

**TITLE**

# ARITHMETIC WITH THE ABACUS

GRADE LEVEL: K-2

**DISCIPLINE:** Mathematics

**TOPIC:** Chinese and Japanese Abacus and Arithmetic

**STANDARDS:** CCSS.MATH.CONTENT.K.CC.A.1 | CCSS.MATH.CONTENT.K.CC.A.3 | CCSS.MATH.CONTENT.2.OA.A.1 | CCSS.MATH.CONTENT.2.NBT.B.5 | CCSS.MATH.CONTENT.2.NBT.B.7 | CCSS.MATH.CONTENT.2.OA.A.1

**OBJECTIVES:**

- Learn the history and use of the Chinese and Japanese abacus.
- Learn how to operate the abacus, including how to count, add, subtract, and use the baseten system.
- Build operational and algebraic skills while practicing arithmetic with the abacus.

**ESSENTIAL QUESTIONS:**

- How is the abacus connected to Chinese and Japanese culture and history?
- Why is it important to learn about the abacus?
- How is the abacus related to modern day arithmetic and calculator use?

**KIT INCLUDES:**

[Introduction to Chinese Abacus Slides](#) | [Subtraction Practice Problems Worksheet](#)  
[Demo Slides: How to Use Chinese Abacus](#) | [Counting Practice Worksheet](#)  
[Japanese Abacus Demo](#) | [Online Suanpan Simulator](#)  
[Addition Practice Problems Worksheet](#)

**CLASSROOM HOURS NEEDED:**

70-140 min

**FINAL ASSESSMENT TYPE:**

Worksheet

**MATERIALS NEEDED:**

Popsicle sticks, wooden dowels, pony beads

**CREDIT AUTHOR AND CONTACT:** Valentina Moreno & Morgan Yen  
 vmoreno@diversifyournarrative.com  
 myen@diversifyournarrative.com

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**INTRODUCTION: (10-15 MIN)**

Start by showing students the [Introduction to Chinese Abacus](#) slideshow to familiarize them with the history and origins of the tool, as well as what it looks like.

**ACTIVITY (OPTIONAL):  
DIY ABACUS  
(45 MIN)**

- Have students follow along on this [DIY Abacus Project](#) using popsicle sticks and beads.
- They can use this DIY Abacus to follow along on the Demo Slides and on the practice problems worksheet!

**ACTIVITY #1:  
DEMO  
SLIDES  
(30-40 MIN)**

- Show students the [Chinese Abacus Demo slideshow](#). Students will learn how to figure out place value, how to count, add and subtract on the Chinese Abacus.
- Students can follow along on the [online abacus simulator](#), or a paper printout of an abacus, drawing and erasing as they follow the practice problems.
- Optional: If there is time, teacher can also show students [How to Use a Japanese Abacus](#) Slideshow. The Japanese abacus is very similar to the Chinese abacus but has a slightly different structure.

**ACTIVITY #2:  
PRACTICE  
ARITHMETIC  
(30-40 MIN)**

- Use the provided [counting](#), [addition](#) and [subtraction](#) practice problem worksheets to build proficiency with the abacus while practicing arithmetic.
- Students can use the online simulator or their DIY abacus.
- Students should explain their process of arriving at the answer under the "formula" section using the vocab terms from the Demo Slides.
- Once they find the answer to the problem, they can draw what their abacus looks like on the image of the abacus on the worksheet.



**CREDIT AUTHOR  
AND CONTACT:**

Valentina Moreno & Morgan Yen  
[vmoreno@diversifyournarrative.com](mailto:vmoreno@diversifyournarrative.com)  
[myen@diversifyournarrative.com](mailto:myen@diversifyournarrative.com)

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