#132	Dennis Mulhearn	Gr: 3-8	8:30 to 9:45 a.m.
	www.moems.org	Gallery	Conference Centre Level 2 View Royal

Title: It Starts with a Cube

<u>Description</u>: A cube or a stack of cubes is the starting point for many rich problems involving even more math concepts. Work your way through factors, combinatorics, volume, surface area, networks, and more by solving Math Olympiad problems. A dozen of these 4-6 minute cube problems provide a fresh approach to these topics. As a participant, you will receive over 50 additional Math Olympiad problems to take back to your students.

#133	Jane Felling	Gr: 4-7	8:30 to 9:45 a.m.
	boxcarsandoneeyedjacks.com	Hands-On	Empress Downstairs Buckingham

Title: All Hands on Deck

<u>Description</u>: Come prepared to play card and dice games that help your upper elementary students achieve success in all operations, place value, fractions, data management. Problem solving is integrated into the activities. Excellent take home ideas, reproducible gameboards, student samples, and more provided. Great for regular, ESL, and special education programs.

#134	Sharon Young	Gr: K-8	8:30 to 9:45 a.m.
	Seattle, WA	Hands-On	Empress Downstairs Balmoral

Title: Bloomin' Questions + Nurturing Discourse = Student Growth

<u>Description</u>: We all want to see our students put down mathematical roots based on deep understanding. We can realize that goal by creating and asking quality thought-provoking questions that yield quality classroom discourse. A variety of question types will be described, including those based on the revised Bloom's taxonomy, question stems, alternative-response questions, and talk moves. Criteria for "quality questions" will be explored. This presentation involves participants in hands-on activities that demonstrate the effectiveness of quality questions and how they can lead your students to worthwhile discussion on mathematical concepts and procedures.

#135	Mike Charles	Gr: 6-College	8:30 to 9:45 a.m.
	Forest Grove, OR	Hands-On	Grand Pacific Vanc. Island West

<u>Title</u>: Addressing the Algebra Barrier with iPads

<u>Description</u>: Join us for a hands-on look at apps that can help further develop students' conceptual understanding of algebra at many levels.

#136	Wendy Hill (repeated session)	Gr: 3-5	8:30 to 9:45 a.m.
	thelearningcarpet.ca	Gallery	Grand Pacific Vanc. Island Centre

<u>Title</u>: Let's Get Physical - With Math on the Floor! (3-5)

<u>Description</u>: This workshop is a highly interactive session that will introduce grades 3-5 teachers to the many creative ways of teaching math, mapping and language concepts using a large 100 square floor grid. We all "LEARN BY DOING" and through active involvement and the physical exploration of number concepts (i.e. facts, times tables, greater/less than, fractions, larger numbers), plus activities in tiling, tessellations, transformational geometry, area/perimeter, and graphing, children can gain a better understanding. Teachers will leave with strategies for immediate classroom implementation in all math strands. Fun-filled games will also be played to learn skills in mapping and language. Come with a camera and comfortable shoes and be prepared to "play the day away!".