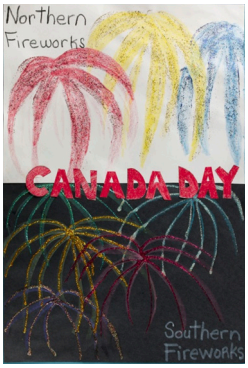
Canada Day Fireworks

Freedom: Reflect and Celebrate

RESPOND to the annual celebration of independence on July 1, Canada Day. How do community celebrations in Northern Canada differ from those in Southern Canada? How would a fireworks display in the north need to be different from one in the south because of its proximity to the Arctic Circle?

CONNECT the science behind the phenomenon of the midnight sun with Canada's northern geography. Because it is so close to the Arctic Circle, the sun remains visible above the horizon late into the night hours during the summer solstice. Consider what challenges this could cause for communities that want to celebrate with fireworks. It would be like trying to see fireworks on a sunny afternoon. So scientists invented special fireworks for those who live in northern latitudes, such as the Canadian North. These make colorful smoke and cloud effects, and a lot of noise when they burst!

CREATE two scenes in the sketch areas below—one that shows a classic fireworks display as it would be seen in Southern Canada and countries located at similar latitudes, and the other a scene of glittering clouds of smoke on a sunny day, as would be seen in Northern Canada and countries near the Arctic Circle. Research what makes classic fireworks glow as brightly colored streaks of light. For example, barium is used to produce green light and strontium makes red. What creates white or gold fireworks and why is it so difficult to create blue fireworks? Explore the history of fireworks and how they have changed or become more regulated over time.



CREATE ONE SKETCH OF CLASSIC FIREWORKS THAT SHOW UP IN A DARK SKY AND ANOTHER SKETCH OF GLITTERING CLOUDS OF SMOKE FIREWORKS THAT ARE VISIBLE IN A SUNNY SKY.

PRESENT insights from your research and share your sketches of different types of fireworks.

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THINKING SHEET