

Subject: Science 10 Block: 1-1 Date: June 13, 2015 Lesson duration: 70 min Miso Lim	<b>Topic: The language of motion</b>	<b>Modified lesson</b>
---	--------------------------------------	------------------------

## I. PLANNING INFORMATION

<b>Big Ideas</b>
<ul style="list-style-type: none"> <li>Average velocity is the rate of change in position</li> </ul>
<b>PLO foci</b>
<ul style="list-style-type: none"> <li>Science 10: C6 explain the relationship of displacement and time interval to velocity for objects in uniform motion</li> </ul>
<b>Established Goals (SWBATs)</b>
<u>Content Objectives:</u> <ul style="list-style-type: none"> <li>Differentiate vector quantities from scalar quantities.</li> <li>Differentiate distance from displacement.</li> <li>Define magnitude and direction.</li> <li>Use proper symbols to represent vectors.</li> </ul>
<b>Materials/ Equipment needed</b>
<ul style="list-style-type: none"> <li>Physical space: regular seating plan, When the students are working on jigsaw learning activity, allow them to sit in groups.</li> <li>Text (s): pages 344-347 from the textbook "BC Science 10"</li> <li><b>Equipment:</b> PowerPoint Computer PowerPoint remote</li> <li><b>Materials:</b> 30- Jig saw learning information sheets 30- graphic organizers Print out of terms for four corners activity</li> </ul>
<b>Assessment Plan</b>
<b>Formative assessment plan:</b> <ul style="list-style-type: none"> <li>Entrance question for drawing out students' previous knowledge and beliefs: at the beginning of the lesson, students will be asked to form pairs and write down how they think "distance" and "displacement" are different.</li> <li>Stop during the lesson and check for the students' understandings by asking for questions and/or asking students to provide an answer to a question.</li> <li>The students will be asked to participate in a "four corners review" activity where they are required to stand in front of the word (corner) that corresponds to the definition read out loud.</li> </ul>

## II. LESSON COMPONENT

Teacher will:	Time	Materials	Students will:
<b>A. Introduction (5 minutes)</b>			
<ul style="list-style-type: none"> <li>Go over the shape of the day</li> <li>Shape of the day:               <ol style="list-style-type: none"> <li>Question of the day</li> <li>Think-pair-share</li> <li>Jig-saw Learning</li> <li>Four-corner's review activity</li> </ol> </li> </ul>	5 minutes	White board	Learn what the agenda is for the day- so that they are aware of what to expect.

**B. Development (50-55 minutes)****1. Question of the day / Think-pair-share**

- Provide the students with a questionnaire and allow them to complete it individually before sharing with a partner. After the pair has shared, allow time for students to discuss together as a class.

5  
MinutesPower  
Point

Collaboratively discuss individual thoughts and ideas pertaining to the presented question. Then share with the partner and the class.

**2. Jig-saw learning activity**

- **Expert groups meet:**
- Hand out the information on the terms to teach student and have the students gather within their expert groups (students that have the same words). They will be learning their designated word.
- Remind the students that they will be teaching the material to other members- and at the end in their “mixed groups.”
- Language of motion includes:
  - Vectors
  - Scalars
  - Direction
  - Magnitude
  - Distance
  - Displacement
  - Position
  - Time interval

15  
MinutesJig-saw  
informatio  
n sheets

Learn the “expert” material together within the “expert groups”

- **Mixed groups meet (Teach what you know):**

- Provide a diagram explaining the instructions of a jigsaw.
- The students will be meeting with their mixed groups and each person teaches their own term so that everyone is accountable for all the information. They have to complete a graphic organizer together.

20  
MinutesGraphic  
organizer

Teach each other of their “expert” knowledge and complete a graphic organizer together.

**3. Four corners game:** First, provide an overview of the physics unit

- Different parts of the classroom will be labelled with different terms covered in the jigsaw activity. The teacher will be asking a question or reading out a definition and the students have to move to the corner that corresponds to the right word.

10  
MinutesLabeling  
of the  
class

Listen to the definition/ question read out by the teacher and move to the corresponding term

**C. Closure (5-10 minutes)**

4. <b>Exit slips:</b> the students will be given a KWL (know, wonder, and learn) sheets to complete and hand in before leaving. This allows the teacher to get to know the students more and how their understands have changed through the lesson. They will be writing down what they knew previously before the lesson, what they wonder now and what they learned through the lesson.	5 minutes	KWL exit slips	Provide personal responses to the questions provided independently.
---	-----------	----------------	---

**Extension Activity**

Provide the students with Cornell notes and assign them to read pages 344-347 and fill the template note for next class.

**Preparation/ Homework for the students to complete**

If the students are able to start on the Cornell notes, have them complete it by next class.

**Teacher reflection of Lesson****Aspects that went well:****Necessary future modifications**

--	--