



PHOTONIC GAMES



Hands-on
challenges to spark
teenagers' interest
in light



JEUX
photoniques

Jeux Photoniques

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Photonic Games – Hands-on challenges to spark teenagers' interest in light

This scrapbook was produced by REPOL, a student organization affiliated with Quebec's SPIE and OSA student chapters

2010, Université Laval, Québec, Canada



PHOTONIC GAMES



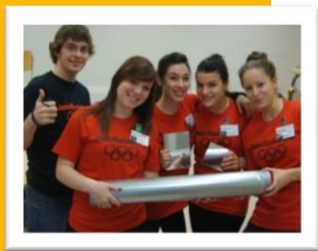
3 highschools



115 students



28 teams



7 challenges



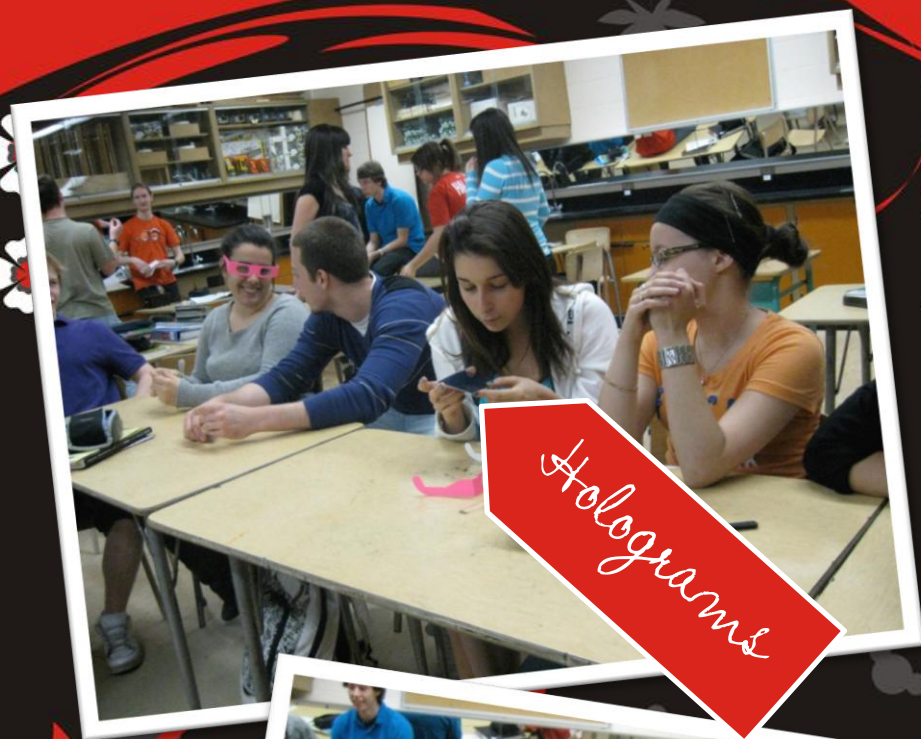
50 volunteers



CLASSROOM WORKSHOPS



*Discovering
the power
of light*



Holograms



*LED pens
from Thorlabs*



Committed
volunteer

Happy
teacher



Cool guy with
Rainbow glasses

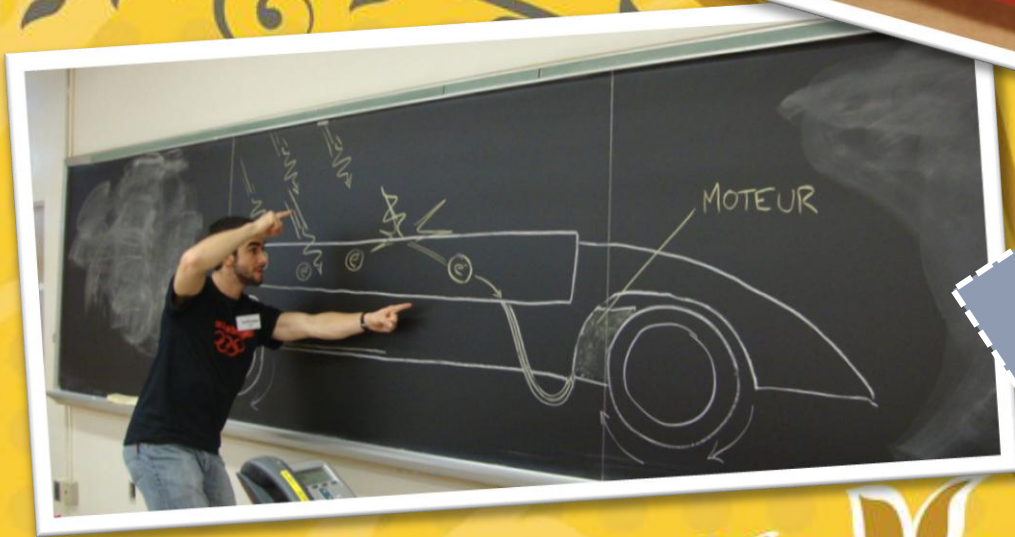
Phenomenon	Experience in the workshop	Applications
Reflection	Concave mirrors Convex mirrors	Rear-view mirrors Surveillance/security mirrors
Refraction	Converging lenses Diverging lenses	Everything that contains lenses: glasses, cameras, microscopes, telescopes, etc.
Dispersion	Prism	Rainbow
Polarization	Stress lines in plastic object between polarizers	3D movies Sunglasses
Birefringence	Calcite crystal that doubles printed letters	Liquid crystal screens (flat screens, cell phone displays, calculators)
Diffraction	Diffraction grating "Rainbow" glasses Shapes with laser pointer and diffraction slide	Spectrometer: instrument that analyses light emitted, transmitted or reflected by an object
Laser	Laser pointer	DVD/Blu-Ray player Bar-code reader Laser eye surgery

SOLAR RACE

CAR



The car



a little bit
of theory

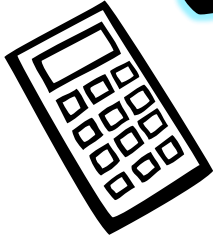
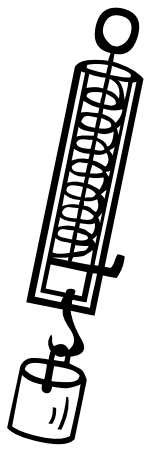
Light as an
energy source





Team
Work



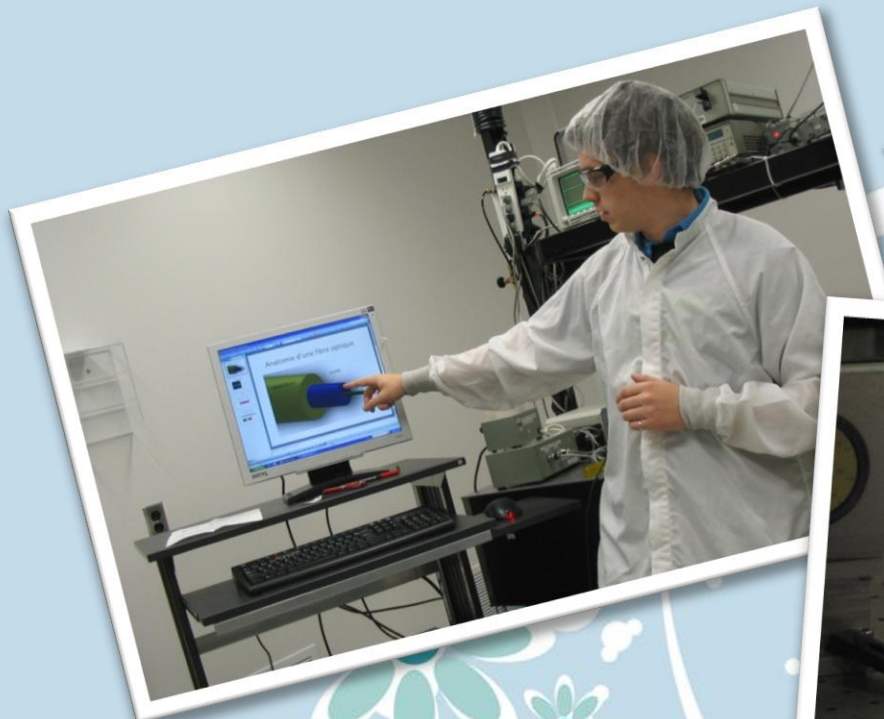


LABORATORY TOURS

getting
ready



tick tock...



Power of
light



Distorsion
is funny

Shedding light on research in
optics and photonics

OPTICAL MINI-PUTT

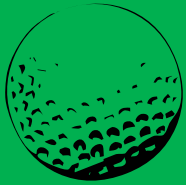


playing with light to
shoot a hole-in-one



Synthetic
grass

I-shaped
course



L-shaped
course



Teachers'
team

??? QUIZ ???



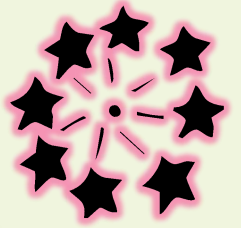
a team
and its
volunteer



Question about
convex mirror



Spotlight on optical knowledge



Draw me a picture...

LASER MAZE

Optical security :
a brilliant idea !



Plan a
robbery...



Infrared
cameras



Walkie-
Talkie



Commit a robbery...

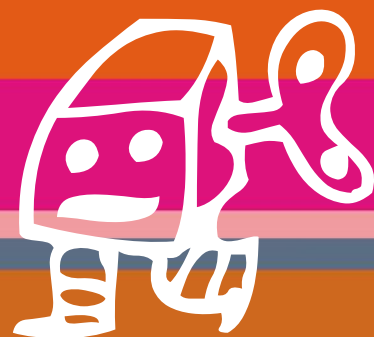


JELL-OPTICS

Controlling light with Jell-O lenses

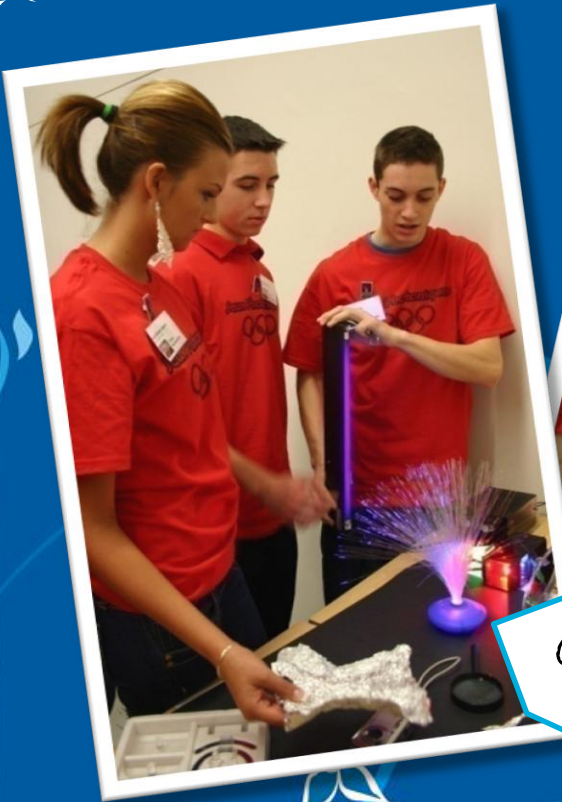
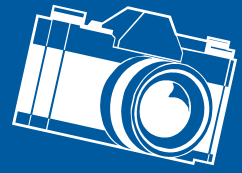


The board



Total Internal Reflection

PHOTOGRAPHY CONTEST



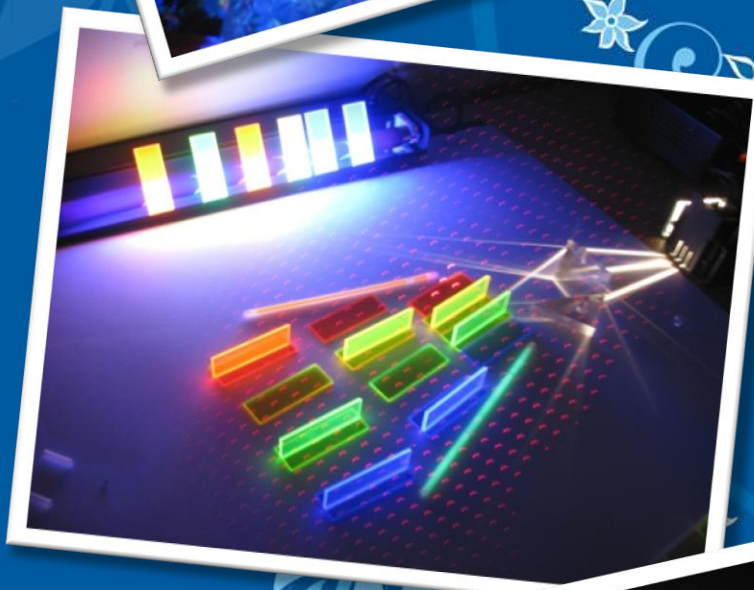
Optical fiber



Black light



Chroma
fluorescent slides



Panic at the disco

First place
2009 Photonic games

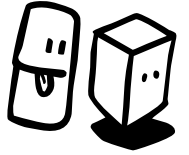


Capturing light

Our biggest fan



SPIE



Réseau photonique du Québec
Quebec Photonic Network



Lasers rock !



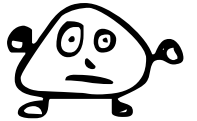
OSA®

Our research
centre



UNIVERSITÉ
LAVAL

Faculté des sciences et de génie
Département de physique, de génie physique et d'optique



Encourages
student
involvement



CorActive



gentec-EO

Optics companies
from Quebec City

TeraXion

TELOPS