

Parents and Children: Mathematics, Autonomy, and iNterest

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Research in Science Museums



The PAC MAN Project is proud to be the first program running in the Lab Quest Program at TELUS World Of Science - Edmonton

Museums and science centres are an excellent space for science and research to intersect by providing the general public opportunities to work with scientists who conduct the research and scientists to unpack their research for the public (e.g., Andre, Durksen, & Volman, 2016).

Ontario Science Centre hosts "Research Live!" since 2003
Science World in Vancouver opened "Living Lab" in 2010

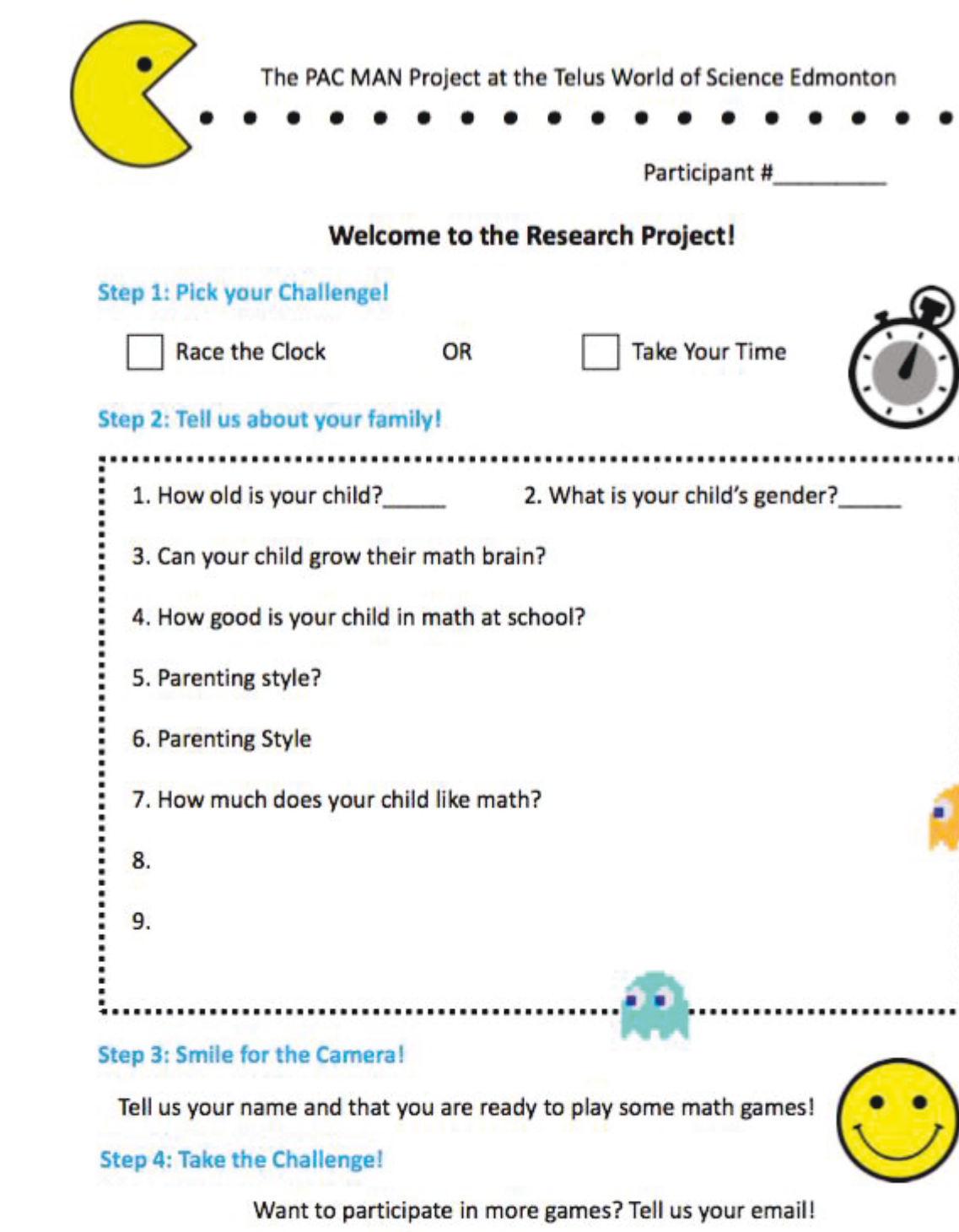
Procedure

A team of research assistants (RAs) will be on site at TWOSE during two weekends in May, 2017 to recruit participants for the PAC MAN Project.

Step 1: Intake

Parents and children will be greeted by an RA and given an Intake Sheet that:

- a) assigns a participant number
- b) gives them their "condition"
- c) collects information about the family in terms of math, parenting, and motivation



Step 2: Play Games

Children and parents will move to one of two tables that contain commercial games that involve mathematical reasoning. They will either Race the Clock or Take their Time.

Step 3: Exit

An Exit RA will collect the Intake Sheet and give parents and children a brochure designed to provide take-home information on:

- a) educational research - designs and functions
- b) parenting research
- c) mathematics reasoning
- d) motivation

The Games

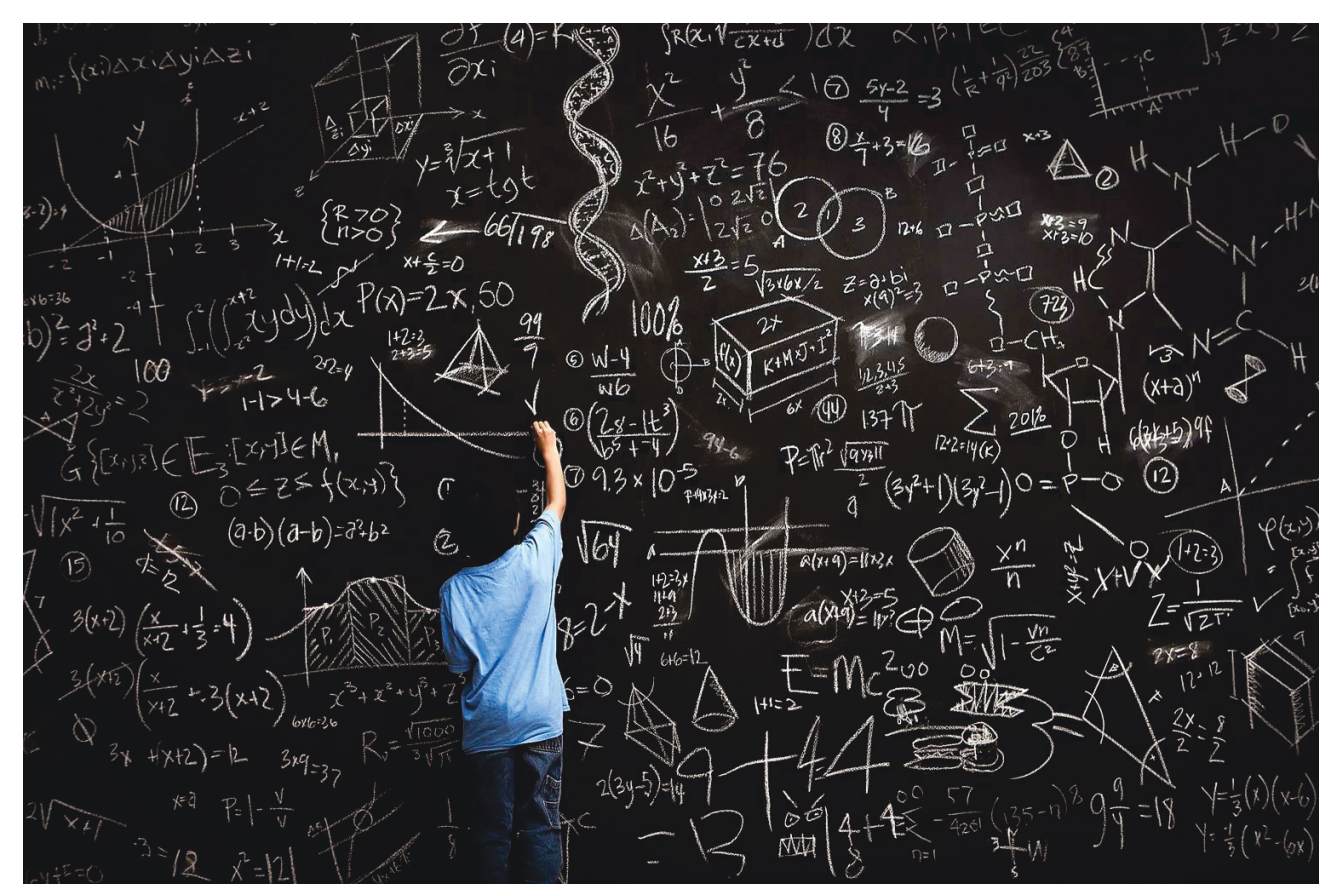
We chose commercial games because they are easy for researchers and parents to access and it helps parents and kids see that mathematical reasoning can be found in everyday activities and games. The games selected rely on reasoning to developing winning strategies or to solve a puzzle collaboratively.



Mathematics

Dr. Janelle McFeetors

Assistant Professor, Elementary Education. Research focuses on mathematics education and reasoning.



Autonomy

Dr. Christina Rinaldi

Professor, Department of Educational Psychology. Research focuses on parent-child relationships and school readiness.



Interest

Dr. Lia Daniels

Associate Professor, Department of Educational Psychology. Research focuses on students' motivation and emotions.



Funding

This work is currently supported by a Support for the Advancement of Scholarship (SAS) grant from the Faculty of Education.

Two members of the RA team will be supported by Roger Smith Undergraduate Research Awards.

