

Student Directed Research Study and Presentation Assignment

Designed for Social Studies 90

Focus: Scientific and Environmental Technology linked to Government and Educational Institutions

Topic: Smartflower Development and Implementation

at Bishop James Mahoney High School

TEACHER GOALS:

Lesson 1: Teacher-led lesson on:

- the social structures that allow specific technologies to be developed and sought out (government and political supports, scientific developments, environmental links to the technology development, business / commerce investors, educational institutions to produce scientists and technology, public interests)
- questioning inquiry on technologies that are present in our everyday lives. Link this technology to our concept in Saskatchewan about our worldview and what is supported by our society.
- discussion on what students know about the actual development and timeline for those technologies to be present in our lives
- Student computer time focused on one topic from the board they are interested in learning about in some way (frame to begin to complete with each level of social organization that helped create that technology)
- Start on the SIEC website and highlight Siemens**

Lesson 2:

- Review and share some of the research students were able to find last day
- Transition to a focused introduction to the Smartflower development lesson
- Key question: How many aspects of our society today were needed for the Smartflower to be installed and implemented at Bishop James Mahoney high school?

Highlights:

SIEC focus on 'Green Umbrella'

- 1) Technology itself
- 2) Careers it provides for and drives more research (focus and do some digging on huge variety of studies and professional careers)
- 3) Current special projects and divisions ('garbage' cars – recycling robotic cars, ecohomes, **Smartflower**)
- 4) Begin the powerpoint lesson on the development and installation of the smartflower at BJM.
 - 1) What it is
 - 2) Where it came from
 - 3) Partners involved and what they individually do in our society
 - 4) Careers involved and educational backgrounds needed for it to be developed and installed.
videos of partners and their explanation of how and why they became involved

- 5) Overall timeline from concept of the smartflower design to installation showing how all partners were involved, when and how the partnerships drive one another to allow us to grow in a positive direction
 - 6) Practical implications of this technology in our school. What does it do? How can we use it in our classes? School? Community?
 - 7) Future implications it may have as it grows and uses for solar technology in and around our communities
- Student hand in what they learned about the key question**

Lesson 3:

Class review of the key aspects of society and the development of the Smartflower

Student directed study introduction:

- 1) Handouts outlining their research project
- 2) Outline the self-directed study
 - Students can pick what they were researching from first day or change topics from a provided list or come up with their own topic pending teacher approval
 - Go over the rubric and answer any questions about assessment on research and presentation itself
 - Research time on topic (they are free to e-mail, call, or contact businesses to find information, or just research online if the information is readily available). Computers needed*

Lesson 4:

- Research and creation of the presentation format
- Work on presentation and materials for it

Lesson 5:

- Finish research and work to complete the presentation of their topic

Lesson 6:

- Finish the presentation and practice delivery

Lesson 7 & 8 if needed:

- Presentations and assessment (self and peer)

Curricular Links:

1. **Interactions and Independence:** To examine the local, indigenous and global interactions and independence of individuals, societies, cultures, and nations.
2. **Dynamic Relationships:** To analyze the dynamic relationships of people with land, environments events and ideas as they have affected the past, shape the present and influence the future.
3. **Power and Authority:** To investigate the processes and structures of power and authority, and the implications for individuals, communities and nations.
4. **Resources and Wealth:** To examine various worldviews about the use and distribution of resources and wealth in relation to the needs of individuals, communities, nations, and the natural environment and contribute to sustainable development.

Guiding Questions for this project:

Unit Two: Interactions and Interdependence

- ✓ How does this technology fit in with the needs of our current time and place, culture, language, religion, gender identity, socio-economic situations, and education?
- ✓ How is worldview expressed in the daily life of a society using this technology? What ideals does it promote?
- ✓ How does our worldview influence the choices, decisions, and interactions by using this technology?

Unit Three: Dynamic Relationships

- ✓ How do we obtain information about this technology currently or past versions of it?
- ✓ How does the natural environment shape the success of this technology?
- ✓ How have past societies shaped contemporary Canadian society to use this technology?

Unit Four: Power and Authority

- ✓ How does power and authority impact the governance of a society?
- ✓ What level of business or government have allowed this product to be created and for what function?
- ✓ How do roles and responsibilities of citizens affect a society? The technology we use today works only in accordance with what is promoted by the general public and changes with the demand by it and the people in power*

Unit Five: Resources and Wealth

- ✓ How do different perspectives regarding acquisition and distribution of resources and wealth affect individuals in societies?
- ✓ How does trade and transportation impact the development of a society?
- ✓ How does this technology, both past and present, influence contemporary society?