Challenge Card Water Bug Discovery

Suited to Section

Challenge Area

Key SPICES growth

Likely Scout Method elements

Summary statement

Water bugs (AKA aquatic macroinvertebrates) are small creatures that have no backbone, live in water and can be seen with the naked eye. They live in and around water and provide food for larger animals like fish, frogs, birds and platypuses. In this citizen science activity, Scouts will head down to their local river or creek and investigate the water bugs that live in and around it.

Challenge Card Water Bug Discovery

Plan

Ask your Unit to consider the purpose of this activity:

- Discuss what water bugs are with your Unit.
- Why are water bugs important to our waterways?
- Can we learn anything about our waterways from the water bugs that live in them?
  - Choose which local waterways you will visit to collect your samples.
  - Conduct your risk assessment – ensure everyone is prepared to be sun smart and safe around water.

Organise your equipment, you will need:

- Sampling
  - Sampling nets on a poles (e.g. fish tank nets)
  - Buckets
  - Waders/gumboots
- Picking
  - Small, clear containers
  - White plastic spoons
  - 1–2 ice cube trays (per tray)
  - Magnifying glasses
  - Small LED torches
  - Laminated water bug identification guides (suitable for your area and age group, see resources for examples)

Print your data recording sheets and your water bug identification guide or download the Museums Victoria "Field Guide to Victorian Fauna" app.

Do

Collect water bugs from the range of microhabitats in and around the waterway:

- Using the nets, strain water at different depth, from the water's surface to the bottom.
- Look for bugs at the water's edge and on nearby plants and rocks. Use the spoons to transfer the bugs to your clear collecting containers.
  - Sort your water bugs by type and store them in separate, water-filled compartments in the ice cube trays.
  - Use your laminated guides to identify the bugs you have collected and record what you have found in your data recording sheet. You might also want to draw the bugs you have found.
  - Using the equation on the data recording sheet, calculate the SIGNAL score for your sample and estimate your waterway's health.
  - Return the bugs to the waterway. Ensure you return them to the same place you found them and wash equipment before moving to a new location to avoid spreading pests or disease.

Review

Discuss what you found in your waterways with your Unit:

- Were there more or less water bugs than you expected?
- Do you think your local waterways are healthy?
  - Pull together photos of the activity as a record
  - Ensure the data collected is shared with the group and kept for records
- How could your unit share your results with waterway managers?
  - What could your unit do to assist in keeping the waterways healthy?
- Are there any volunteer groups that maintain this waterway?
- Are there any Scouts in your unit that wish to continue monitoring this waterway, perhaps as a Special Interest Area Project?