

LEO BAECK DAY SCHOOL CURRICULUM: Grade 4 - Science and Technology

The Ontario Ministry of Education Curricular Expectations for Science and Technology are on-line:

<<http://www.edu.gov.on.ca/eng/curriculum/elementary/scientec18curr.pdf>>(pages 2-42, 84-95)

The Ontario Ministry of Education Curricular Expectations are taught from a perspective that reflects the unique nature of the LBDS. Grade 4 Science and Technology Expectations are enriched and extended, where appropriate, through a selection of the "IB THEMES AND APPROACHES" from the **Primary Years Programme International Baccalaureate** <http://www.ibo.org/pyp/index.cfm>. The "IBO Learner Profile" and "IBO Attitudes" are central to our approach to teaching and learning in and out of the classroom. Reform Jewish values, perspectives and content are incorporated into subjects where applicable.

IB Themes: Grade 4

Who we Are. Where we are in Place and Time. How we Express Ourselves. How the World Works. How We Organize Ourselves. Sharing the Planet

Approaches to Learning and Teaching Strategies <i>(Methodologies)</i>				Assessment: (Criterion Referenced) <i>(Formative assessment, Summative assessment, Student self-assessment)</i>			
Organization Skills	Communication Skills	Thinking Skills	Attitudes, Social skills	Strategies:		Criteria Tools /Recording Devices:	
<ul style="list-style-type: none"> •Responsibility •Study habits, Note making •Homework •Research strategies •Preparation for class •Self discipline, Self management •Group work •Learning style: Gardner's Multi-intelligences 	<ul style="list-style-type: none"> •Language skills •Listening, Oral strategies •Group skills •Subject specific vocabulary, term. •Verbal, Non- verbal, Visual strategies •Presentation skills •Class participation •Direct, Front loading 	<ul style="list-style-type: none"> •Acquisition of specific knowledge •Numeric strategies •Problem solving •Creative, Lateral thinking •Critical thinking, Analysis •Bloom's taxonomy •Arts based strategies •Activity based strategies 	<ul style="list-style-type: none"> •Appreciation, Enthusiasm •Independent work •Confidence, Curiosity •Respect: self/others/world •Cooperation •Commitment, Effort •Empathy, Tolerance •Integrity 	<ul style="list-style-type: none"> •Performance: quizzes, tests •Observations •Selected responses •Reports •Essays •Open-ended original responses •Reflections •Demonstrations 	<ul style="list-style-type: none"> •Open-ended Research •Portfolios •Presentations •Conferences •Response journals •Interviews 	<ul style="list-style-type: none"> •Rubrics •Checklists •Benchmarks •Rating scale •Provincial Achievement Charts 	<ul style="list-style-type: none"> •Exemplars •Anecdotal records •Continuums •Learning Logs

PRIMARY RESOURCES	ADDITIONAL RESOURCES
<ul style="list-style-type: none"> • Science and Technology - Pearson Canada • Nelson Canada - teacher resource materials • Library • Teacher resource - as per unit • Science experiments 	<ul style="list-style-type: none"> • science equipment (microscope, magnifying glass, magnets, Spectrum - New Ministry Equipment) • trips (The Ontario Science Centre) • hands-on materials (earth, seeds, leaves, food colouring) • speakers • scientists in the school • Kavannah Gardens • computer class

JUDAICA

- Habitats in Israel – Animal and Plant Species in Israel
- Geology in Israel – Rocks/Minerals of Israel
- Rock Formations in Israel
- Energy Use/Types in Israel
- Creation – God created light
- How were famous architectural structures in Israel built? Did they use pulleys and gears?

LBDS OVERVIEW OF PROPOSED UNITS

YEAR: 5769/70, 2009/10

GRADE: 4

SUBJECT: Science & Technology

TEACHER/S:

CAMPUS: NORTH

Use as many blocks as required.

UNIT #	DATES (Start-End)	UNIT TITLE	CENTRAL IDEA (K-5)	IB ORGANIZING THEME (K-5)
1	Sept-Oct 30 hrs	Adapt to Survive Habitats and communities Research Understanding Life Systems	Sharing the planet is essential for everyone's survival.	Sharing the Planet
2	Jan-Feb 30 hrs	Hear me, see me Sound and light Research Understanding Matter and Energy	Sound and light are forms of energy essential to daily life.	How the World Works
3	Mar-Apr 20 hrs	Switching gears Pulleys and Gears Understanding Structures and Mechanisms	Pulleys and gears are simple machines designed for specific purposes.	How the World Works
4	May-June 20 hrs	Rock your world Rocks and minerals Research Understanding Earth and Space Systems	The geographical features of the earth have been formed over a long time and continue to change.	How the World Works
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LBDS OVERVIEW OF PROPOSED UNITS

YEAR: 5769/70, 2009/10

GRADE: 4

SUBJECT: Science & Technology

TEACHER/S:

CAMPUS: SOUTH

Use as many blocks as required.

UNIT #	DATES (Start-End)	UNIT TITLE	CENTRAL IDEA (K-5)	IB ORGANIZING THEME (K-5)
1	Sept-Oct 25 hours	Research Unit A Matter of Survival Habitats and Communities Understanding Life Systems	Sharing the planet is essential for everyone's survival.	Sharing the Planet
2	Jan-Feb 25 hours	Stop, Look and Listen Sound and Light Understanding Matter and Energy	Light and sound shape our experiences in the world.	How we express ourselves.
3	April - May 20 hours	We Will Rock You! Rocks and minerals Understanding Earth and Space Systems	The geographical features of the earth have been formed over a long time and continue to change.	Where we are in place and time.
4	May-June 20 hours	Switching Gears Pulleys and Gears Understanding Structures and Mechanisms	Pulleys and gears make our lives easier.	How the World Works.
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