

SCOUT SUNDIAL

MACKENZIE RIVER Environment & Outdoors



THE ADVENTURE:

For centuries, humans have relied on the sun to keep track of the passage of time. Even after the invention of the modern clock, sundials were used to reset these clocks and keep them accurate.

As a Troop or Patrol, build your own sundial to tell time and explore how the sun moves through the sky over the course of a day. How does this change at different times of the year?

PLAN:

- Where will you build your sundial? How will it be positioned?
- What kind of sundial will you build?
- What tools and materials will you need to build your sundial?
- What's a gnomon and at what angle should your gnomon be, relative to the base, to give correct time?
- Where will you make the hour marks relative to the centre line?
- How will you determine where the markers must be to keep correct time?

SAFETY TIP:

- It's not safe to look directly at the Sun. Wear sunglasses at all times when working or playing outside to protect your eyes. What else do you need to **stay safe in the sun**?
- Make sure you know how to use all of your tools **safely**.
- Wear safety gloves and glasses when handling tools and cutting wood or metal.

DO:

- Gather your tools and materials.
- Build your sundial, and calibrate it to keep correct time.

Review:

- What do you know now that you did not know before?
- Would your sundial need to change at different times of the year? Why or why not? If yes, how would you need to change your sundial?
- What elements of STEM were in this adventure? Science? Technology? Engineering? Mathematics?
- What did you like about this adventure? What did you not like? How would you do this adventure differently?

ONLINE RESOURCES:

- [Horizontal Sundial Shadow Angle Calculator](#)
- [How to Make a Sundial](#)
- [Sundials and Latitude](#)

