If I start to feel overwhelmed or confused, I will take a step back and consider using only the required lessons or will add extra lessons and teacher education at a much slower pace. Earthschooling provides extra resources, so I have *choices*, not because they expect me to use them all.	
HIGHLY RECOMMENDED BELOW	**PRIORITY**
I have visited the Teacher Support Page for seventh-grade and have browsed or watched the videos on that page that will help me in my journey (Package Members only – this is not available for Core Bundles)	
I have browsed the START HERE page to become familiar with those resources and have read or listened to the ones that I need at this time.	
ALL EXTRA AND OPTIONAL BELOW	**EXTRAS**
I have visited the Introduction page for seventh-grade for help with organizing and record keeping.	
I understand that I also have the option to use the archived seventh-grade blocks. However, the material in these blocks is not as complete as the planners.	
I have visited the Teacher Essentials Page and have skimmed through some of the important materials there for future reference such as: Waldorf 101, My Waldorf Year, Member FAQs, Planning Essentials, Classroom Essentials, and more	
I have skimmed the Seventh Grade Music Page to be aware of the extra resources I have there such as charts, sheet music, extra verses, and mp3s	
I am aware of the member galleries here on the Member Gallery page. However, I also know I can access all the member galleries from the EarthschoolingHelp.com page.	
I am aware that Earthschooling provides extra lessons for seventh-grade if I need them on the Extra Lessons page	
I have looked at the optional book list for seventh-grade on the Book List page.	
I am aware that students will need to practice the math they learn in the planners and that Earthschooling provides practice problems on the Math Problems page. However, I am also aware I can find math problems for all grades linked from the EarthschoolingHelp.com page.	
I know where to find the Seventh Grade FAQs page. However, I am also aware I can link to this page from EarthschoolingHelp.com.	
I am aware there is a Cultural Enrichment page for all members and have skimmed the content to be aware of what is available.	