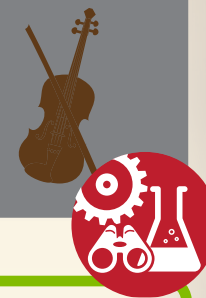# STEM
Science | Technology Engineering | Mathematics

SPEEDY SCOUT TRUCKS

CABOT TRAIL
Creative Expression

THE ADVENTURE:
Get ready for the Scout Truck rally you've been waiting for! Take your Scout Truck to the next level and make it the fastest one at the rally.

ONLINE RESOURCES:
- **Off to the Races**
- **18-Wheeler and Accessories**
- **Science of the Pinewood Derby**
- **The Big Rally**

SAFETY TIP:
What precautions do you need to take when working with sharp tools and chemicals like lubricants, glue and paint?

PLAN:
- What are the rules for your Scout Truck rally? How can you make sure your Scout Truck follows the rules?
- What do you know about how a Scout Truck works?
- What shape will your Scout Truck be? Make sure it follows the size guidelines for your rally.
- What makes one Scout Truck travel faster and farther than another? Gather some old Scout Trucks and experiment to discover what shapes are fastest.
- How can you reduce air resistance and friction between your Truck and the track?
- When and where will you design and make your Scout Truck? Will the Scouts in your Troop design and make their Scout Trucks on their own, or will you work in pairs? Will you take time at a meeting to design and test a few Scout Trucks before making the final one at home?
- Check with a local shop teacher to see if it is possible to arrange a time in the shop to build your trucks under supervision.

DO:
- Build and test out your Scout Truck.
- Test different wheels on the track. Which wheels help your Scout Truck go faster? Why do you think some wheels run faster than others?
- How far does your Scout Truck travel? What makes your Scout Truck slow down and then stop?

REVIEW:
- What do you know now that you did not know before?
- What forces are acting on your Scout Truck as it goes down the track? What caused your Scout Truck to slow down? What changes helped it go faster?
- What did you like about this adventure? What did you not like? What would you do differently?
- What elements of STEM were in this adventure? Science? Technology? Engineering? Mathematics?

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It starts with Scouts.