

MMLC lesson
 Science: 3rd grade- Animal groupings
 Co-op taught by Hannah Krebs and Marleigh Buechler
 September 24, 2020

Grade: Kindergarten-6 (3rd grade standard taught to K-6)		Subject: Science	
Materials: Balls, jerseys, and hula hoops from the field house		Technology Needed: N/A	
Instructional Strategies: ð Direct instruction ð Guided practice ð Socratic Seminar ð Learning Centers ð Lecture ð Technology integration ð Other (list)	ð Peer teaching/collaboration/cooperative learning ð Visuals/Graphic organizers ð PBL ð Discussion/Debate ð Modeling	Guided Practices and Concrete Application:	
		ð Large group activity ð Independent activity ð Pairing/collaboration ð Simulations/Scenarios ð Other (list)	ð Hands-on ð Technology integration ð Imitation/Repeat/Mimic
Standard(s) 3-LS2-1: Construct an argument that some animals form groups to help members survive.		Differentiation Below Proficiency: The kindergarteners are going to be guided by the older students through the activity.	
Objective(s) <ul style="list-style-type: none"> By the end of the lesson students will understand that bigger groups of animals are more likely to survive. By the end of the lesson, students will show their understanding of how animals form groups to protect their members and survive. 		Above Proficiency: The older students will help guide the younger students throughout the activity. The teachers will use questions to help push the above proficient students.	
Bloom's Taxonomy Cognitive Level: Understand, apply		Modalities/Learning Preferences: -Visual: Watching the game play out -Auditory: Hearing teachers explain the concepts -Kinesthetic- Getting to play a hands on game	

<p>Classroom Management- (grouping(s), movement/transitions, etc.)</p> <p><u>Boundaries:</u></p> <ul style="list-style-type: none"> • Inside the white or orange volleyball lines <p><u>Groups:</u></p> <ul style="list-style-type: none"> • The first activity requires even groups and will be split up based on age as much as possible. The second time they do the activity there will be uneven groups and will be chosen at random. • The second activity requires even groups and will be split up based on age as much as possible. <p><u>Voice levels:</u></p> <ul style="list-style-type: none"> • 0= voices off • 1= whispers • <u>2=inside voice</u> • 3=outside voice • Students will use voice level 2 while playing the game. NO SCREAMING. <p><u>Activity 2:</u></p> <ul style="list-style-type: none"> • No throwing balls at peoples' faces 	<p>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</p> <ul style="list-style-type: none"> • Students are expected to listen to the teachers during the lesson and when activities or rules are being explained. • When the teacher is talking students should have their voices off. • Students are expected to take part in the activities. • Students are expected to participate in the discussions. • Students are expected to raise their hands to comment or ask questions. • Students will stay within the boundaries set by the teachers. Example: If the teachers want the students to stay within the white volleyball lines, they are expected to stay within the white volleyball lines. • Students are expected to keep their masks over their mouths and noses during the whole activity.
Minutes	Procedures
5	<p>Set-up/Prep:</p> <ul style="list-style-type: none"> • Get balls, jerseys, and hula hoops from fieldhouse • Set up balls around the field house • Set up two hula hoops for team safe spaces
	<p>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</p> <ul style="list-style-type: none"> • To begin, I will call all students to the center circle on the volleyball court. • I will ask students to turn their voices off during directions

<p style="text-align: center;">5-10</p>	<p>The students will be playing a game to teach how large groups of animals will be able to collect more food.</p> <p style="text-align: center;"><u><i>EXPLAINING THE GAME</i></u></p> <ul style="list-style-type: none"> • I will explain that they are going to play a game of tag involving gathering balls. • I will explain to the students that they are going to pretend to be animals gathering food. • There will be balls symbolizing food surrounding the court that they must gather • Each team will have a hula hoop to place the food into. This is a safe space. The other team cannot take food out of a safe space. • If the students are tagged by someone on the other team they must sit and can only get back up if rescued by another teammate. • To be rescued they must be tapped by another alive teammate. • The game is over when all of the food is collected • I will explain that the boundaries are the orange volleyball lines. • Each team will wear a different colored jersey to decipher teams. • To begin, both teams will start the game with one foot their hula hoop. • The game will begin with 1, 2, 3, GO! Called out by the teacher. <p><u><i>-This activity will be played twice.</i></u></p> <ul style="list-style-type: none"> • <i>The first time</i> the activity is played the teams will be <i>even</i>. • <i>The second time</i> the activity is played the teams will be very <i>uneven</i>. This will represent a large group of animals and a small group of animals. • The second time the game is played the larger team should win easily, showing the students why animals would want to group into large groups.
	<p>Explain: (concepts, procedures, vocabulary, etc.)</p> <ul style="list-style-type: none"> • After the food collecting activity is played Miss Marleigh will have the students sit back in the circle. • I will ask the students to turn their voices back to 0. • I will ask the students how they liked the game the first time vs the second time. • I will call on a few students who have their hands up and get comments about the activities. • I will then explain to the students that nature is more like the second game for most animals because animal groups are never even. • I will ask students “What do you think the small group could do to get more food?” <ul style="list-style-type: none"> ○ I am looking for students to notice the ways animals need to adapt. ○ After students answer I will tell them that this is called adaptations. This is not in the standard but is tying in background knowledge for some, scaffolding others, and teaching a new concept to the younger kids!

5-10

- I will ask the students if they have any questions about the activity or concept.
 - I will call on students who have questions if they have their hands raised.
 - If students come up with any strategies to do well at the game we will discuss their strategies and if they are something animals might use.
 - We will now move the discussion towards predators.
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- After the students have gathered and finished discussing Miss Marleigh's activity, Miss Hannah will ask the group, "So we saw how animals get into groups and gather food, right? What if the animals who get into groups are animals who eat meat?"
 - Pause to see if there is understanding of what a predator/carnivore is throughout the group.
 - Take this time to ask the students if they know what a predator is. If a student raises their hand, call on them to answer and tell the group what a predator is.
 - Acceptable answers: "A predator is an animal that hunts down other animals for their food." "A predator is an animal that eats other animals" etc.
 - If students do not raise their hand, provide a definition for a predator. "A predator is an animal that hunts other animals and eats them for food. An example of this would be a cat. A cat hunts down mice and other small creatures and eats them. A few more examples of predators would be bears or wolves. Can you think of any other animals that are predators?" Allow time for students to answer.
 - Acceptable answers: Dogs, coyotes, tigers, lions etc.
 - Pose this question to students, "So if a predator hunts other animals, how do they gather food? Do they gather food the same way as we just did in Miss Marleigh's activity?"
 - Acceptable answers: "No they don't." "Predators hunt other animals so they don't gather food like non-predators do." Etc.
 - "So we've found that predators hunt other animals, so does a predator like a coyote, just get to walk up to a buffalo and eat it?"
 - Allow time for answers.
 - "What Miss Marleigh and Miss Hannah want to teach you guys today is that animals will form groups so that they can get more food, but also so they can protect each other from predators like coyotes."
 - Explain that when buffalo see that a predator is near, they circle up to protect the young and older bison.
 - Show a picture of a buffalo and coyote. Make a small story about them. (The buffalo is just eating his grass when he sees a coyote coming for food!) Etc.
 - "Now that we have seen how buffalo form a group to protect each other from the predators, we're going to try it out in another activity."

<p style="text-align: center;">10</p>	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <p>Activity 2: How Buffalo protect their young and old and how coyotes (predators) hunt for food</p> <ul style="list-style-type: none"> • Explain how the game works. <ol style="list-style-type: none"> 1. The students will be split into two groups, one group for buffalo, one for coyotes. 2. Team buffalo will have all of the younger students it can and some teachers will act as the “older” buffalo. 3. The group of students who are buffalo will wander around the volleyball court. 4. Team coyotes will be kept off the volleyball court until they count to 20. They can count as fast or slow as they want. 5. Once team buffalo spot a coyote entering the court, they should immediately get into a circle with the old and young in the middle and facing towards the outside. 6. Team coyote will have one ball each that they will try to throw at the old and the young to tag them. If a student or teacher is tagged with a ball, they have to sit down. 7. Team buffalo should be standing elbow to elbow. They can block the balls with their arms and bodies, but can't move from their spot. 8. Team coyote should try and tag as many buffalo as they can and can move all around the circle. 9. The round is done when team coyote has thrown all of their balls and have no way to tag the buffalo. <p>Students and teachers will participate in the second activity. After each round, the students will be given a few seconds to strategize on how to better protect their teammates or get at the buffalo.</p>
<p style="text-align: center;">3</p>	<p>Review (wrap up and transition to next activity):</p> <p>After a few rounds, have the students come back to the center circle and discuss the results of the second activity. Ask the students questions. <i>Some questions could be:</i></p> <p><u>For team coyote:</u></p> <ul style="list-style-type: none"> • Compared to Miss Marleigh’s activity, was it easier or harder to be a predator? Since predator’s eat other animals for food, was it easier to get food? • What would have made it easier to get food? <p><u>For team buffalo:</u></p> <ul style="list-style-type: none"> • How hard was it to protect the young and old buffalo? • What would have made it harder or easier to protect them?

<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <ul style="list-style-type: none"> • Questions will be asked throughout the lesson to check for understanding. <p>Consideration for Back-up Plan:</p>	<p>Summative Assessment (linked back to objectives) End of lesson:</p> <ul style="list-style-type: none"> • N/A <p>If applicable- overall unit, chapter, concept, etc.:</p> <ul style="list-style-type: none"> • N/A
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p> <p>I thought this lesson went extremely well. Marleigh and I communicated well and were on the same page for classroom management, expectations, and monitoring for learning throughout the lesson. One thing I think we could have done better for this lesson was communicate more effectively with the other student teachers who were with us. We could have at least gathered them together before the lesson started and explained the expected outcomes of the lesson and how we planned to achieve that through the content, discussions, and activities. We did involve the student teachers in the active parts of the lesson and they helped with our behavioral expectations and classroom management.</p> <p>Marleigh and I taught about two different aspects of the standard with the same outcome and I thought the students understood this well. The two different aspects were that animals got into big groups to gather food and protect each other to survive which was the outcome we wanted them to understand. In Marleigh's activity, the students were able to see that a bigger group was able to gather more food. I think this activity had an impact on the students' learning because they actively took part in the activity and were actually able to see and be an integral part of getting the results at the end of the activity. They showed the impact the activity had on them when discussing the activity with Marleigh. The younger students commented on how unfair it was in round two that they were against all the older students, but they did not get so caught up on the unfairness of the situation that they were not able to understand how important it was for animals to get into bigger groups to survive.</p> <p>In my activity, the students were able to see that animals get into bigger groups to protect each other to survive. After the activity, the students and I had a discussion to review the activity and how it went. They understood that it was harder for predators to get food since the larger group was able to come together and protect each other. They also showed their understanding that it was better for animals to get into bigger groups in order to be able to protect each other well. In this activity, I thought it was fascinating on how quickly the 4th, 5th, and 6th graders (older students) adapted to being a pack of coyotes. I did not expect for them to come together and strategize as quickly as they did. The students chose an alpha for their "pack" and created a plan of attack that was both efficient and involved all of them. They reflected good communication and teamwork.</p>	

In both mine and Marleigh's activity, the students' answers to our questions reflected that they had learned what Marleigh and I intended.

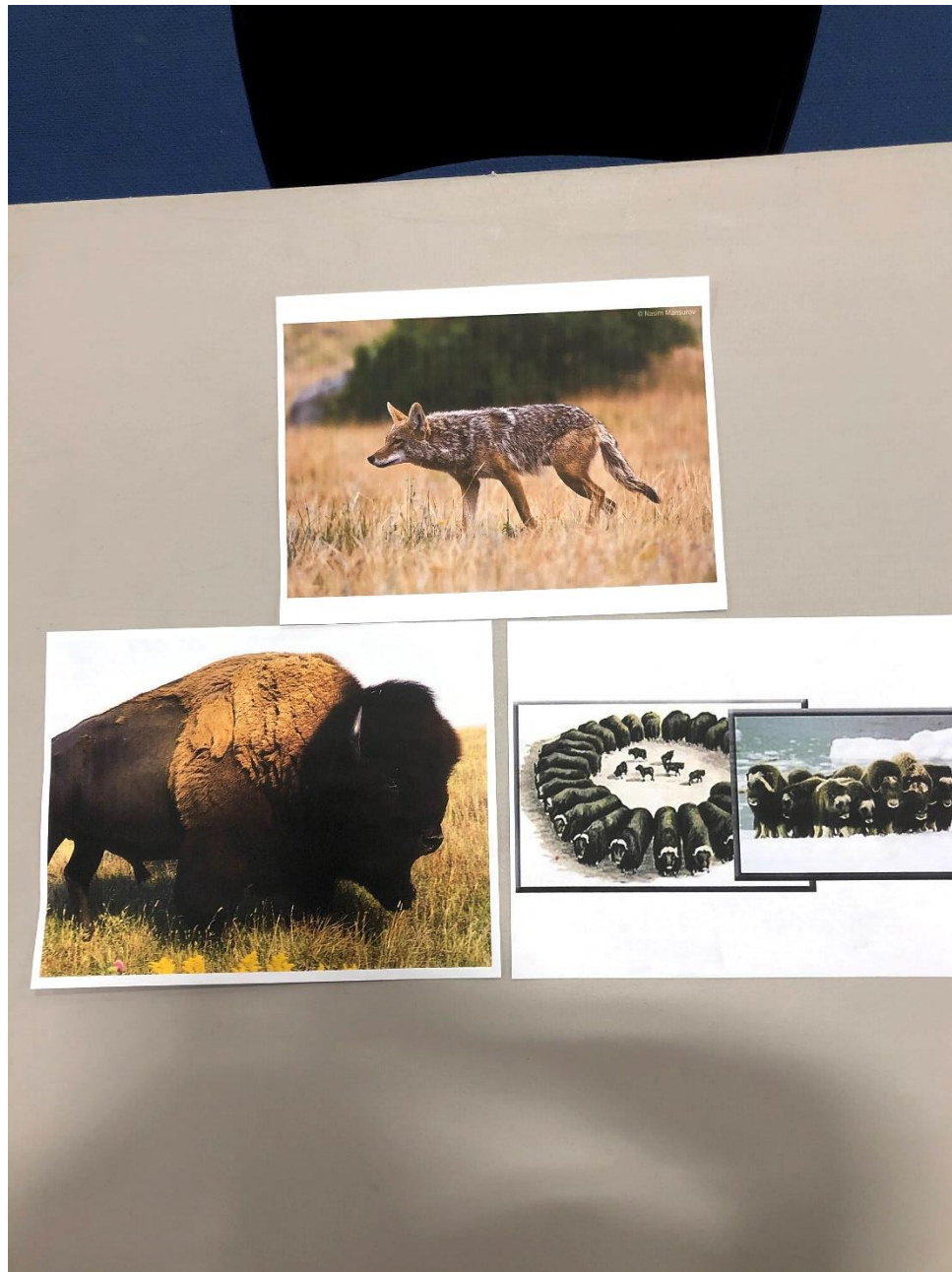
For my portion of the lesson, I would and did make some changes on the day of the lesson. Initially, the students who were coyotes (team coyote) were going to have balls in which they could throw at the students who were buffalo (team buffalo) to tag them. They were also going to be able to throw the balls into the defensive circle of team buffalo once it was erected. While this would might have helped team buffalo protect more of the younger students with a chance of the balls missing them or being able to dodge the balls more effectively, it did not give them good chances while they were in the defensive circle. I took the balls out for a few reasons. One, the chances of the younger students on team buffalo getting smoked in the face as they ran for the protective circle or while they were in the protective circle was great. Second, team coyote having balls would be less true to coyotes, since real coyotes do not have the ability to use ranged equipment to hunt. Third, team coyote being able to throw balls into the defensive circle would defeat the purpose of the defensive circle and would teach the students very little about the advantages of animals getting into bigger groups to protect each other.

So instead of team coyote using balls to tag team buffalo, I changed the method of tagging to physical contact tag. I also did not have as many older students as I thought I would have so instead of students creating the protective circle around the young and old buffalo, the student teachers acted as the protectors and all the older students ended up being coyotes. The actual way the activity transpired then, it had the same rules and boundaries, but instead of having balls, team coyote had to physically tag members of team buffalo, the round was over as soon as the protective circle was created, and the student teachers were the adult buffalo as opposed to the old buffalo.

I would also maybe change the boundaries of the activity so that the coyotes would not start as close to team buffalo. This would have given the younger students more of a chance to get into the protective circle since they could not run as fast as the older students could and helped more of them survive.

The last thing I would change is giving more clear instructions on what was expected of both teams. I would make sure that team coyote understood that once the protective circle was made around team buffalo, they could not tag them anymore and the round was done. There was confusion about this and team coyote kept tagging people even though the protective circle was up. I would also make sure that team buffalo understood that the protective circle did not need to be in the middle of the gym but could be wherever they all came together. There was some confusion as to how they were supposed to circle up.

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Pictures used for the narrative and to give the students an idea of what the protective circle looked like.

Picture of the bison found at:

<https://www.bing.com/images/search?view=detailV2&ccid=LiSfVpiC&id=2A137767547EF1E887BE100D4355547CBB152051&thid=OIP.LiSfVpiCC09Z4vZ6louzJAHaFj&mediaurl=http%3>

[a%2f%2fwww.todayifoundout.com%2fwp-content%2fuploads%2f2011%2f12%2fAmerican-bison.jpg&exph=768&expw=1024&q=american+bison&simid=608031592579009256&ck=33982623849282845092360B9F0306B7&selectedIndex=22&FORM=IRPRST&ajaxhist=0](http://www.todayifoundout.com/wp-content/uploads/2011/12/American-bison.jpg&exph=768&expw=1024&q=american+bison&simid=608031592579009256&ck=33982623849282845092360B9F0306B7&selectedIndex=22&FORM=IRPRST&ajaxhist=0)

Picture of the coyote found at:

https://www.bing.com/images/search?view=detailV2&ccid=3NQj%2fOru&id=17A3C8898FB1D23ABC9D4B159040D316738DFDD8&thid=OIP.3NQj_Orumj0o8DDIGXvv0gHaE6&mediauri=https%3a%2f%2fcdn.photographylife.com%2fwp-content%2fuploads%2f2009%2f12%2fCoyote-Hunting.jpg&exph=680&expw=1024&q=hunting+coyote&simid=608009799968361457&ck=1A5B159B439063581E9DB8ADCB67FEE4&selectedIndex=51&FORM=IRPRST&ajaxhist=0

Picture of the protective circle made by buffalo found at:

https://www.bing.com/images/search?view=detailV2&ccid=qYi%2bUbur&id=F3B8E759576B38A05FC0098BFF858241F76E35C2&thid=OIP.qYi-UburuNauPfYE6Kqu9AAAAA&mediauri=http%3a%2f%2f4.bp.blogspot.com%2f_f_urOMU9yH0%2fTPF-ykg0lqI%2fAAAAAAAAAABc%2fH46iiWarJ48%2fs1600%2fmusk_oxen.jpg&exph=174&expw=411&q=bison+defense+circle&simid=608054226985354477&ck=93E19F4671DFCEA47D3820C0EBC1B85D&selectedIndex=6&FORM=IRPRST&ajaxhist=0