

abacus summer term test Printable PDF

Understanding the Abacus Summer Term Test: A Comprehensive Guide

Abacus summer term test is an essential assessment designed to evaluate students' proficiency in mental arithmetic and abacus skills acquired during the summer term. This test plays a vital role in tracking progress, identifying areas for improvement, and motivating students to excel in their mathematical abilities. Whether you're a parent, teacher, or student preparing for the upcoming assessment, understanding the structure, preparation strategies, and benefits of the abacus summer term test can help ensure success.

What Is the Abacus Summer Term Test?

The abacus summer term test is a standardized examination conducted at the end of the summer academic term for students enrolled in abacus and mental arithmetic courses. It is typically organized by educational institutions, training centers, or abacus associations aiming to:

- Assess students' mastery of abacus techniques
- Evaluate mental calculation speed and accuracy
- Encourage consistent practice and learning
- Provide a benchmark for progress compared to previous terms

This test covers various levels of proficiency, from beginner to advanced, tailored to match the curriculum and age group of the participants.

Key Components of the Abacus Summer Term Test

Understanding the structure of the test can significantly enhance preparation efforts. The abacus summer term test generally comprises several components:

1. Written Mental Arithmetic

- Timed calculations involving addition, subtraction, multiplication, and division
- Emphasis on speed and accuracy
- Problems vary in complexity based on the student's level

2. Abacus Manipulation

- Demonstration of abacus operation skills
- Mental visualization of abacus calculations
- Practical use of abacus beads to solve problems physically

3. Oral Calculation

- Verbal recitation of answers to arithmetic problems
- Assessment of mental calculation ability without visual aids

4. Theoretical Knowledge

- Basic questions about abacus principles
- Understanding of place value and number composition

Preparation Strategies for the Abacus Summer Term Test

Preparing effectively for the abacus summer term test involves a combination of practice, revision, and confidence-building. Here are some strategies to help students excel:

1. Consistent Practice

- Dedicate regular time to practicing abacus calculations
- Use practice worksheets, online tools, or abacus apps
- Focus on both speed and accuracy

2. Review Past Tests

- Analyze previous assessments to identify common question types
- Practice similar problems to build familiarity

3. Strengthen Mental Visualization

- Practice mental abacus exercises to enhance visualization skills

- Use mental imagery to perform calculations without physical beads

4. Improve Speed and Accuracy

- Time yourself during practice sessions
- Set incremental goals to improve calculation speed

5. Attend Regular Classes and Seek Feedback

- Engage actively in abacus classes
- Request feedback from instructors to correct mistakes and refine techniques

6. Develop Exam Day Strategies

- Properly manage time during the test
- Read questions carefully to avoid errors
- Stay calm and focused under exam conditions

Benefits of Taking the Abacus Summer Term Test

Participating in the summer term test offers numerous advantages for students:

- **Progress Tracking:** Provides a clear measure of skills acquired and areas needing improvement.
- **Motivation:** Encourages students to set goals and strive for excellence.
- **Confidence Building:** Success in the test boosts self-esteem and fosters a positive attitude towards mathematics.
- **Recognition and Certification:** Many organizations award certificates or medals, acknowledging achievement.
- **Preparation for Future Levels:** Ensures readiness for higher abacus levels or competitive exams.
- **Enhanced Cognitive Skills:** Improves concentration, memory, and problem-solving abilities.

How Schools and Parents Can Support Students

Supporting students through their abacus journey involves collaborative effort from teachers and parents:

For Teachers:

- Provide structured practice sessions aligned with the test syllabus
- Offer personalized feedback
- Organize mock tests to simulate exam conditions
- Encourage peer learning and group practice

For Parents:

- Create a conducive learning environment at home
- Monitor practice routines and progress
- Motivate and praise efforts, not just results
- Assist in reviewing concepts and solving problems together
- Ensure timely registration and awareness of test dates

Post-Test Activities and Next Steps

After the summer term test, it's important to analyze results and plan future learning:

- Review Mistakes: Understand errors to prevent repetition
- Set New Goals: Identify new targets based on performance
- Continue Practice: Maintain regular practice routines
- Advance to Higher Levels: Enroll in next levels or specialized courses
- Participate in Competitions: Consider entering for national or international abacus contests

Conclusion: Embracing the Abacus Summer Term Test

The **abacus summer term test** is more than just an examination; it is a milestone that reflects a student's dedication to mastering mental arithmetic. Proper preparation, consistent practice, and a positive attitude can make the experience rewarding and inspiring. By understanding the test's structure and leveraging available resources and support systems, students can confidently approach the assessment and unlock their full mathematical potential. Remember, every test is an opportunity to learn, grow, and excel in the fascinating world of abacus and mental calculation.

Abacus Summer Term Test: An In-Depth Review and Expert Analysis

The Abacus Summer Term Test stands as a pivotal milestone for students engaged in abacus-based mental calculation programs. As a comprehensive assessment tool, it not only

evaluates students' mathematical proficiency but also serves as a motivational and diagnostic instrument for instructors and parents alike. In this article, we will explore the essence of the Abacus Summer Term Test, its structure, benefits, preparation strategies, and how it fits into the broader context of abacus education.

Understanding the Abacus Summer Term Test

The Abacus Summer Term Test is an annual or semester-based examination designed specifically for students enrolled in abacus learning programs. Its primary purpose is to gauge students' progress over the course of the summer term, identify areas of strength and weakness, and motivate students to achieve higher standards.

What is the Abacus Method?

Before delving into the test specifics, it is essential to understand the abacus method itself. Originating from ancient China, the abacus is a manual calculating tool that visually represents numbers through beads on rods. Modern abacus programs combine traditional techniques with mental calculation strategies, enabling students to develop:

- Rapid calculation skills
- Enhanced concentration
- Improved memory
- Stronger number sense

The abacus method emphasizes mental visualization, where students learn to imagine the abacus and manipulate beads mentally, leading to faster and more accurate calculations.

The Role of the Summer Term Test

The Summer Term Test serves multiple functions:

- **Assessment of Skills:** Measuring students' proficiency in basic and advanced calculation techniques.
- **Progress Tracking:** Comparing current performance with previous terms to assess improvement.
- **Motivation:** Providing goals for students to strive towards.
- **Feedback for Educators and Parents:** Offering insights into student development and areas needing reinforcement.

Structure and Content of the Abacus Summer Term Test

The test's structure is carefully designed to match the curriculum and skill levels of students, typically ranging from beginner to advanced levels.

- Test Levels and Segmentation

Most programs categorize students into levels based on age and skill:

- Beginner Level: Focuses on basic bead operations, number recognition, and simple calculations.
- Intermediate Level: Incorporates two-digit operations, mental calculation exercises, and speed drills.
- Advanced Level: Includes complex calculations involving multiple digits, fractions, and problem-solving tasks.

The Summer Term Test is often tailored to each level, ensuring assessments are appropriately challenging.

- Types of Questions

The test comprises various question types:

- Written Calculations: Students perform calculations using the abacus or mental visualization.
- Speed Drills: Timed exercises to evaluate calculation speed and accuracy.
- Problem-Solving Questions: Word problems requiring application of learned techniques.
- Mental Calculation Tasks: Pure mental exercises without physical abacus use to assess mental visualization skills.

- Assessment Criteria

Evaluation focuses on several key aspects:

- Accuracy: Correctness of answers.
- Speed: Time taken to complete calculations.
- Technique: Proper use of abacus operations and mental visualization.
- Efficiency: Ability to perform calculations with minimal steps and maximum confidence.

- Duration and Format

The test duration varies depending on the level but generally lasts between 30 to 60 minutes. It may be administered as:

- Written Paper: Paper-based questions with space for calculations.
- Oral Examination: Live testing of mental calculation skills.
- Computer-Based Test: Digital assessments for modern classrooms.

Benefits of the Abacus Summer Term Test

Participating in the Summer Term Test offers numerous advantages for students, educators, and parents.

- Motivation and Confidence Building

Achieving high scores or progressing to higher levels boosts students' confidence. The tangible recognition of their hard work encourages continued effort and perseverance.

- Identifying Learning Gaps

The test results help instructors pinpoint specific areas where students struggle, such as subtraction or multi-digit operations, enabling targeted intervention.

- Tracking Academic Progress

By comparing results across terms, parents and teachers can objectively measure developmental progress, adjusting teaching strategies accordingly.

- Setting Goals and Aspirations

The test provides clear benchmarks for students to aim for, fostering a goal-oriented mindset.

- Preparation for Future Competitions

Success in the Summer Term Test often serves as a springboard for participating in regional or national abacus competitions, further motivating students.

Preparing for the Abacus Summer Term Test

Preparation is crucial for maximizing performance. Here are comprehensive strategies for students, parents, and educators.

- Consistent Practice

Regular practice sessions reinforce skills. Focus on:

- Mastery of basic operations
- Speed drills
- Mental visualization exercises
- Problem-solving tasks

- Review of Previous Tests

Analyzing past assessments helps identify recurring errors and weak areas.

- Mock Tests and Simulations

Conducting practice tests under timed conditions familiarizes students with the exam environment, reducing anxiety.

- Teacher Guidance

Instructors can provide personalized feedback, tips, and additional exercises tailored to student needs.

- Healthy Routine and Rest

Ensuring adequate sleep, nutrition, and mental relaxation keeps students alert and focused during preparation and the actual test.

Post-Test Evaluation and Next Steps

After the assessment, a structured review process maximizes the benefits of the test.

- Feedback and Analysis
 - Teachers should provide detailed feedback highlighting strengths and areas for improvement.
 - Students should reflect on their performance to understand mistakes and develop strategies.
- Celebrating Achievements

Recognizing accomplishments encourages continued interest and effort.

- Setting New Goals

Based on test results, students can set targeted goals for the next term, such as mastering a new operation or increasing calculation speed.

- Adjusting Learning Plans

Parents and teachers can modify lesson plans or practice routines to address identified gaps.

The Broader Impact of the Abacus Summer Term Test

Beyond immediate assessment, the Summer Term Test influences the overall educational trajectory of students.

- Fostering Lifelong Skills

Proficiency with abacus calculations translates into better cognitive skills, including memory, concentration, and problem-solving?traits valuable across academic disciplines and real-life situations.

- Encouraging Healthy Competition

Participation in tests fosters a healthy competitive spirit, motivating students to excel and learn from peers.

- Building Discipline and Patience

Preparing for and performing well in the test cultivates discipline, patience, and perseverance.

- Creating a Learning Community

Shared experiences around the test create bonds among students, teachers, and parents, fostering a supportive learning environment.

Conclusion

The Abacus Summer Term Test is more than just an evaluation; it is a comprehensive developmental tool that plays a vital role in nurturing mathematical skills, confidence, and a love for learning. Its structured format, targeted assessment criteria, and motivational benefits make it an essential component of abacus education programs. Proper preparation, coupled with supportive feedback, ensures that students not only perform well but also internalize valuable cognitive skills that benefit them throughout their academic and personal lives.

As abacus education continues to evolve with technological advancements and pedagogical innovations, the Summer Term Test remains a steadfast benchmark guiding students toward mastery, inspiring lifelong learning, and unlocking the full potential of young minds.

Question What is the purpose of the Abacus Summer Term Test? The Abacus Summer Term Test assesses students' progress and understanding of abacus and mental arithmetic skills learned during the summer term. How can students prepare effectively for the Abacus Summer Term Test? Students can prepare by reviewing class materials, practicing daily on abacus exercises, and completing mock tests to build confidence and improve their speed. Are there specific topics covered in the Abacus Summer Term Test? Yes, the test typically covers addition, subtraction, multiplication, division, and mental calculation techniques taught during the summer term. When is the Abacus Summer Term Test usually scheduled? The test is usually conducted at the end of the summer term, with exact dates varying depending on the school or learning center. What is the format of the Abacus Summer Term Test? The test generally includes written questions on abacus calculations, mental math exercises, and sometimes practical abacus demonstrations. How can parents support their children in preparing for the Abacus Summer Term Test? Parents can support by encouraging regular practice, providing additional resources, and motivating children to review key concepts learned during the term. What results or outcomes can students expect after

completing the Abacus Summer Term Test? Students receive scores or feedback that highlight their strengths and areas for improvement, helping to guide their future learning in mental arithmetic.

Related keywords: abacus practice, summer term exam, math test, abacus skills, mental calculation, math practice, exam preparation, abacus competition, summer learning, arithmetic skills

Free Abacus Lesson Plan

Free abacus lesson plan ? a comprehensive resource designed to help educators, parents, and students embark on a rewarding journey into the world of mental math and number sense development. Abacus teaching not only enhances arithmetic skills but also fosters concentration, memory, and problem-solving abilities. This article provides an in-depth, SEO-friendly guide to creating and utilizing effective free abacus lesson plans that can be adapted for various age groups and learning environments.

Understanding the Importance of an Abacus Lesson Plan

An abacus lesson plan serves as a structured roadmap that outlines teaching objectives, activities, and assessment methods. It ensures that lessons are coherent, progressive, and aligned with educational standards. For educators, a well-crafted plan maximizes teaching efficiency and student engagement, while for parents, it offers a clear framework to support home learning.

Key Components of a Free Abacus Lesson Plan

Creating a comprehensive lesson plan involves several crucial elements. Below are the fundamental components to include:

1. Learning Objectives

Define what students should achieve by the end of the lesson. Objectives should be specific, measurable, and attainable. Examples include:

- Understand the basic structure and components of an abacus.
- Learn to perform simple addition and subtraction using the abacus.
- Develop mental calculation skills through abacus visualization.

2. Materials Needed

List all necessary tools and resources, such as:

- Physical abacuses (standard or bead-type)
- Printable abacus diagrams or charts
- Workbooks or practice sheets
- Digital tools or apps (optional)

3. Lesson Duration and Structure

Break down the lesson into segments to maintain student focus:

- Introduction (10 minutes)
- Demonstration and explanation (15 minutes)
- Guided practice (20 minutes)
- Independent practice or activities (15 minutes)
- Review and assessment (10 minutes)

4. Teaching Methods and Activities

Incorporate diverse teaching strategies to cater to different learning styles:

- Visual demonstrations using physical abacuses
- Interactive activities and games
- Group work and peer learning
- Use of digital apps for virtual practice

5. Assessment and Feedback

Evaluate student progress through:

- Observations during activities
- Quizzes or short tests
- Student self-assessment
- Feedback sessions to address challenges

Sample Free Abacus Lesson Plan for Beginners

To illustrate how to implement the above components, here's a sample lesson plan aimed at beginners aged 6-10:

Lesson Title: Introduction to Abacus and Basic Addition

Objectives:

- Identify parts of the abacus
- Perform simple addition (e.g., $3 + 2$)

Materials:

- Standard abacuses for each student
- Printable abacus diagrams
- Practice sheets with addition problems

Lesson Duration: 60 minutes

Lesson Breakdown:

- **Introduction (10 mins):** Discuss what an abacus is, its history, and its uses. Show a physical abacus and explain its parts.
- **Demonstration (15 mins):** Show students how to set numbers on the abacus and perform addition. Use visual aids and step-by-step instructions.
- **Guided Practice (20 mins):** Assist students in practicing simple addition problems, encouraging them to manipulate the beads and confirm their answers.
- **Independent Practice (10 mins):** Provide practice sheets for students to solve basic addition problems on their own or with peers.
- **Review and Feedback (5 mins):** Recap key points, answer questions, and give feedback on student performance.

Tips for Effective Abacus Lesson Planning

Creating engaging and effective lesson plans requires careful consideration. Here are some valuable tips:

Start with the Basics

Introduce the abacus components and basic concepts before moving to complex operations. This builds a strong foundation.

Use Visual Aids and Real Objects

Physical abacuses and diagrams help students grasp abstract concepts more concretely.

Incorporate Fun Activities

Gamify lessons with challenges, competitions, or abacus-based puzzles to boost motivation.

Differentiate Instruction

Adapt activities based on student skill levels. Offer additional support for beginners and advanced problems for quicker learners.

Integrate Technology

Use abacus apps and online tutorials to diversify learning and accommodate remote education.

Resources for Free Abacus Lesson Plans

Many online platforms and educational organizations offer free resources to supplement your lesson planning:

- [Abacus Education Resources](#)
- [Kids Academy Free Abacus Activities](#)
- [Education.com Abacus Lesson Plans](#)
- Printable PDFs and worksheets available on various educational blogs and websites

Benefits of Using a Free Abacus Lesson Plan

Implementing a well-structured, free lesson plan offers numerous advantages:

- Enhances number sense and mental calculation skills
- Fosters concentration and patience
- Encourages active participation and hands-on learning
- Provides a scalable framework suitable for different ages and skill levels
- Cost-effective, making quality education accessible

Conclusion

A free abacus lesson plan is an invaluable tool for educators and parents aiming to teach mathematics in a fun, engaging, and effective manner. By carefully designing lessons that incorporate clear objectives, diverse activities, and assessments, learners can develop strong foundational skills that serve them well in academics and everyday life. Leveraging available resources and adapting the plan to meet individual needs ensures that every student can benefit from the timeless educational power of the abacus. Start planning today and watch your students thrive in their mathematical journey!

Free Abacus Lesson Plan: A Comprehensive Guide to Teaching Mental Math with the Abacus

Introducing young learners to the world of numbers can be both exciting and challenging. One of the most effective tools to develop strong mental calculation skills is the free abacus lesson plan—a structured, accessible way to teach children how to use the abacus as a foundation for mental math. Whether you're a parent, teacher, or homeschooling educator, a well-designed lesson plan can make the learning process engaging, systematic, and rewarding.

In this guide, we will explore how to craft and implement a free abacus lesson plan that fosters confidence, enhances mathematical understanding, and promotes critical thinking. From understanding the basics to advanced techniques, this comprehensive resource aims to provide all the information you need to deliver effective lessons without any cost.

Why Use an Abacus in Teaching Math?

Before diving into the lesson plan details, it's important to understand the significance of using an abacus in math education:

- Builds a strong number sense: Manipulating beads helps children visualize numbers and understand their relationships.
- Enhances mental calculation: Regular practice with the abacus develops the ability to perform calculations mentally.
- Improves concentration and patience: Abacus work requires focus, fostering better attention spans.
- Encourages tactile learning: The physical act of moving beads supports kinesthetic learners.
- Cost-effective and accessible: Free lesson plans make this resource available for everyone.

Developing a Free Abacus Lesson Plan: Key Components

Creating an effective lesson plan involves understanding the essential elements that ensure

comprehensive learning. Here are the core components to include:

- Objectives: Clear goals for what students should achieve by the end of the lesson.
- Materials Needed: Listing necessary tools, primarily the abacus, and optional supplementary items.
- Lesson Structure: Step-by-step activities, including introduction, practice, and assessment.
- Differentiation Strategies: Adapting lessons for various learning paces and styles.
- Assessment Methods: Ways to evaluate understanding and progress.

Step-by-Step Guide to Creating Your Free Abacus Lesson Plan

- Define Your Learning Objectives

Begin by setting specific, measurable goals. For example:

- Students will learn how to use the abacus to perform addition and subtraction.
- Students will understand the place value system through abacus manipulation.
- Students will develop mental calculation skills by visualizing the abacus.

Clear objectives help focus your teaching and give students a sense of purpose.

- Gather Materials and Resources

Primary Material:

- An abacus suitable for beginners (e.g., a 10-rod or 13-rod bead abacus)
- Worksheets for practice (optional)
- Visual aids, such as charts explaining bead values
- A timer or stopwatch (for timed drills)
- Digital resources or videos (if available)

Optional:

- Color-coded beads to distinguish place values
- Flashcards for quick recall exercises

- Small prizes or stickers for motivation

- Structure Your Lesson

A typical lesson can be divided into the following sections:

a. Introduction (10-15 minutes)

- Welcome students and introduce the concept of the abacus.
- Explain the history and relevance of the abacus in modern math.
- Demonstrate the abacus, highlighting the beads and their values.
- Engage students with a simple question, such as "Have you ever used an abacus before?"

b. Demonstration and Guided Practice (20-30 minutes)

- Show how to represent numbers on the abacus.
- Teach basic movements: counting beads, representing single digits, and understanding place value.
- Walkthrough simple addition and subtraction using the abacus.
- Encourage students to mimic the movements alongside you.

c. Independent Practice (20-30 minutes)

- Provide students with practice problems.
- Allow them to manipulate their own abacus to solve problems.
- Circulate and offer guidance, correcting techniques as needed.
- Use timed exercises to build speed and confidence.

d. Mental Math Integration (15-20 minutes)

- Teach students to visualize the abacus in their mind.
- Practice mental calculations with guided exercises.
- Use flashcards or quick quizzes to reinforce mental visualization.

e. Review and Recap (10 minutes)

- Summarize key points learned during the session.
- Address questions and clarify doubts.
- Assign simple homework or practice tasks for reinforcement.

f. Assessment and Feedback (Ongoing)

- Use quick quizzes or observation to evaluate understanding.
- Provide positive feedback and encouragement.

Sample Weekly Breakdown for a Free Abacus Lesson Plan

Week 1: Introduction to the Abacus and Basic Counting

- Understanding the parts of the abacus
- Counting from 1 to 10 using beads
- Recognizing bead values

Week 2: Place Values and Number Representation

- Understanding units, tens, hundreds
- Representing multi-digit numbers
- Practice exercises

Week 3: Basic Addition

- Adding single-digit numbers
- Using the abacus to perform simple sums
- Transitioning to mental visualization

Week 4: Basic Subtraction

- Subtracting small numbers
- Using the abacus for subtraction
- Mental subtraction exercises

Week 5: Combining Addition and Subtraction

- Solving slightly complex problems
- Developing speed and accuracy

Week 6: Mental Math and Speed Drills

- Visualizing the abacus in your mind
- Timed calculations
- Real-world problem solving

Tips for Effective Teaching with a Free Abacus Lesson Plan

- Start slow: Ensure students grasp basic concepts before moving on.
- Use visual aids: Charts, diagrams, and color-coding enhance understanding.
- Encourage repeated practice: Mastery comes with consistent practice.
- Make it fun: Incorporate games, competitions, and rewards.
- Differentiate instruction: Adapt your pace based on students' progress.
- Integrate technology: Use online videos or apps for additional practice.
- Record progress: Keep track of individual achievements to tailor future lessons.

Additional Resources for Free Abacus Lesson Plans

- Printable worksheets: Many educational websites offer free printable practice sheets.
- Video tutorials: YouTube channels dedicated to abacus training.
- Online abacus simulators: Virtual tools that mimic physical abacus work.
- Community groups: Join online forums or local groups for shared ideas and support.

Conclusion

Creating a free abacus lesson plan is an excellent way to democratize access to foundational math skills. By structuring your lessons around clear objectives, engaging activities, and consistent practice, you can help students develop confidence in their mental math abilities. The abacus is more than just a counting tool; it's a gateway to better problem-solving skills, improved concentration, and a lifelong love for mathematics.

Remember, the key to success lies in patience, creativity, and persistence. With these principles in mind, your free abacus lesson plan can transform the way learners perceive and approach math, making learning both enjoyable and effective.

Question What are the key components of a free abacus lesson plan for beginners? A comprehensive free abacus lesson plan for beginners should include an introduction to the abacus, basic bead counting, simple addition and subtraction exercises, visual aids, practice activities, and assessment tips to gauge understanding. **Answer** How can I access free abacus lesson plans online? You can find free abacus lesson plans on educational websites, YouTube channels dedicated to mental math, teaching blogs, and platforms like Teachers Pay Teachers offering free downloadable resources. What age group is suitable for a free abacus lesson plan? Free abacus lesson plans are typically suitable for children aged 4 to 12 years old, with activities tailored to different developmental stages to enhance their mental math skills. How do I modify a free abacus lesson plan for online teaching? To adapt a free abacus lesson plan for online teaching, incorporate digital tools like virtual abacus simulators, interactive videos, live demonstrations, and online practice exercises to engage students remotely. Are there any free abacus lesson plans specifically designed for special education students? Yes, some free abacus lesson plans are tailored for special education, emphasizing multisensory learning, simplified instructions, and additional visual supports to cater to diverse learning needs. What are the benefits of using a free abacus lesson plan in early childhood education? Using a free abacus lesson plan helps improve children's concentration, enhances their understanding of basic arithmetic, develops fine motor skills, and fosters confidence in math learning. Can I find free abacus lesson plans that include assessment tools? Yes, many free abacus lesson plans come with built-in assessment tools like quizzes, practice sheets, and tracking charts to monitor student progress and understanding. How do I ensure the effectiveness of a free abacus lesson plan? To ensure effectiveness, customize the lesson plan to suit your students' learning levels, incorporate hands-on activities, provide regular practice, and gather feedback to adjust teaching strategies accordingly.

Related keywords: free abacus lesson plan, abacus teaching resources, abacus lesson ideas, elementary abacus activities, math lesson plans, abacus classroom activities, beginner abacus lessons, abacus curriculum, mental math strategies, hands-on math activities

Read the full article online: [FREE ABACUS LESSON PLAN](#)