

A photograph of a classroom. In the foreground, there are several rows of wooden desks and black chairs. At the front of the room, there is a green chalkboard. On the chalkboard, the name "Michael Spink" is written in white chalk. Above the chalkboard, there are several fluorescent light fixtures. To the left, there is a window with blinds. To the right, there is a door. The overall scene is a typical classroom setting.

# Student Response Systems

# Learning Outcomes

Following this experience, we will be able to ...

1. Integrate appropriate, relevant and meaningful (ARM) response systems; and
2. **Discriminate between SRS, select the most aligned with their instructional style.**



# Why Use Student Response Systems?

**Students** use to **Respond** anonymously to questions; tabulated and shared to:

- Maintain attention
- Promote engagement
- Discuss, collaborate
- Encourage participation
- Create a safe, accessible space
- Check for understanding



# Question Type is Critical



Each **Distractor** should provide clear action item for Instructor...

# Conceptual Prompts (Bloom)

**Knowledge** (facts): Who, What, Why, When, Where, How

**Comprehension** (translate, interpret): In your own words; What does this mean; Give an example; Classify, Infer

**Application**(new situations): Predict, Choose, Select, Explain, ID

**Analysis** (break down into parts): Distinguish, What assumptions; What conclusions, What ideas apply

**Synthesis** (combine elements into a pattern): Create, How would you test; Propose an alternative; Solve; Plan; Design

**Evaluation** (criteria): Appraise, Criticize, Defend, Compare

# Integrating Technology SRS

[Plickers](#), [Poll Everywhere](#), [Padlet](#), [Kahoot](#), [GoFormative](#),  
[Twitter](#), [Answer Garden](#), GSlides

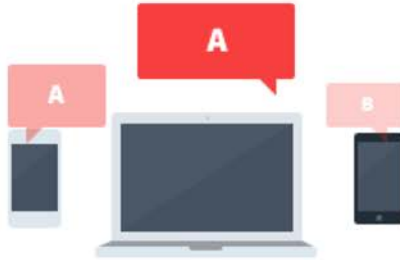


# [www.PollEverywhere.com](http://www.PollEverywhere.com)



1

Ask your audience a question with the Poll Everywhere app



2

Audience answers in real time using mobile phones, Twitter, or web browsers



3

See your response live on the web or in a PowerPoint presentation

**AnswerGarden**  
A minimal tool for  
maximum feedback



# Kahoot Gamification SRS

<https://getkahoot.com> & <https://kahoot.it>





# Google Slide SRS



## Audience Q&A

Let your audience submit questions, then present your favorites.

# Screencasting

- App – ShowMe, Explain Everything
- Browser - Jing, Google Screencastify
- MAC - Quicktime player
- PC – [Screencast-o-matic](#)



# <https://Padlet.com>

## Multiplication & Division Grade Level Trajectories

How does each grade level talk about or build upon multiplication and/or division

### 2nd Grade

**2.OA.3** The beginning of division in making equal pairs in determining odd and even numbers.

Students learn doubles and halves of numbers

learning to skip count and recognizing number patterns

Even numbers can be partitioned into two equal parts, but odd numbers can't

**2nd Grade:** Students can use number sentences to justify "evenness" of a number in two ways:

1. write the number as the sum of two identical values.
2. identify the number as a double of that identical value.

### 3rd Grade

**multiply and divide within 100** factors...something sounds like variables! (symbols to represent unknown number)

Students reason using arrays

### 3.0

Understanding the quotient is equally partitioning a certain number of objects into equal shares.

They used this box for multiplication using objects and groups and it was also used for "fair sharing". How are these used and how does it turn into a ratio box? it seemed very useful to understand/teach multiplication and division.

**4th grade: focuses on multi-digit factors**

### 4th Grade

Area models of multiplication

Being able to use multiplication and division to solve word problems.

### fair sharing

Multiplication patterns

It starts with word problems and then goes into fractions. It builds on multiplication and begins using division to transition into fractions

in 4th grade: they refer to multiplication about comparing and there is a lot of different models to solve a problem.

**Multiplying or dividing within word problems involving comparison and pictures** (4th grade)

### 4th grade

Students are thinking about multiplication in terms of the commutative property, multiplying larger numbers together, and multiplying fractions.



### comparing 4th grade

$35=7 \times 5$ . 35 is 5 times as many 7s and 7 times as many 5s.  
OR  
 $7 \times 5$  is the same as  $7 \times 5$

Factors and multiples

### 4th grade: Equipartitioning

### 4th Grade

4.OA.1 explanation (wording) is slightly confusing..

# Padlet Free Alternatives



Lino

Dotstorming

Wakelet

Scrumblr

# The SAMR Model

*enhancing technology integration*

Ruben R Puentedura, Ph.D.

*Transformation*

**Redefinition**

technology allows for the creation of new tasks, previously inconceivable

create a narrated Google Earth guided tour and share this online

**Modification**

technology allows for significant task redesign

use Google Earth layers such as panoramio and 360 cities to research locations

**Augmentation**

technology acts as direct tool substitute, with functional improvement

use Google Earth rulers to measure the distance between two places

**Substitution**

technology acts as a direct tool substitute, with no functional change

use Google Earth instead of an Atlas to locate a place

*examples added by the Digital Learning Team*

*Enhancement*



Thank You!

# References

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