Bison Regional Science Fair- Artificial Intelligence Ethics Policy

Artificial Intelligence:
Artificial intelligence (AI) is a branch of computer science that aims to create intelligent machines capable of simulating human-like behavior and decision-making processes. AI systems are designed to analyze vast amounts of data, make predictions, and adapt to changing circumstances. AI is applied in many sectors including healthcare, finance, transportation, and entertainment. A well-known AI app is Chat GTP. It is designed to answer questions and generate essays. Ethical concerns arise when the AI program produces essays that are claimed to be the original work of a person.

Citation, Verification and Use
AI is an important resource. The use of an AI to generate background material is valid. **How and where in the project it is used must be acknowledged.** It is wise to double check the AI conclusions. The answers provided by AI are only as good as the data the AI program had access to. The old computer adage still applies – "Garbage in = garbage out."

Always start with clear, precise questions. Refine your questions to where you want the AI to specifically target. Remember though the AI is not a replacement for your own critical thinking or good research. **Your questions and search criteria should be recorded in your log book.**

Mentoring
It is advisable to seek a mentor when working with AI; e.g. parent, teacher and professional in the field of your research.

Some Uses of AI

Idea generation:
- Sparks for brainstorming ideas **https://mystemspace.ca/spark/**
- Brainstorming
- Refining of an idea
- Research questions, hypothesis, or experiment designs
- Expand on your idea for a science fair project, e.g identify variables worth testing

Research:
- Research on your chosen topic
- Background information
- Places to look for more information.
- Analysis of data (techniques, statistics, graphical representations)

Presentation
- AI can create suggestions on how to present your project and help with a script.

FAQ

1. Why is it necessary to have an artificial intelligence policy specifically for science fairs?

An artificial intelligence policy for science fairs is crucial because it helps address the unique challenges and ethical considerations posed by AI projects in the context of student-led scientific inquiry. It ensures that students have clear guidelines and support to navigate the complexities of AI, promotes fairness and transparency in project evaluation, and fosters a responsible and inclusive approach to AI integration in science fairs.

2. What are some key components of an effective artificial intelligence policy?

Key components of an effective artificial intelligence policy include clear guidelines and objectives, defining the scope of AI projects in science fairs, and addressing data privacy and security concerns. Additionally, promoting ethical decision-making, mitigating bias in AI algorithms, and ensuring consent and privacy protection in AI data collection are essential elements of a comprehensive policy framework.

3. How can educators and students be supported in incorporating artificial intelligence into their science fair projects?

Educators and students can be supported in incorporating artificial intelligence by providing training and professional development opportunities, offering accessible tools and platforms for AI integration, and fostering mentorship and guidance. Collaboration with industry experts and establishing partnerships between schools, organizations, and institutions can also provide valuable support and resources for educators and students venturing into AI-driven science fair projects.

Additional Resources:
AI Sites:
Chat GPT https://chat.openai.com/auth/login
Khan Academy's https://www.khanacademy.org/khan-labs
BARD https://bard.google.com
Tinywow Search Tools - TinyWow
100% [FREE] AI Writer | ToolBaz.com

Background
AI vs. Machine Learning vs. Deep Learning vs. Neural Networks: What's the difference?
Video: How Large Language Models Work
Harvard Business School: Student Use Cases for AI
ChatGPT: An Introduction for Educators
Statement from the International Baccalaureate about Artificial Intelligence in Education
Ethical AI for Teaching and Learning
Shedding light on AI Bias with Real World Examples
How to Cite AI Use