Enhancing Multiplication Mastery in Third Grade Through Technology-Integrated Coding Instruction

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Author's Note:

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Topic and Context

Third-grade students can learn multiplication in an interesting, enjoyable, and customized way when using online resources and technology. At this point, students use digital tools and technology to bridge their understanding through interaction, visualization, gamification, and real-time feedback as they move from practical math to more abstract concepts.

At Rice Elementary School in San Carlos Unified School District in Arizona, 99% of our third-grade students come from the Apache tribe of San Carlos. A community with a rich cultural heritage, a resilient spirit, and a tribe who are extending extra efforts to strengthen and promote the language among younger generations, as language ties closely to cultural identity and traditional practices. Apart from this, the school advocates for student activities that enhance learning by organizing clubs like the Student Council, Girls Who Game-Minecraft Education, Robotics Club, Writing Club, Sports Club, and STEM-related activities. These activities aim to strengthen the skills and knowledge of Apache students, helping them become future-ready community members.

Aside from the activities the school is implementing, creating curriculum units that teach multiplication using online tools and technology benefits both teachers and students by streamlining instruction, increasing engagement, and supporting differentiated learning.

This curriculum unit is particularly well-suited to the time of year when third-grade students normally start their multiplication unit—typically in early fall or early winter, after foundational units on addition and subtraction—and would fit in perfectly with the regular teaching schedule. Students are now prepared to investigate more complex operations since they have a better understanding of numbers. Teachers can introduce multiplication in an engaging, scaffolded way that builds on prior knowledge with the aid of online resources and technology. These digital resources are a useful and efficient addition to the curriculum during this crucial learning phase because they are simple to incorporate into daily math blocks, math centers, or homework assignments, allowing for flexible pacing and differentiation. As the school year goes on, these tools also support continuous fluency practice and reinforcement.

One of the most powerful benefits of technology in teaching multiplication is interactivity. Online platforms like IXL, Prodigy Math Game, and Multiplication.com provide interactive lessons that present multiplication as both repeated addition and grouping, helping students internalize foundational concepts. These tools often incorporate visuals such as arrays, number lines, and virtual manipulatives, which are critical for young learners who benefit from seeing math in action. Interactive activities encourage exploration and offer instant correction, allowing students to learn from mistakes and gain confidence without fear of judgment.

On the other hand, using basic coding materials and the 3Doodler enhances teaching multiplication by providing students with hands-on, interactive experiences that promote both computational thinking and creativity. Through coding activities, students can program simple algorithms to solve multiplication problems, helping them understand patterns, sequences, and logic. When paired with the 3Doodler, learners can visually and physically construct multiplication models—such as arrays, groups, or area representations—making abstract concepts tangible. This STEAM-based

approach not only deepens comprehension but also engages different learning styles, encouraging problem-solving and critical thinking in a fun, innovative way.

Gamification, or the application of game-design elements, also plays a crucial role in capturing students' attention and making learning multiplication enjoyable. Programs like Reflex Math, Times Tables Rock Stars, Kahoot, Wayground and Blooket, turn practice into a game, rewarding students with points, levels, or avatars as they master multiplication facts. This motivation can significantly increase time-on-task and promote automaticity, which is essential for higher-level math skills. Students often perceive these games as play rather than work, which helps reduce math anxiety and fosters a positive attitude toward the subject.

Online tools and technology support differentiated instruction, which is vital in a third-grade classroom where students may have varying levels of prior math knowledge. Many platforms offer adaptive learning paths that adjust the difficulty based on the student's performance. Teachers can assign specific skills, monitor progress, and identify areas where students need extra support. This data-driven approach ensures that instruction is targeted and effective, allowing struggling students to catch up and challenge advanced learners in a manner that is appropriate for them.

Collaborative technology tools like Google Classroom enable teachers to create and share customized multiplication activities, quizzes, and interactive lessons. These platforms support blended learning, where students can engage with content both in class and at home. Teachers can incorporate videos, polls, drawings, and short assessments to reinforce multiplication concepts. The ability to share student work and feedback digitally also increases communication and engagement among students, teachers, and parents.

Virtual manipulatives—such as digital counters, base-ten blocks, and multiplication charts—available through platforms like Math Learning Center—offer students hands-on experience without the need for physical materials. These tools help reinforce the conceptual understanding of multiplication strategies, like arrays and equal groups.

To sum it up, teaching multiplication to third-grade students with online tools, coding and technology enhances traditional instruction through interactivity, personalization, gamification, and accessibility. It enables teachers to reach diverse learners and create a fun, supportive environment for mastering foundational math skills. As technology continues to evolve, these tools will play an increasingly important role in building mathematical fluency and confidence in young learners.

Rationale

The goal of this curriculum unit is to teach multiplication using online resources, online applications, coding and technology specifically using basic coding materials and 3Doodler while incorporating the Apache language into number and object counting.

As an educator committed to equitable and engaging learning experiences, I believe that integrating online tools, coding and technology into third-grade mathematics instruction is essential for meeting the diverse needs of today's learners. My positionally is grounded in the understanding that students come from varied cultural, linguistic, and academic backgrounds, and that coding and technology can serve as a powerful equalizer in the classroom. By incorporating

interactive platforms, digital manipulatives, coding and virtual games. I aim to foster curiosity, provide immediate feedback, and differentiate instruction to support all learners—especially those who may struggle with traditional methods. I view coding and technology not as a replacement for strong pedagogy, but as an enhancement that promotes student agency, builds confidence in problem-solving, and prepares students for a digital future. My goal is to create a math learning environment that is inclusive, relevant, and aligned with 21st-century skills.

The decision to create a curriculum unit about teaching multiplication using online tools and applications, coding and technology for third-grade students stems from a desire to make math instruction more engaging, effective, and aligned with the digital literacy needs of today's learners. Multiplication is a critical foundation in elementary math, yet many students struggle to grasp its concepts through traditional methods alone. By incorporating interactive online platforms, virtual manipulatives, coding and gamified learning tools, I aimed to create a more dynamic and student-centered experience that builds conceptual understanding while keeping students motivated.

Traditional methods often rely heavily on memorization, which can disengage students and limit deeper learning. By integrating technology and coding, this unit aims to transform how multiplication is taught and learned. When students use technology, they can learn at their own pace and feel more confident.

I also chose this topic because it helps students build skills for the future. Technology and coding are important in many jobs today. If students learn these skills early, they will be better prepared later in life.

Another reason is that this method can help all kinds of learners. Some students learn best by seeing, others by doing, and some by playing. Technology and coding can support all these styles. It also helps teachers make lessons more fun and creative.

Third graders are at a developmental stage where visual learning, immediate feedback, and hands-on experiences significantly boost comprehension. Online tools, coding and manipulatives offer these benefits while allowing for differentiated instruction—meeting each student at their level and providing enrichment or support as needed. This unit not only addresses core math standards but also integrates 21st-century skills, encouraging problem-solving, critical thinking, and responsible technology use. Ultimately, the goal was to design a curriculum unit that empowers students to succeed in math while embracing the tools that will shape their futures and embracing the use of Apache language especially in counting numbers and naming objects.

In short, I chose this topic because I want to improve how multiplication is taught. I want students to enjoy learning math, feel proud of their work, and be ready for a world that uses technology every day.

Instructional Guide

The purpose of this unit is to help third-grade students understand and enjoy learning multiplication by using technology, educational applications, basic coding, and fun games. Multiplication is an important math skill that students will use in many parts of their lives, both in and out of school. However, many students struggle with seeing multiplication as repeated addition or applying it in real-life problems (Rejekiet et al., 2024). This unit is designed to make learning multiplication more exciting and meaningful by using tools that students already enjoy, like computers, tablets, and interactive games. The integration of games into teaching practices not only simplifies educators' tasks but also enhances the overall educational experience (Picha, 2018).

To support deeper understanding, this unit uses interactive technology tools and hands-on activities. Students will use digital platforms and visual coding toy and programs like Cubetto coding toy to explore multiplication concepts. Coding helps students think step-by-step and solve problems logically, which strengthens their math skills (Caroline, 2023). Also, by using coding, students will learn how to give instructions to a computer or coding toy to solve multiplication problems or create simple math games. By creating simple games or animations that use multiplication, students connect math to creativity and real-world applications.

Also, the use of educational apps offers a dynamic and engaging way for students to master multiplication. Unlike traditional methods, apps provide interactive experiences that cater to different learning styles. Visual learners benefit from colorful animations and diagrams, while kinesthetic learners engage through touch-based activities and games. These features make multiplication more accessible and enjoyable, especially for third-grade students who are still developing foundational math skills.

Apps also support personalized learning. Students can progress at their own pace, receive instant feedback, and revisit challenging concepts as needed. Many apps use gamification—such as points, levels, and rewards—to motivate learners and build confidence. This encourages consistent practice, which is essential for developing fluency in multiplication.

Incorporating apps into multiplication instruction bridges the gap between technology and curriculum. It fosters engagement, builds essential math skills, and prepares students for future digital learning environments. Educational apps are designed to optimize educational outcomes (Outhwaite et al., 2023). When used thoughtfully, apps can transform multiplication from a rote task into an exciting and meaningful learning experience.

Gamification will be used to make learning feel like play. Students will earn points, badges, or rewards as they complete challenges and improve their skills. This approach increases motivation, encourages teamwork, and helps students stay focused and engaged. Research shows that gamification boosts student participation and makes math lessons more enjoyable and effective (Appiah, 2015). Coding also helps keep them motivated and encourages them to try their best. Working in teams or pairs will also help students learn from each other and build communication skills.

By the end of the unit, students will be more confident in using multiplication, understand how it connects to technology and coding, and feel proud of what they've created. This unit supports different learning styles and helps all students succeed in a fun and engaging way through a mix of technology, coding, and game-based learning.

Teaching Strategies

This unit uses a blended approach that integrates:

- **Technology**: Students use digital tools like tablets, interactive whiteboards, and platforms such as Scratch or Tynker to visualize and practice multiplication.
- **Coding**: Basic block-based coding helps students understand multiplication as repeated actions. For example, loops in code can represent repeated addition or array creation.
- **Gamification**: Game elements such as points, levels, badges, and challenges are embedded into lessons to boost engagement and motivation. Students work in teams, earn rewards, and track progress through digital dashboards.

These strategies promote active learning, collaboration, and differentiated instruction, making math more accessible and enjoyable.

Sequence of Lesson Plans

1. **Introduction to Multiplication Concepts**
    - Use visual models (arrays, equal groups).
    - Introduce multiplication vocabulary.
2. **Technology Integration**
    - Use apps and games to reinforce concepts.
    - Practice multiplication facts through interactive platforms.
3. **Coding for Multiplication**
    - Introduce block coding (e.g., Scratch).
    - Create simple programs that model multiplication (e.g., drawing arrays)
4. **Gamified Practice**
    - Implement classroom games like "Castle Attack" or scavenger hunts.
    - Use digital badges and leaderboards.

Assessment Plan

CRAIS tool should be considered during the following parts of the lesson:

- **Formative Assessments**: Daily check-ins using digital quizzes (e.g., Kahoot, Quizizz), coding challenges, and peer feedback.

- **Performance Tasks**: Students complete a final project (e.g., a coded game or animation) demonstrating their understanding of multiplication.
- **Self and Peer Assessment**: Students reflect on their learning and evaluate each other's projects.
- **Summative Assessment**: A gamified test combining multiple-choice, coding tasks, and problem-solving scenarios.

Overview of CRAIS Tool in Math Instruction

The CRAIS tool is designed to help educators assess and strengthen culturally responsive practices, especially in schools serving Indigenous students. It focuses on five key areas: relationships and community, sociopolitical context, representation, diversity, and instructional relevance. When applied to a third-grade multiplication unit, CRAIS helps ensure that teaching is inclusive, respectful, and empowering.

Culturally Responsive Assessment of Indigenous Schooling (CRAIS) Tool

Use this form to analyze and document evidence of culturally responsive principles in a particular unit of analysis. Be sure to note the date, who is completing the form, and the type of data being assessed. For statistical consistency, use whole numbers (i.e., avoid 1.5 or 2 ½). Provide qualitative descriptions to substantiate your numeric assessment when possible.

Date: _____ Location: _____ Observer's Name: _____

Note what is being observed and/or analyzed (i.e., teaching, a particular text, a specific curriculum unit, etc.):

_____

_____

	-3 High degree of opposite	-2 Medium degree of opposite	-1 Low degree of opposite	0 Zero	1 Low	2 Medium	3 High	N/A	Notes
1. *Stereotypes of Indigenous people and or/communities are addressed*									
2. *Indigenous people are represented as contemporary (not only historical)*									

Implementation Strategies

1. **Community and Relationality**
    - Lessons begin with students sharing how multiplication appears in their daily lives (e.g., cooking, farming, crafting).
    - Teachers build trust by incorporating students' family and community knowledge into examples and problems.

2. **Cultural Representation**
    - Word problems and coding projects include culturally relevant contexts, such as trading, weaving patterns, or traditional games.
    - Visuals and stories reflect Indigenous cultures and avoid stereotypes.
    - Apache language usage (e.g., counting numbers, naming objects)
3. **Sociopolitical Awareness**
    - Students explore how math supports community needs (e.g., resource planning, environmental stewardship).
    - Teachers discuss how Indigenous knowledge systems use mathematical thinking.
4. **Technology and Coding Integration**
    - Students use block coding to model multiplication in culturally meaningful ways (e.g., simulating planting rows of crops).
    - Digital tools are selected for accessibility and relevance to students' lived experiences.
5. **Gamification with Cultural Sensitivity**
    - Games are designed to reflect cooperative values and community-based success rather than competition.
    - Rewards and challenges are framed around collective achievement and storytelling.

"*Culturally*" *Sustaining Practices*

- Teachers regularly reflect using the CRAIS tool to evaluate lesson plans and student engagement by:
    - ❖ Supporting curriculum standards,
    - ❖ Making learning relevant and future-focused,
    - ❖ Promoting rigorous cognitive engagement,
    - ❖ Utilizing innovative instructional methods,
    - ❖ And boosting student motivation and involvement.
- Families and community members are invited to co-create learning experiences.
- Students are encouraged to see themselves as mathematicians and problem-solvers within their cultural context.

Teaching Plan

SHILGOZHOO LESSON DELIVERY TOOL/PLAN

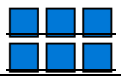
Teacher/s: M. Banabana **Class:** 3rd **Date(s):**

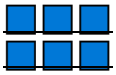
Essential Cluster Standard:

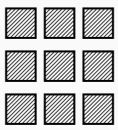
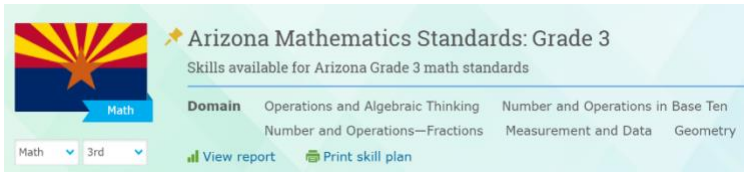
3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

LESSON COMPONENTS

Proficiency Scale	***Proficiency Scale:*** *4-Highly Proficient* *3-Proficient* *2-Partially Proficient* *1-Minimally Proficient*
Student Friendly Learning Objective **(Learning Goals)**	I can **interpret** whole number products with visual support
Activating Prior Knowledge *(Mastering Scientific Skills)* **10 Mins**	**Fluency** Encourage students to answer addition fluency in **Reflex** **10-min Drill/Bellwork** **Bell Work: Multiplication with Arrays** **Instructions:** Look at the array below and answer the questions. 

	 1. How many rows are there? 2. How many squares are in each row? 3. What multiplication equation matches this array? 4. What is the total number of squares? **Extension (Optional):** Draw your own array to show **5 × 2**. Write the multiplication sentence and explain what your array shows. Would you like this turned into a printable worksheet or a digital slide for classroom use?
Acquiring New Knowledge *(Teaching Happening)* **Core Lesson** **30 Mins**	**15-min I DO/*Modeling*:** **Materials Needed:** Whiteboard or chart paper Counters or cubes Printed array cards Student math journals or worksheets Exit ticket slips Show a visual array (e.g., 3 rows of 4 dots). Say: "This is 3 rows of 4. That means 3 groups of 4. We can write this as 3 × 4." Model counting the total: 4 + 4 + 4 = 12. **15-min We Do/Guided Practice:** **Activity 1:** Display a new array (e.g., 5 rows of 2). Ask: "How many rows? How many in each row?" Guide students to write the multiplication sentence: 5 × 2. Count together and confirm the product. Repeat with one more example, encouraging student input. **(Have students count in Apache language).**

	Activity 2: (Multiply Using Cubetto Toy) In four groups, give numbers to multiply to each group. Have the students solve it and locate the answer in the Cubetto map by coding. Remind students to practice cooperation when coding for the answer.
Applying the Verb *(Monitoring/Academic Feedback & Student(s) verb Engagement)* **25 Mins**	**25-min YOU DO/ Independent/Group Practice:** Hand out array cards or have students draw their own. Students write the multiplication sentence that matches each array. Challenge: Create your own array to show a multiplication fact of your choice. **(Have the students use the Apache language when identifying their numbers to multiply).**
Checking for Understanding *Identifying Student Success* *(Formatives)* **5 Mins**	**Directions:** Look at the array below:  How many rows? How many in each row? Write the multiplication sentence. What is the total?
AzSCI Practice **20 mins**	**IXL** Math Skill Plans 
Resources/Materials	Whiteboard or chart paper Counters or cubes Printed array cards Student math journals or worksheets Cubetto coding toy

	Coding map Number cards Exit ticket slips
AVID/RBIS (Research-Based Instructional Strategies)	**1)** Practice Teacher-Student Feedback Inquiry **2)** Coding activity **3)** Hands-on activity Student-student feedback Collaboration Non-linguistic representation **4)** Writing Teacher-Student Feedback

SHILG O ZHO O LESSO N DELIVERY TO O L/PLAN

Teacher/s : M. Banabana **Class:** __3rd_____ **Date(s):**

Essential Cluster Standard:

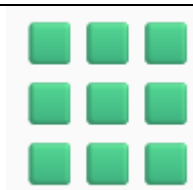
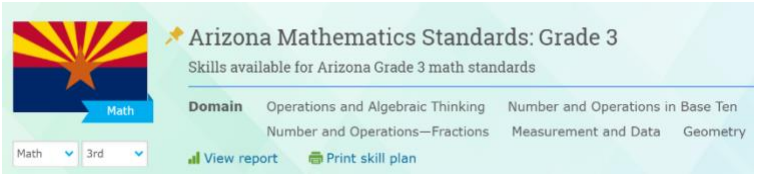
3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

LESSON COMPONENTS

Proficiency Scale	***Proficiency Scale:*** *4-Highly Proficient* *3-Proficient* *2-Partially Proficient* *1-Minimally Proficient*
Student Friendly Learning Objective **(Learning Goals)**	I can **interpret** whole number products with visual support (arrays and repeated addition).
Activating Prior Knowledge *(Mastering Scientific Skills)* **__10__ Mins**	**Fluency** Encourage students to answer addition fluency in **Reflex** **10-min Drill/Bellwork** **Bell Work: Multiply by 4** **Instructions:** Solve the problems below. Use skip counting, drawing, or repeated addition if it helps! **What is 4 × 2?** *Show your thinking using a picture or number sentence.* **Skip count by 4s to find the answer:** 4, 8, ___, ___, ___ What is 4 × 5? **Draw an array to show 4 × 3.** *Label the rows and columns.* **True or False:** 4 × 0 = 4 *Explain your answer.* **(Have students say the numbers in Apache language).**
Acquiring New Knowledge *(Teaching Happening)* **Core Lesson**	**15-min I DO/*Modeling*:** P- arrays and repeated addition **Chapter 6**

_30__Mins	Lesson 4 Multiply by 5, TE 313A State the Objective Developing Vocabulary (TE 313A) New Learning: Slide 9: Explore Slide 10-13 Model the Math (plastic money nickels to show skip counting by 5's) Slides 14-15 Extend . Math in My World Model Examples 1 and 2, pp. 313 and 314 **15-min We Do/Guided Practice:** Walk through the **Guided Practice** exercises together: **Student Book p. 314** **TE p. 314-314** **Slides 24-25** **Talk Math** Slide 26
Applying the Verb *(Monitoring/Academic Feedback & Student(s) verb Engagement)* **_25__Mins**	**25-min YOU DO/ Independent/Group Practice:** **Activity 1.** Assign **Independent Practice** Student Book p.315-316 **Activity 2.** Have students answer a Kahoot game on multiplying by 5. **Assign My Homework** pp. 317-318 **Problem of the Day** Slides 3-4
Checking for Understanding *Identifying Student Success* *(Formatives)*	**Directions:** Look at the array below:

_5__Mins	 1. How many rows? 2. How many in each row? 3. Write the multiplication sentence. 4. What is the total? **(Encourage students to count in the Apache Language)**
AzSCI Practice **20 mins**	**IXL** Math Skill Plans 
Resources/Materials	3rd Grade MyMath book IXL Kahoot Exit ticket slips
AVID/RBIS (Research-Based Instructional Strategies)	**1)** Practice Teacher-Student Feedback Inquiry **2)** Lecture Teacher-Student feedback Video Reading AVID marking the text **3)** Hands-on activity Student-student feedback Collaboration Non-linguistic representation **4)** Writing Teacher-Student Feedback

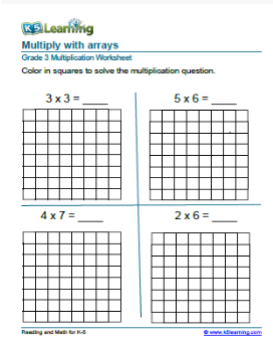
SHILGOZHOO LESSON DELIVERY TOOL/PLAN

Teacher/s : M. Banabana Class: __3rd_____ Date(s):

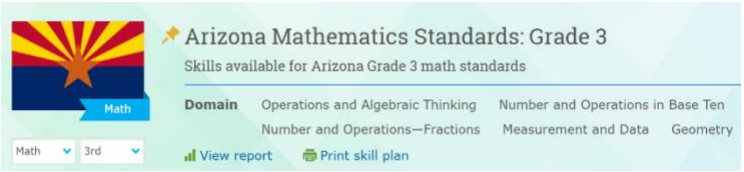
Essential Cluster Standard:

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

LESSON COMPONENTS

Proficiency Scale	***Proficiency Scale:*** *4-Highly Proficient* *3-Proficient* *2-Partially Proficient* *1-Minimally Proficient*
Student Friendly Learning Objective **(Learning Goals)**	I can **use** skip counting to model the Commutative Property of Multiplication.
Activating Prior Knowledge *(Mastering Scientific Skills)* __10__Mins	**Fluency** Encourage students to answer addition fluency in **Reflex** **10-min Drill/Bellwork** 
Acquiring New Knowledge	**15-min I DO/*Modeling*:**

(Teaching Happening) **Core Lesson** **30 Mins**	**Multiplication by Skip Counting** State the Objective Review: 1. Distribute the Blank Number line worksheet to the students and have them solve the following. 1. 2x3= 2. 3x3+ 3. 5x2= 4. 9x1= 5. 4x3= 2. Have the students skip count by 2's, 3's, 4's, 5's and 10's at least up to 50. 3. Show this video: **https://www.youtube.com/watch?v=eTtemQl8ARY** **15-min We Do/Guided Practice:** 1. Discuss how to answer **Multiplication through Skip Counting** based on the video. 2. Have them answer the following: **- 2x6=** **- 5x8=** **(Encourage students to count numbers in Apache language)**
Applying the Verb *(Monitoring/Academic Feedback & Student(s) verb Engagement)* **25 Mins**	**25-min YOU DO/ Independent/Group Practice:** **Activity 1.** Distribute **Multiplication by Skip Counting worksheet**. Guide the students on how to answer it. **Activity 2.** Using **3Doodlers**, have students illustrate multiplication by skip counting by creating their chosen design.

	(Have the students use the Apache language when identifying the numbers when skip counting and naming the object they created).
Checking for Understanding *Identifying Student Success* *(Formatives)* **_5__Mins**	**Instructions:** Use skip counting to solve each multiplication problem. Show your work by writing the numbers you count. 1. **What is 4 × 5?** *Skip count by 4s: 4, 8, 12, 16, 20* **Answer: _____** 2. **What is 6 × 3?** _Skip count by 6s: _____ **Answer: _____** 3. **What is 5 × 7?** _Skip count by 5s: _____ **Answer: _____** **Fill in the blanks:** Skip count by 3s to find 3 × 6: ___, ___, ___, ___, ___, ___ **Answer: _____**
AzSCI Practice **20 mins**	**IXL** Math Skill Plans 
Resources/Materials	Video: https://www.youtube.com/watch?v=eTtemQI8ARY Multiplication by Skip Counting worksheet 3Doodler

AVID/RBIS (Research-Based Instructional Strategies)	**1)** Practice Teacher-Student Feedback Inquiry **2)** Using video **3)** Hands-on activity Student-student feedback Collaboration Non-linguistic representation **4)** Writing Teacher-Student Feedback

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Outhwaite, L.A. and Van Herwegen, J. (2023), Educational apps and learning: Current evidence on design and evaluation. *Br J Educ Technol, 54*: 1268-1272. https://doi.org/10.1111/bjet.13360 https://bera-journals.onlinelibrary.wiley.com/doi/epdf/10.1111/bjet.13360

"Additional Resources"

https://www.ixl.com/math/skill-plans/arizona-mathematics-standards-grade-3

https://play.kahoot.it/v2/?hostId=df63d6dc-ffe2-4e30-a61a-15c49de9a734

https://connected.mcgraw-hill.com/c2j/dashboard.do;c2j=778A41DAC599700F931C47DE918327DE?bookId=249Z22755DG81TSQBRZPPDFROQ

https://www.youtube.com/watch?v=eTtemQl8ARY

https://in.nau.edu/wp-content/uploads/sites/101/2021/10/CRAIS-Tool-Oct-2021.pdf

https://apps.explorelearning.com/reporting/reflex/19604

https://dashboard.blooket.com/set/65be568ba841813a86599161

www.k5learning.com