Lesson Plan Template
Date: _____

Grade: 1	Subject: Science – Sending Secret Message
Materials: 22 flashlights, Color Code handout, Student red, green, and blue markers.	**Technology Needed:** Teacher computer

Instructional Strategies:

☐	Direct instruction	☐	Peer teaching/collaboration/ cooperative learning
☐	Guided practice	☐	Visuals/Graphic organizers
☐	Socratic Seminar	☐	PBL
☐	Learning Centers	☐	Discussion/Debate
☐	Lecture	☐	Modeling
☐	Technology integration		
☐	Other (list)		

Guided Practices and Concrete Application:

☐	Large group activity	☐	Hands-on
☐	Independent activity	☐	Technology integration
☐	Pairing/collaboration	☐	Imitation/Repeat/Mimic
☐	Simulations/Scenarios		
☐	Other (list)		

Explain:

Standard(s)

1-PS4-4 Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Objective(s)

By the end of the lesson, the student will assign three colors to three different actions and use a flashlight to illuminate the color and communicate the desired action to his/her partner.

Bloom's Taxonomy Cognitive Level: Creating

Differentiation

Below Proficiency: help students to create basic signals like jump or spin.

Above Proficiency: encourage students to create advanced signals like pat your head and rub your tummy.

Approaching/Emerging Proficiency: help students to create more complex signals like bark like a dog or hop on 1 foot.

Modalities/Learning Preferences:
- **Visual:** modeling how to do activities, seeing how to complete Color Code handout
- **Auditory:** hearing lecture, ideas
- **Kinesthetic:** standing up, using flashlights to communicate
- **Tactile:** coloring

Classroom Management- (grouping(s), movement/transitions, etc.)
- **Brain Break : relaxing strategies**
- **"Not on the Ceiling" song**
- **"I'll wait."**
- **"5, 4, 3, 2, 1, 0"**
- **"3, 2, 1, talking is done."**
- **"When I say go…"**
- **Control volcanoes**

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)
- **Students are to sit on the floor in their spots in front of the board and keep all body parts to themselves. (active listening bodies)**
- **Students may not use the bathroom while I am teaching.**
- **Students are to use the flashlights to illuminate the colors on the Color Code handout and must take care not to shine the flashlight in other students' eyes.**
- **Students cannot talk to each other during the activity, they can only rely on their colors to communicate.**

Minutes	Procedures
2	**Set-up/Prep:** • **Have Color Code handouts printed and ready in advance.** • **Have students come to their carpet spots in front of the board with 1 red marker, 1 blue marker, and 1 green marker.**
2	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** • **Ask students for ideas on how to communicate with someone if talking and hearing is not allowed.** • **Inform students that today, they are going to communicate with a partner using colors and a flashlight.**
12	**Explain: (concepts, procedures, vocabulary, etc.)** • **Remind students that when they are driving in a car, a green light means to go, a yellow light means to slow down, and a red light means to stop. Colored lights can send messages.** • **Today, we are going to figure out how to send messages using colored lights.** • **Examples of color codes: red = hop on 1 leg, green = bark like a dog, and blue = thumbs up.** • **Each person will need 1 worksheet, 1 red marker, 1 green marker, and 1 blue marker, and 1 flashlight.** • **Each person needs to color in the circles on their handout. Each circle needs to be a different color, and it does not matter the order that the circles are colored.**

	• **Use sticks to partner students up. Have students move to be next to their partner.**
	• **Talk with your partner to come up with what each color means. You and your partner have to agree on what green means, what blue means, and what red means. They have to be the same.**
	• **Write down what each color means, and make sure you are writing your messages next to the same color that your partner is.**
	• **Hold your worksheet up with one hand and shine your flashlight over the different colored circles.**
	    ○ **Ask students if they can see the color coming through the other side of the paper.**
	    ○ **Ask students to move their flashlights closer and farther and if they notice anything different between holding the flashlight closer and the farther.**
	    ○ **Ask students if they think it would be best to hold their flashlights closer or farther. Why?**
	
	• **Explain to students that they will be on one end of the room and their partner will be on the other side of the room.**
	• **Decide with your partner who is going to be the sender… who shines the flashlight and gives the signal, and who is going to be the watcher… who is going to do what the light says.**
	• **Each person gets to go three times.**

10	Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) • **Have students go to the opposite sides of the room. Remind each student to take their flashlight and their worksheet.** • **Sender: send one message using your worksheet and flashlight.** • **Watcher: do what the message says.** • **Now switch roles.** • **Each person gets to go three times.**

4	Review (wrap up and transition to next activity):
	• **Have students come back to their carpet spots.**
	• **Ask them:**
	    ○ **Could you send messages to each other using only light?**
	    ○ **How could you send more than three messages using just three colors? (if there is time, try out the ideas).**
	    ○ **Ideas: flashing light, switch back and forth between two colors,**
	• **If time allows, play the video at the end of the activity about the guy who invented a sky projector.**

Formative Assessment: (linked to objectives, during learning) Progress monitoring throughout lesson (how can you document your student's learning?)	Summative Assessment (linked back to objectives, END of learning)
• **Monitor student confusion** • **Monitor questions students ask** • **Monitor student ideas**	• **none**

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

I loved this lesson. It was so fun for the students and myself. At the last minute, I decided to use the online science video to aid in teaching the lesson, which was on mysteryscience.com. I think using the online aid was a good idea to decide to use because it offered a great visual for students and freed me up to assist students. The video was in a step by step order, which allowed the students and me to complete one step before moving on to the next. Step by step really helped in moving the lesson along because the students didn't have to remember all the steps. Instead, they had the chance to complete a step and then listen for further directions. Because students knew exactly what to do, they followed directions really well.

In the future, I may want to be more mindful of how I pair students up. I drew sticks, but some students happened to be together who should never be together because they are good friends and tend to get a little too wild. Pairing students up in advance might be worth some of the hassle in the long run.

The questions at the end of the video really got students thinking. The video asked questions such as how could students send multiple messages using only three colors? And what other ways could student send secret messages? They were fun discussion questions. The video prompted students to try out some of their ideas. We were short on time, but in the future I would like to offer students some time to test out their ideas. I think it would be another great learning activity.

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The overall activity went well. Although we were a little cramped on space, students were still able to make the activity work. In the future, I might tell students that they need to perform the necessary activity for at least 5 seconds, because some students seemed to get in a race together and rushed through the activity. They were done well before other students, which makes me wonder how much they explored.

I would definitely do this lesson again. It was really engaging and interactive for students. We all had a lot of fun, and the quality video really allowed students to visualize, understand, and think about other ways to send secret messages, which allowed me to facilitate and aid more. The overall lesson went really well because students were intrigued and given step by step directions, which allowed them to know what to do and do it.