



The Science Teachers' Association of Manitoba Celebrating Fifty Years of STAM

Westwood Collegiate, 360 Rouge Road, Winnipeg

PROGRAM

Times vary

Off-site Sessions

9:00–10:15 a.m.

Keynote

9:00–10:15 a.m.

9:00–11:30 a.m.

10:45 a.m.–12:00 p.m.

Morning Sessions

11:30 a.m.–1:00 p.m.

Lunch

1:00–2:15 p.m.

1:00–3:30 p.m.

2:30–3:45 p.m.

Afternoon Sessions

KEYNOTE

David Mastie

**SC01 Igniting Curiosity through
Discrepant Events**

Location: Theatre

As a retired Earth Science teacher in the Ann Arbor (Michigan) schools for over 43 years, David Mastie presents the content and fun of science to audiences of all ages. Calling him “Mr. Science,” “Mr. Magic” and similar names, children are fascinated by his exciting demonstrations and lively style. Meanwhile, K–12 teachers delight in finding terrific ideas that they can take directly into their classroom for integrating Life, Physical and Earth Sciences. A successful television teacher at one time, David remains a popular presenter nationally and internationally.



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Important: For complete session descriptions, details on new sessions, session cancellations, and full sessions visit the STAM website at www.stam.mb.ca.

12:00 – 1:30

SC00 Past-Presidents

**Special Invitation to Past-Presidents’
50th Anniversary Luncheon**

(Includes STAM membership, conference registration and anniversary t-shirt)

\$20

Reserved lunch table

Please register for SC00 as well as desired sessions.

8:00–9:00 a.m.

**Manitoba Association of
Physics Teachers (MAPT)
Annual General Meeting**

**Publishers’ Display
in the gym**

Nutrition Break in the gym

Please bring your own water bottle and/or coffee cup.

2010–2011 STAM

membership includes:

Bicentennial STAM 50th anniversary t-shirt

(First 400 people registered—Must be picked up at Westwood Collegiate October 22, 2010—Limited sizes available)

**11:30 a.m.–1:00 p.m.
Join Us For Lunch!**

Enjoy a delicious hot catered lunch. Tickets must be purchased in advance.

**3:30–4:30 p.m.
Awards and Reception**

50th Anniversary Celebration

Recognize and celebrate excellence in science education. Find out how to be a part of the STAM BOD.

Meet science colleagues from across the province. Win prizes!

**(Check times
and locations)
Off-Site Sessions**

Note

*Times and locations vary

**Catered lunch NOT available

***Participants must pre-register for off-site sessions

(Registration NOT available at off-site sessions)

****Additional fees may apply—To be paid to presenters

SC02 Forest Ed: Sustainability and the Forest (two day workshop)
Michaela Knispel, Manitoba Forestry Association & Manitoba Model Forest, Manitoba Hydro, Manitoba Conservation

Location: Duck Mountains, Swan River, Oct. 22 and Oct. 23, 2010 (accommodations and meals included). \$75 additional fee (pay to instructor). Please check website for more details.
Level: General

SC03 Wetlands Can Perk Up the Curriculum
10:00 a.m.–3:30 p.m.

Location: Meet your guide at Oak Hammock Marsh Interpretive Centre at 10:00 a.m. Cafeteria available. Dress for the weather.
Level: General

SC04 GPS, GIS and Geocaching
10:00 a.m.–3:30 p.m.

Location: Meet your guide at Oak Hammock Marsh Interpretive Centre at 10:00 a.m. Cafeteria available. Dress for the weather.
Level: General

SC05 Dig For Fossils
10:00 a.m.–2:00 p.m.
Anita Janzic and Joseph Hatcher, Canadian Fossil Discovery Centre
curator@discoverfossils.com

Location: Meet at 10:00 a.m. at Canadian Fossil Discovery Centre, Morden Manitoba
 A \$12.00 additional fee will be collected by presenters. Participants will be provided with lunch, transportation to a fossil dig site, hand-outs and coffee. Dress to be outdoors. More info at www.discoverfossils.com
Level: General

SC06 Getting Outdoors in Manitoba's Parks

9:00–11:30 a.m.
Morgan Hallet, Manitoba Conservation—Parks and Natural Areas, and Andrea Rempel, Manitoba Conservation—Birds Hill
Morgan.Hallett@gov.mb.ca
Location: Meet at Birds Hill Provincial Park Interpretive Workshop at 9:00. Bring coffee mug for tea or coffee. Dress for the weather and hiking.
Level: K–4

SC07 Dolphins and Whales 3D: Tribes of the Ocean, at the IMAX

1:00–3:30 p.m.
Brendene Barkley, IMAX
Location: IMAX Theatre, Portage Place
Level: K–8

SC08 Getting Outdoors in Manitoba's Parks
1:00–3:30 p.m.

Morgan Hallet, Manitoba Conservation—Parks and Natural Areas, and Andrea Rempel, Manitoba Conservation—Birds Hill
Morgan.Hallett@gov.mb.ca
Location: Meet at Birds Hill Provincial Park Interpretive Workshop at 1:00. Bring coffee mug for tea or coffee. Dress for the weather and hiking.
Level: 5–8

SC09 Molecular Medicine
9:00–11:30 a.m.

David Blicq, Red River College
Location: Red River College, 2055 Notre Dame Avenue (parking provided—further details available online)
Level: 9–12
 Repeated Session

SC10 CSI: Compound Systemic Identification
(9:00–11:30)

J. David Graham, Red River College
Location: Red River College, 2055 Notre Dame Avenue (parking provided—further details available online)
Level: 9–12
 Repeated Session

SC11 Molecular Medicine
1:00–3:30 p.m.

David Blicq, Red River College
Location: Red River College, 2055 Notre Dame Avenue (parking provided—further details available online)
Level: 9–12
 Repeated Session

SC12 CSI: Compound Systemic Identification
1:00–3:30 p.m.

J. David Graham, Red River College
Location: Red River College, 2055 Notre Dame Avenue (parking provided—further details available online)
Level: 9–12
 Repeated Session

***NEW SC101 Manitoba Hydro Building Tour (1:00–3:30 p.m.)**

Janet Rak, Manitoba Hydro
jrak@hydro.mb.ca
Location: Meet at STAM Registration Desk, Westwood School at 12:50 p.m. A bus will transport you from Westwood to the award-winning Manitoba Hydro building for an interesting and informative guided tour of this energy-efficient, healthy workplace. You will be transported back to Westwood School for 3:30.
Level: General

9:00–11:30 a.m.

SC13 Hands-On Science Activities for K–4
Randy Cielen, Sunrise School Division
Level: K–4

SC14 Space Academy Toys in Space

Maria Nickel, Woodlands Elementary
marianickel@shaw.ca
Level: 5–8

SC15 Renewable Fuel - How to Make Biodiesel

Rex Newkirk, Canadian International Grains Institute and Manitoba Canola Growers

Level: 9–12

Repeated Session

9:00–10:15 a.m.

SC01

Keynote: David Mastie

Level: General

SC16 Bio-Rad Enzymes and Biofuels: Go From Grass to Gas! (AP Lab 2)

Bob Malyk, Bio-Rad Laboratories (Canada) Ltd

info_canada@bio-rad.com

Level: 9–12

SC17 Life is a Gift: A Grade 11 Manitoba Biology Resource for Organ Donation and Transplantation

Tara Sheperd, John Taylor Collegiate, and Sybill Stokoloff, Transplant Manitoba

Level: 9–12

Repeated Session

10:45 a.m.–12:00 p.m.

SC18 Aerospace & Aviation in Manitoba

Marcelin Gautron, StandardAero and Manitoba Aerospace (MAHRCC), Elena Anciro, Career Trek, and Colleen Flather, WISE and WinCube

marcelin.gautron@standardaero.com or aaim.day@gmail.com

Level: General

SC19 Assessing Science Fair Projects

Steve Thiessen and Grant Fisher-Smith, Bruce Middle School, St. James-Assiniboia School Division

Level: General

SC20

Physics for Grades 1 to 8

MAPT

Level: 1–8

SC21 EdGeo Middle Years: Putting the Earth into Science

Jeff Young, Department of Geological Sciences, University of Manitoba

Level: 4–9

SC22 Teaching Grade 9 & 10 Science with Inquiry-based Projects

Leona Groot, Cheryl Bailey and Jessica Worden, Gimli High School, Evergreen School Division

Level: 9–12

Repeated Session

SC23 From Classroom to Career: Work-Integrated Learning through Science Co-operative Education

Diane Kunec and Gerri Acorn, Faculty of Science, University of Manitoba

Level: 9–12

Repeated Session

SC24

Science Chemical Safety and Legal Requirements

Paul Deacon, St. James-Assiniboia School Division

Level: 9–12

Repeated Session

SC25 Bear Pit Session

Brian Dentry, River East Transcona School Division/MAPT

Level: 9–12

SC26 Environmental and Green Chemistry: Water Treatment and Biodiesel

Sid Greenstone, Steinbach Regional Secondary School and PALCIK Educational Products Ltd

Level: 9–12

SC27 Biotechnology Explorer pGLO Bacterial Transformation Kit

Bob Malyk, Bio-Rad Laboratories (Canada) Ltd

info_canada@bio-rad.com

Level: 9–12

SC28 Life is a Gift: A Grade 11 Manitoba Biology Resource for Organ Donation and Transplantation

Tara Sheperd, John Taylor Collegiate, and Sybill Stokoloff, Transplant Manitoba

Level: 9–12

Repeated Session

SC29 How's the Weather? A Grade 10 Science Weather Unit

Jason Braun, St. James School Division

Level: 10

***NEW SC102 The Next Titanium Chef: Making Healthy Food Choices**

Sarah Cahill, Dairy Farmers of Manitoba sarahc@milk.mb.ca

Looking for innovative ways to meet the nutrition outcomes in grades 5–8? Join Registered Dietitian Sarah Cahill, of Dairy Farmers of Manitoba, for a guided tour of Titanium Chef: a web-based game (available in French and English). Students play the role of ChefBot and compete to become the Titanium Chef (the galaxy's greatest ChefBot). Along the way students are engaged in making healthy food choices and learning about

Canada's Food Guide. Cognitive and emotional experiences formed during the role play support the retention of information, encouraging students to make healthy food choices in the real world.

Level: 5–8

Repeated Session

*NEW SC103

Electronics: What do I do Monday morning?

Dave Cutcher, Retired Science Teacher, British Columbia
ElectronicRaven@gmail.com

With demonstration & discussion, Mr. Cutcher presents a proven scope and sequence for Electronics 9–12.

- Material specially tuned for teenaged learners
- Resources for both Beginning & Experienced Teachers
- Support material for attendees included

Level: 9–12 Repeated Session

1:00–3:30 p.m.

SC30 Spaghetti Bridge Building

Yilan Shi, Manitoba Hydro

Level: General

SC31 Including Aboriginal Perspectives in the Teaching and Learning of Science

Barbara McMillan, University of Manitoba, and Mohammad Rezai, Gordon Bell High School

Level: 1–10

SC32 Hands-On Science Activities for 5–8

Randy Cielen, Sunrise School Division

Level: 5–8

SC33 Lake Winnipeg: A curriculum for Special Topics in Science, Grade 12

Dawn Sutherland and Deanna Kazina, University of Winnipeg

Level: 9–12

SC34 Cosmos vs. Canvas: Create Colour Images from Astronomy Data

Dr. Jayanne English, Department of Physics and Astronomy, University of Manitoba

jayanne_english@umanitoba.ca

Level: 9–12

SC35 Teaching, Learning and Assessing in Chemistry

Brian Leuthwaite, University of Manitoba, Brian Hayward, St. James-Assiniboia School Division, and Rick Wiebe, St. James-Assiniboia School Division

brian_leuthwaite@umanitoba.ca

Level: 9–12

SC36 Renewable Fuel: How to Make Biodiesel

Rex Newkirk, Canadian International Grains Institute and Manitoba Canola Growers

Level: 9–12

Repeated Session

1:00–2:15 p.m.

SC37 Solid Dihydrogen Monoxide Breakers

Marshall Carroll, Vincent Massey Collegiate

Level: General

SC38 Assiniboine Park: Imagine A Place

Scott Gray, Assiniboine Park Zoo

Level: General

SC39

Inner City Science Centre

Don Metz, University of Winnipeg, and Leon Espira, Inner City Science Centre

Level: General

SC40 Cut It, Stab It, Slice It, Dice It: Using the Potato in the Science Classroom

David Mastie

Level: 3–12

SC41

The Impact of Invasive Forest Pests to Manitoba

Daphne Titterton, Manitoba Conservation—Forestry Branch
daphne.titterton@gov.mb.ca

Level: 5–8

SC42 Teaching Grade 9 & 10 Science with Inquiry-based Projects

Leona Groot, Cheryl Bailey and Jessica Worden, Gimli High School, Evergreen School Division

Level: 9–12

Repeated Session

SC43 Biological Themes Workshop

Dr. Michele Piercey-Normore and Dr. Gary Anderson, University of Manitoba

Level: 9–12

SC44 Proper Methods for the Dissection of Preserved Rats

Michael Shaw, Department of Biological Sciences, University of Manitoba

mshaw@cc.umanitoba.ca

Level: 9–12

Repeated Session

SC45

Science Chemical Safety and Legal Requirements

Paul Deacon, St. James-Assiniboia School Division

Level: 9–12

Repeated Session

SC46

Hands-on Physics Lab for Physics 30S and 40S

Brian Dentry, River East Transcona School Division/MAPT

Level: 9–12

SC47

A Universe to Discover

The Canadian Space Agency

www.asc-csa.gc.ca

Level: 9–12

SC48 Using Rock'n'Roll to Teach Electromagnetsim

Michael Lukie,

The University of Winnipeg

m.lukie@uwinnipeg.ca

Level: 9–12

Repeated Session

*NEW SC104 The Next Titanium Chef: Making Healthy Food Choices

Sarah Cahill,

Dairy Farmers of Manitoba

sarahc@milk.mb.ca

Looking for innovative ways to meet the nutrition outcomes in grades 5–8? Join Registered Dietitian Sarah Cahill, of Dairy Farmers of Manitoba, for a guided tour of Titanium Chef: a web-based game (available in French and English). Students play the role of ChefBot and compete to become the Titanium Chef (the galaxy's greatest ChefBot). Along the way students are engaged in making healthy food choices and learning about Canada's Food Guide. Cognitive and emotional experiences formed during the role play support the retention of information, encouraging students to make healthy food choices in the real world.

Level: 5–8

Repeated Session

*NEW SC105

An Introduction to Medical Physics

Dr. Daniel Rickey and Dr. Boyd McCurdy, CancerCare Manitoba
daniel.rickey@cancercare.mb.ca

Discussed in this presentation are the roles medical physics plays in radiation therapy and diagnostic imaging. Emphasis is placed on an overview of imaging and therapy technology and physics.

Level: 9–12

2:30–3:45 p.m.

SC49 What Was the Most Interesting Event in Physics This Year?

MAPT

Level: General

SC50 Fifty Years of Science—Pulling in Students with the Magnetometer: An Under-rated Attraction

David Mastie

Level: 3–12

SC51 Exploring the Solar System

The Canadian Space Agency

www.asc-csa.gc.ca

Level: 4–8

SC52 From Classroom to Career: Work-Integrated Learning through Science Co-operative Education

Diane Kunec and Gerri Acorn,

Faculty of Science,
University of Manitoba

Level: 9–12

Repeated Session

SC53 Proper Methods for the Dissection of Preserved Rats

Michael Shaw, Department of Biological Sciences,
University of Manitoba
mshaw@cc.umanitoba.ca

Level: 9–12

Repeated Session

SC54 Using Rock'n'Roll to Teach Electromagnetsim

Michael Lukie,

The University of Winnipeg

Level: 9–12

Repeated Session

SC55 EdGeo Senior Years: Putting the Earth into Science

Jeff Young, Department of Geological Sciences, University of Manitoba

Level: 9–12

*NEW SC106

Electronics: What do I do Monday morning?

Dave Cutcher, Retired Science

Teacher, British Columbia

ElectronicRaven@gmail.com

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- Resources for both Beginning & Experienced Teachers
- Support material for attendees included

Level: 9–12 Repeated Session

REGISTRATION

NOTE: Sessions are reserved at the time of registration. A limited number of spaces for sessions may be available for STAM members only at the registration desk (Westwood Collegiate only) on Friday, October 22rd, 2010. If you would like to attend a particular session, please register early. Changes to the program may be viewed on the STAM website: www.stam.mb.ca

**STAM Membership
2010–2011***

General.....\$20.00

Full-time student.....\$20.00

*Please note membership fees may be paid in conjunction with the conference fee.

Membership includes:

- Bicentennial STAM 50th anniversary t-shirt (First 400 people registered—Must be picked up at Westwood Collegiate October 22, 2010—Sizes may be limited)
- Access to online journals
- Reduced SAG conference fees
- Reduced science workshop/in-service fees

Full Day Conference Fees

STAM Member.....\$40.00

Non-Member.....\$59.00

Full-time student (non-member)....

.....\$35.00

(free with STAM membership)

Half Day Conference Fees

STAM Member.....\$20.00

Non-Member.....\$39.00

Full-time student (non-member)....

.....\$20.00

*NOTE: There is no charge for students who are STAM members (including those who pay for their membership at time of registration). Please show student card.

Lunch (not available at off-site sessions).....\$14.00

(Lunch tickets will NOT be available for purchase at the conference. Tickets must be pre-ordered with your conference registration.)

NOTE: For regular members, your total cost for the conference, including a STAM membership and commemorative t-shirt, is \$60.00 (\$74.00 with lunch). For students who pay for a STAM membership, your total cost is \$20.00 (for the STAM membership – no charge for conference).

Late and On-Site Registrations

Registrations postmarked after October 1 or completed on-site will be assessed a \$10.00 fee. On-site registration is available for STAM members only. (Memberships may be purchased on-site.) Payment is cash or cheque only.

How to Register

- If your chosen session(s) is full, and you have not provided alternate sessions choices, STAM will do its best to provide you with the most suitable available session.
- Please complete the registration from and return with cheque or money order payable to the Science Teachers' Association of Manitoba (STAM).

- Include stamped, self-addressed envelope to receive confirmation of your registration through the mail. E-mail confirmations will be sent to all other participants. E-mail address must be included on registration form.
- Registration must be post-marked by October 1st to ensure receipt of a confirmation.
- Registration is not confirmed until payment is received. Late registrants will receive their session information at the conference registration desk.
- Late registrants will be charged a \$10.00 administration fee.
- Write only one cheque to cover the cost of the conference and the STAM membership fees (if required). No post-dated cheques please.
- Faxed registrations will not be accepted.
- Conference fees and STAM memberships are non-refundable.
- **REMEMBER:** Registration is on a first-come basis and some sessions fill up quickly. Please provide a second and third choice of session. Check the STAM website (www.stam.mb.ca) for updates on new sessions, full sessions and cancelled session.

Mail registrations to:

STAM SAG Conference Coordinator
3 Davis Place
St. Andrews, MB R1A 2X1