Grade: Preschool  Materials: masking tape, popsicle sticks		Subject: Math  Technology Needed: Projector for photo of ski jump
Standard(s)  MTH.3.2 Use standard or nonstandard measurement techniques to measure objects.		Differentiation  Below Proficiency: Students are unable to put popsicle sticks end to end between 2 points. The student will count the popsicle sticks as a teacher or group leader places them.
Objective(s)  By the end of the lesson, the students will be able to measure how far they can "ski jump" by using popsicle sticks and counting how many popsicle sticks fit between where a student jumped and where a student landed.		Above Proficiency: Students are able to visually estimate how many popsicle sticks will fit between 2 points.  Approaching/Emerging Proficiency: Students will place popsicle sticks end to end between 2 points and count how many are there.
Bloom's Taxonomy Cognitive Level: Apply		Modalities/Learning Preferences:  • Kinesthetic  • Tactile

### Classroom Management- (grouping(s), movement/transitions, etc.)

- The children will stand in their own square (or bumble bee) while they watch their friends jump and measure.
- The students should all count together when counting the popsicle sticks.

# Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

- The students should wait for their turn to jump and measure.
- If a student does not wait for his or her turn, give them a warning that they may not get to have a turn.
- Make sure the students are using the popsicle sticks only for measuring.

Minutes	Procedures		
1	Set-up/Prep:		
	• Put a piece of tape on the floor with a lot of room in front of it. Set out a box of craft sticks for the children to use to measure.		
2	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest		
	/generate questions, etc.)		
	<ul> <li>All the students will begin by sitting at the table. Show the students how far you can jump.</li> <li>Ask the students how far they think that you could jump. "How do you know?"</li> <li>Did you know that we can find out how far we can jump by measuring?</li> <li>Tell them that they are going to practice a way to measure how far you can jump.</li> </ul>		
2	Explain: (concepts, procedures, vocabulary, etc.)		
	<ul> <li>I will tell the students that measuring means to use tools to find out how big or how long something is.</li> <li>We could use a tool to find out how far I landed from the starting point.</li> <li>I will show the students the following picture and tell the students that this is an Olympic sport called ski jumping. (This lesson is within an Olympic unit, so the students will already have background knowledge of the Olympics.)</li> </ul>		

- I will tell the students just like I jumped, in this sport, athletes ski (slide) all the way down this hill then jump as far as they can.
- They measure how far they jumped.
- Explain that in the Olympics, some athletes do a ski jump.
- They measure how far someone can jump on skis.
- Show the students that popsicle sticks can be used to measure how far we can jump.
- Lay down the popsicle sticks on the floor between the tape and where you landed. Have the students count the popsicle sticks.
- I will tell the students that I could jump the length of popsicle sticks
- Vocab: Ski jump, measure, prediction (estimate)

## Explore: (independent, concreate practice/application with relevant learning task - connections from content to real-life experiences, reflective questions- probing or clarifying questions)

- Tell the kids that they will each have a turn to jump and to measure.
- Have the students get in a line behind a piece of tape on the carpet.
- Have the first student in line jump as far as he or she can from the tape line. Mark where the student lands with another piece of tape.
- Have a different student lay down popsicle sticks to measure the distance between the tape line and where the student landed.
- Have all the students count the popsicle sticks together to find out how far the student could jump.
- During the activity, I will ask the students the following reflective questions:
- Does running help you to jump farther?
- Will more or less popsicle sticks fit between Johnny's mark or Abby's mark? Why do you think that?
- Repeat until each student has had a turn to jump and to lay out the popsicle sticks.
- Optional: Give each student 2 turns to jump and 2 turns to measure.
- Ask the children to put all the popsicle sticks away and find a seat at the table.

#### 1 Review (wrap up and transition to next activity):

- Finish by asking the kids questions about the activity.
- What does it mean to measure something?
- What kinds of things can we use to measure?
- What do they measure in the Olympics?
- I will show the students a ruler. I will tell the students that this is one common tool we use to measure. I will ask the students if they can think of any other tools.
- I will remind the students of how they measured their jumps. It is important to lay the popsicle sticks end to end.
- I will tell the students that next time they watch the Olympics, they should look at how they measure the real ski jump.

#### Formative Assessment: (linked to objectives, during learning)

### Progress monitoring throughout lesson (how can you document your student's learning?)

Assess who is able to count as a group.
Assess a student's improvement between their first turn measuring and their second.
I will formatively assess the students by observing their ability to lay the popsicle sticks end to end and count them. I will also assess the students' ability to make predictions or estimate the length (above proficiency).

### Summative Assessment (linked back to objectives, END of learning)

Assess the student's ability to lay popsicle sticks end to end between 2 points and count how many fit.

At the end of the unit, I can assess the students learning by administering a performance assessment that involves student measurement using popsicle sticks.

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

Overall, the kids enjoyed this activity. This activity works best with small groups so that the students do not have to wait so long in between their turns to jump and measure.

Go more in depth about what a ski jump is. This will make the activity more meaningful to the kids.

Explore the idea of a "running start" with the kids. Ask questions like, "Does running from farther away help you to jump farther?"

Keep the students engaged by having them help their friends count the sticks, predict how many sticks will fit. Ask questions like, "Will more or less popsicle sticks fit between Johnny's mark or Suzie's mark?"

During the review, ask the kids about other ways that they can measure. What kinds of tools can we use to measure? What kinds of tools do we normally use to measure?