

## Plan: How can I help prepare students and myself for a great day of learning?

The **Strong and Stable Structures** program is designed to enrich and expand the Grade 3 classroom STEM\* program by bringing the Ontario Science, Technology and Math curriculum to life through a hands-on, learning experience at Forest Valley Outdoor Education Centre.

\*An integrated application of Science, Technology, Engineering and Mathematics

### Curriculum Connections:

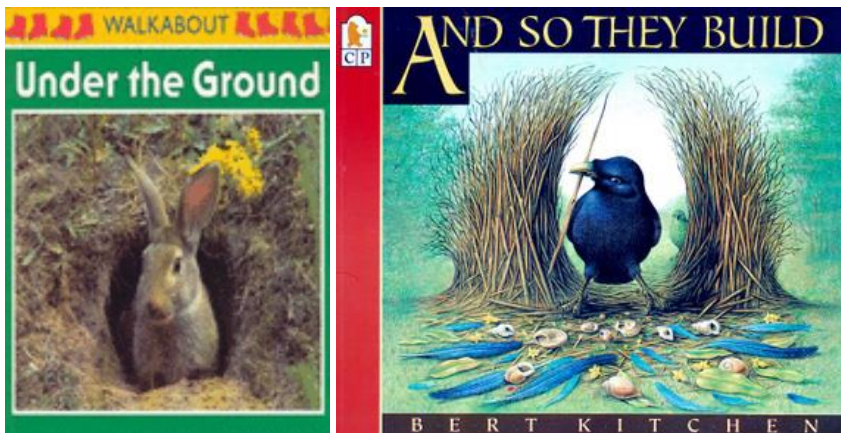
- [Science and Technology 1-8 Understanding Structures and Mechanisms, Strong and Stable Structures \(pp.73-75\)](#)
- [Mathematics, Measurement, Geometry and Spatial Sense \(pp. 57-60\)](#)

### Some guiding questions to support effective field trip planning:

- Why did you choose **Strong and Stable Structures**?
- How does it integrate into your classroom program?
  - Is the field trip going to act as a “minds on” engagement where students formulate questions for inquiry?
  - Is the field trip an opportunity for students to gather evidence for an inquiry already in progress?
  - Is the field trip a culminating experience for students to apply their learning?

### Possible Pre-Trip Experiences:

- document (sketching, photos) a community/playground walk looking for structures
- begin a Know, Wonder, Learn (KWL) chart based on the Framing Question (**How can nature teach us to design and build strong and stable structures?**) to bring with you to Forest Valley
- reading books related to natural structures (available from Forest Valley’s Library)
- explore the relationship between 2D and 3D shapes
- build structures at school to investigate strengths and weaknesses of various designs and shapes
- test/measure the strengths of structures using different forces (mass, wind etc...)
- have students practice drawing their structures to record their measurements and observations
- use Google images to research examples of “architecture inspired by nature”



To borrow books please contact Forest Valley OEC ([ForestValleyOutdoorEdCentre@tdsb.on.ca](mailto:ForestValleyOutdoorEdCentre@tdsb.on.ca) or 416-395-5110)

**TDSB Web Resources** (note, these may only be accessible through a TDSB computer):

- [MediaNet](#) (Library & Learning Resources: Grade 3 Science and Technology Structures and Mechanisms)
- [TDSB's Virtual Library](#).