# SOLAR LESSON PLAN FORMAT

**Age Level:** 1st Grade
**Subject(s) Area:** Math
**Materials Needed:**
- Student activity books p. 230-232
- Pencil
- Laptops
- Number line
- Ten squares and other manipulatives if needed for differentiation

# Standards:

**Code and description:**

1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 − 4 = 13 − 3 − 1 = 10 − 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 − 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

# Objectives:

**What will the students know or be able to do?  At what Bloom's Taxonomy Level?  To what accuracy?**

Action verb (bloom's taxonomy) + primary learning focus + accuracy level

Students will be able to solve addition problems within 10 with 90% accuracy.

Students will be able to solve subtraction problems within 10 with 80% accuracy.

# Learning Activities:

**Technology:** Smartboard, students will use laptops to complete their math workshops

**Required Vocabulary:**

Digit: any of the numbers from 0 to 9

**Opening Element:** Have the students gather on the stage. Remind students that even though we are not at the carpet, they are expected to still sit crisscross apple sauce, voices should still be off, and their brains should be paying attention to me. Review as a whole group adding within 10. Ask for 3 students to come and stand in the front of the class. Ask the students, "How many more friends do we need to make 10? What are some ways we can make 10 by using two numbers?" Bring the number of students up to the front on the other side of me, the number will depend on student answers. Do the same steps with a starting group of 2 and 5. Asking the same questions and bringing up more students to the front. Can change it up and put 2 to 3 groups of students standing and have them figure out how

many they have all together. Can also have the students use subtraction by having more than 10 students standing and then ask, "How many students need to sit down to make 10?"

and do a Guess my number with the class.

**Reflective Questions:** We will than play a game of Guess my number with the students my number will be 23. My two clues will be it is between 10 and 25 and it is a two-digit number, whose second number is one more than the first number. Students can ask more questions if they cannot figure it out with those two clues. Use a number like to help mark the clues down.

**Instructional Methods:**

1. Review games the students will play during Math Workshops, "Today we are going to have a variety of different math games to play during our math workshops. The first is a page in your Student Activity Book, p. 230, for this page all you have to do is show me 10 ways you can make 10. Once you do that and get it checked by me or Mrs. Miller, you can go on to your next workshop. You must finish your worksheet before you can work on the laptops. Once you're done you can wait for someone to be done too and partner up and work on the workshops. Your other workshops are…"
   a. Students must complete p. 230 in their Student Activity Book before they can move on to their Workshops
   b. Dot Addition, where you count the dots to make 10
   c. Five-in-a-Row: Subtraction with Three Cards, where you choose which number to subtract from 10 to be able to get 5 in a row
   d. Five-in-a-Row with Three Cards, where you can choose which two numbers you want to add to get five in a row
   e. Ten Plus, where you roll a dice and you have to add that number to 10
      i. Dismiss students who are sitting nicely and who are ready to work
      ii. 8 minutes per workshop, use as a reminder for students to switch workshops
      iii. Give 5 and 2 minute warnings before they must clean up
      iv. Have the students gather back at the carpet
   - Guided Practice Strategies: shown throughout the lesson
   - Independent Concrete Practice/Application: students will independently complete their activity book pages.
   - Classroom management/movement: shown throughout the lesson
   - Differentiation: give students 10 frames or manipulatives to help them work through the problems.

**Wrap-Up:** Discuss with the students the ways they have made 10. "Who wants to share a way they used to find 10? How did you know that equaled 10? What is another equation that we could use that would be equal to the one_____ just made?

- Generate equivalent expressions for numbers
- Using standard notation (= and +) to record expressions or equations
- Make sure the students shar how or why they wrote the expression they did.
- Ask if there is a way to make 10 by subtracting

Give the students p. 231-232 in their student activity books to work on as homework and bring back the next day.

# Assessment:

**Formative:** use p. 230 as a formative assessment as paper proof of student's understandings

**Summative:** use the daily work and homework pages as a summative assessment, correct it for right and wrong answers and grade according to the .5-4 grading scale.

# Reflection:

This lesson was a challenge for me to teach because I was having a hard time keeping the students engaged in the lesson. While I was prepared for the lesson, I was not prepared for just how much I was going to need to use my classroom management strategies throughout the entire lesson. The math part of the lesson went really well but I need to work on redirecting the students to be focused on my lesson. I should have had the students get up and move when I noticed them starting to get wrestles. The students were not adhering to the classroom expectations and they had to have a discussion with their teacher about the expectations. I was hoping that this was going to be an easy lesson to teach because I love math, but I think that math might end up being difficult for me because it comes easy to me but it may not be easy for my students and I need to be able to make sure that my teaching it in a way that the students can understand.

But other than that, the math part of the lesson went very well. The students were able to work on making 10 in many different ways. They were also able to discuss how they made 10 and why their methods work. When the class moved on to working in partners, most of the students were working hard on the games I had set up for them to play, although there were still a few students who had trouble transitioning to independent/partner work. I had to go and talk to those student's individually and remind them what their expectations were for working on the computers. After that the students seamed to understand what was expected of them, they changed their actions, and they were able to work well on their own.