

# GRADE 3 SCIENCE: STRUCTURES & MATERIALS

## SURVIVAL SHELTER

### OUTCOME

- SM3.1 - Investigate properties of materials and methods of joinery used in structures.

### BACKGROUND KNOWLEDGE

- Shelters provide necessary protection from the elements.
- Shelters vary around the world, based on their purpose, climate, environment and materials available.
- 2D and 3D shapes can be found in structures, offering strength, and stability.
- Rectangles, arches, and triangles are the most common shapes found.
- Animals also construct a variety of shelters!

## ACTIVITY: EMERGENCY SHELTER

1. Send home a list of desired items for the project.
2. Ask families to label any items they want returned.
3. Show students short student survival video-
4. Bring all collected items outside and spread out so that everything is visible.
5. Divide class into groups of 3-4 students.
6. Teams take turns selecting items from the collection.
7. With materials chosen- groups need to create an emergency shelter.
8. Once complete, students present their shelter and classmates evaluate their design.

### MATERIALS

Variety of fort building materials:

- tarps.
- large pieces of cardboard.
- old sheets.
- newspaper.
- particle board.
- thin blankets.
- rope.
- duct tape.
- zip ties.
- bungee cords.
- long branches.
- pieces of wood, etc.

### TOP TIPS

1. Can be done in all seasons!
2. Block off at least half the day for this activity.
3. Ideally find a space with trees.
4. Try to space teams apart so that ideas are original.
5. If you need more building materials, ask staff to contribute.

### ESSENTIAL QUESTIONS

1. What are the best building materials?
2. What shelter designs are best suited for our local environments?

### HEALTH/SAFETY

- Monitor students to make sure that they aren't balancing larger items overhead.

### EXTENSIONS

1. **MATH (SS3.3)**- Measure and record the dimensions of their shelters.
2. **MATH (SS3.5)**- Document shapes found in their design.
3. **ELA (CC3.2)** – Make a blueprint before starting, including sketches and notes.
4. **ELA (CC3.4)**- Write a short survival story using their shelters for inspiration.

### DID YOU KNOW?

Beavers are so efficient at felling trees that Meewasin needs to protect some trees in the river valley from being chewed down!

# GRADE 3 SCIENCE: STRUCTURES & MATERIALS

---

## TAKING IT FURTHER

1. **EXPERTS-** Invite a parent who works in construction to bring in their work tools & PPE to talk about their job!
2. **FIELD TRIPS-** Visit Beaver Creek to learn more about Nature's greatest engineer- the beaver!

## RESOURCES

1. Blog post- How to build an outdoor fort.
2. Video- Homes around the world.

## HOME CONNECTION

- Build a fort at home- snow, blanket, box, ice blocks, cardboard, tarp, branches, etc.