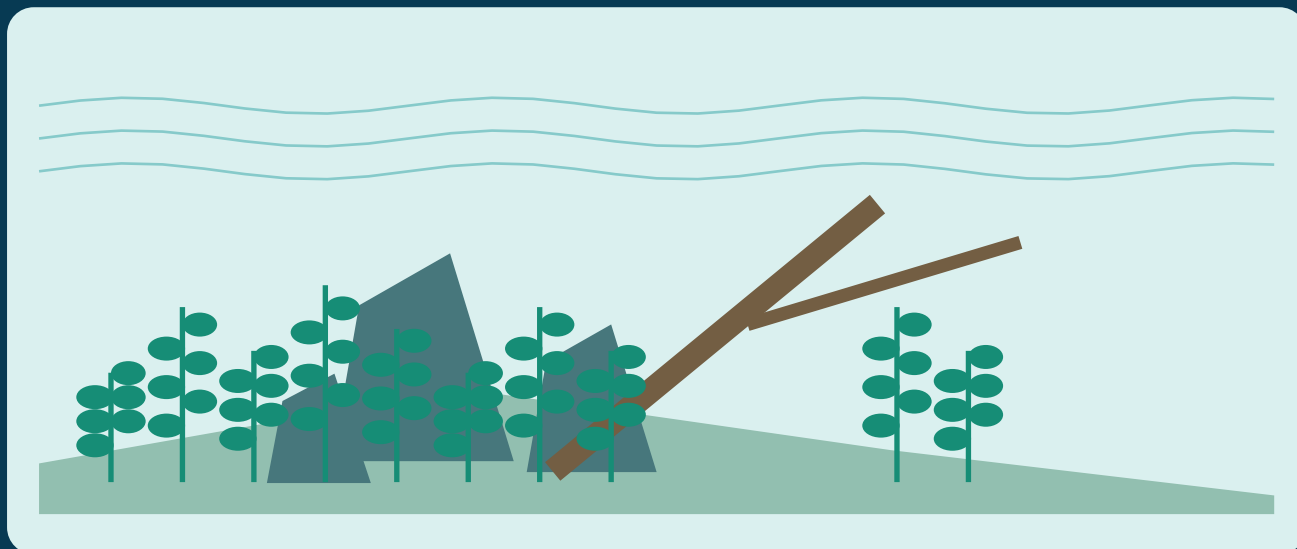


Introduction to Aquascaping

Understand the essentials. Plan a beautiful first aquarium.



DISCOVER. LEARN. CREATE.

Practical lessons | Printable worksheets | Knowledge checks

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Your learning route

A practical, self-paced guide for planning and caring for freshwater planted aquariums. Read the lessons in order, complete the worksheets and use the knowledge check to review the key decisions.

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Practical takeaway

The layout ideas and examples are teaching exercises. Equipment instructions, exact plant requirements and species-specific animal care take priority over a generic example.

LESSON 01

Living art, built around life

What an aquascape really is

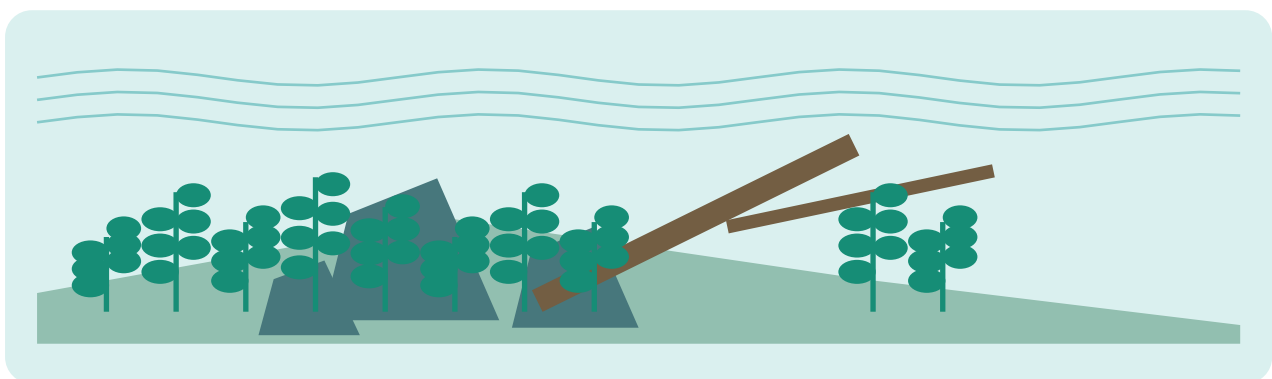
Aquascaping is the deliberate arrangement of plants, wood, stones and open water inside an aquarium. A successful layout has two jobs: it creates a pleasing view and provides an environment its inhabitants can use. Those jobs should support each other. A sheltered corner can also be an attractive planting group; a swimming lane can become a strong visual pathway.

Start with a realistic outcome

For a first project, aim for healthy plants, reliable equipment and a composition that remains attractive between maintenance sessions. A simple planted wood-and-stone layout is often a better learning project than a demanding carpet. The photograph you admire may show months of growth, frequent trimming and equipment outside the frame. Plan for the work behind the image.

Choose what you want to learn

Decide whether this aquarium is primarily a plant display, a fish habitat or a balance of both. Then write a one-sentence brief: "A green, low-tech aquarium with an open foreground and easy weekly care." Use that sentence whenever a new purchase tempts you. A coherent brief prevents conflicting choices.



Practical takeaway

Your first success is a stable aquarium you can maintain, rather than an exact copy of a competition photograph.

LESSON 02

Low-tech or injected CO2?

Two useful routes

A low-tech planted aquarium usually runs without injected carbon dioxide and uses plants that cope with modest light. It still needs filtration, fertiliser where appropriate, water testing and regular care. Growth is generally slower, which can make trimming easier. "Low-tech" does not mean self-maintaining.

When more equipment makes sense

Injected CO2 can support demanding plant choices and faster growth. It also brings cylinder, regulator, diffuser, timing and monitoring responsibilities. Higher light without matching carbon supply often creates problems rather than a shortcut to better plants. Choose the whole system together; do not buy a powerful light and assume every plant will thrive.

A sensible beginner decision

Start without injection if you prefer a measured pace and can accept an open foreground instead of a dense lawn. Consider a properly installed CO2 system when a researched planting plan needs it and you can monitor livestock and equipment daily. Product categories such as "easy" or "advanced" are useful shopping filters, but check the requirements of the exact species and cultivar.

Practical takeaway

Carbon is a plant requirement; bottled products marketed as liquid carbon are not equivalent to a regulated gas-injection system.

LESSON 03

Choose a tank you can support

Think in dimensions, not only litres

A long aquarium provides different swimming space from a tall one with the same stated volume. Depth from front to back also matters when arranging wood and planting layers. Look at the adult requirements of any intended fish before choosing dimensions. Do not use a universal fish-per-litre formula.

Make the location workable

Select a position where you can reach the rear corners, lift the lid, service the filter and carry water safely. Direct sunshine makes the light schedule difficult to control. Leave room for hoses and cables. Use a stand rated for the complete filled system and install the tank exactly as its manufacturer requires; support pads are not interchangeable between tank designs.

Estimate practical weight and volume

Water alone weighs approximately one kilogram per litre. The glass, substrate, rocks, stand and equipment add more. A nominal 60-litre tank does not contain 60 litres of water once the hardscape is installed. Record actual water added during filling; that is more useful for product dosing than the capacity printed on the box.

Practical takeaway

Check access, stand loading and installation instructions before buying the aquarium.

LESSON 04

Understand the equipment

Filtration and temperature

The filter moves water and houses biological filtration. Choose one suitable for the tank and livestock, with media that can be cleaned without replacing everything at once. An adjustable outlet is helpful when different animals need different flow. A heater is needed when the chosen species cannot stay within its suitable temperature range at room temperature; confirm with a separate thermometer.

Light and essential supplies

A timer creates a repeatable day. A dimmable aquarium light gives more control than simply extending the lighting period. Keep test kits for ammonia, nitrite and nitrate, plus pH and hardness tests where relevant to your livestock. Buy a conditioner suitable for your water supply, dedicated buckets, a siphon and a glass-cleaning tool suited to the tank material.

Maintenance belongs in the design

Place the filter intake where you can inspect it. Keep plants away from the heater and provide enough room to remove equipment without dismantling the layout. Keep electrical connections dry, use drip loops and follow local electrical protection guidance and manufacturers' instructions. Unplug equipment as directed before putting hands in the water.

Practical takeaway

Spend on reliable essentials and test kits before decorative extras.

LESSON 05

Plants, substrate and hardscape

Build a compatible palette

Use a few contrasting plant forms: broad leaves near wood, fine leaves in the background and a lower group in front. Repetition looks more deliberate than buying one specimen of every plant. Anubias and Java fern are useful starting choices for attachment planting, while a suitable Cryptocoryne can form a rooted midground group. Confirm exact plant sizes before purchase.

Match the bottom layer to the plan

Aquarium gravel can support roots but normally supplies little nutrition. Root tabs may suit selected rooted plants. Active aquasoils can supply nutrients and alter water chemistry; some release ammonia initially. Follow the specific product's filling and water-change directions. Fine sand gives an attractive open area but is not a substitute for the needs of rooted plants.

Keep materials predictable

Buy aquarium-suitable wood and stones from a reliable supplier. Some stones change hardness, and wood may stain water with tannins. Neither effect is automatically a problem, but both should fit the planned livestock. Never use unidentified garden materials, treated wood or rock contaminated with chemicals. Inspect edges and build stable structures before filling.

Practical takeaway

For rhizome plants, keep the thick horizontal growing stem exposed rather than buried. [P]

LESSON 06

Water chemistry without the confusion

The terms you need

Ammonia and nitrite are harmful nitrogen compounds associated with waste and an immature or disrupted filter. Nitrate is another nitrogen compound that accumulates in many systems and is managed with appropriate maintenance. pH describes acidity or alkalinity; GH describes general hardness and KH relates to buffering. These are different measurements, not interchangeable scores.

Test your starting water

Measure the source water before selecting sensitive livestock or using products that change chemistry. Choose animals suited to the water you can reliably provide. Altering pH with repeated quick-fix additions can create instability. If a specialist species needs softer water, plan the complete preparation method with an experienced aquarist rather than chasing a single reading.

What cycling means

A new aquarium needs biological capacity to deal with an ammonia source. Clear water and a few days of running are not proof of readiness. A measured fishless cycle allows this capacity to develop before animals are exposed to waste. Follow a purpose-made product's dosing protocol, test and record results, and confirm that ammonia and nitrite return to zero after its specified challenge before stocking. [O]

AMMONIA

Waste / known source

NITRITE

Intermediate compound

NITRATE

Managed by maintenance

Practical takeaway

Never add household ammonia of unknown purity, and never dose ammonia into a tank containing animals.

LESSON 07

Composition you can practise today

Choose one focal area

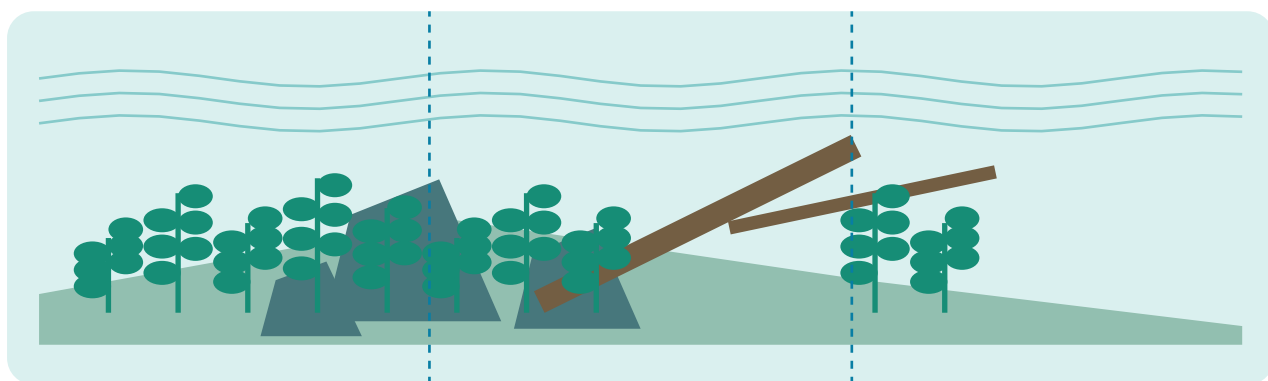
Place the strongest wood or stone group slightly away from the middle as an easy starting exercise. The often-used thirds grid is a planning tool, not a rule that overrides animal space or structural safety. Repeat smaller pieces around the main group so the layout reads as one scene.

Create three layers

Use an open or low foreground, a clearly shaped middle and a taller background. Overlapping pieces can create depth, but leave gaps for cleaning and water movement. A path looks deeper when it narrows towards the rear. Check that any apparent cave is truly accessible and cannot trap the intended animals.

Test before planting

Make three arrangements on a safe work surface or in the empty tank according to the manufacturer's support requirements. Photograph each from normal viewing height. Compare silhouettes, open space and maintenance access. Once water and plants are added, large changes become harder. Keep the simplest arrangement that communicates the idea clearly.



Practical takeaway

An attractive empty layout is only a starting point: imagine its plants at mature size.

LESSON 08

Your first project roadmap

Plan and prepare

First, choose the tank, location and intended animals. Test the source water, select compatible equipment and make a simple planting map. Next, build and secure the hardscape, prepare plants and fill gently with appropriately conditioned water. Check temperature, circulation and equipment operation before beginning the cycling programme.

Establish and observe

Use a conservative, repeatable lighting period during establishment. Six hours daily is a useful starting example from Tropica; adjust to the actual system and plant response. [G] Keep a dated record of water tests, water changes and new growth. Do not introduce fish, shrimp or snails just because plants appear settled.

Stock and maintain

After the system meets its cycling protocol and the water suits the intended species, stock gradually and monitor water quality. Ask the supplier for species-specific acclimatisation and feeding guidance. Maintain a simple routine: inspect daily, test regularly, trim when required and change water according to the system's readings and needs. Go slowly enough to learn what each change does.

Practical takeaway

A calendar helps organise care; water tests and animal requirements decide readiness.

WORKSHEET 1

My project brief

Print this page or add notes with your PDF reader. These are static worksheets, not interactive form fields.

Main purpose

Desired appearance

Time available each week

Tank dimensions and actual water volume

Source-water pH / GH / KH

Intended animals and adult needs

WORKSHEET 2

Before I buy

Print this page or add notes with your PDF reader. These are static worksheets, not interactive form fields.

- ☐ Suitable tank stand and location confirmed
- ☐ Source water checked
- ☐ Filter, light and timer selected
- ☐ Test kits and conditioner included
- ☐ Plant requirements checked
- ☐ Maintenance access drawn into the layout

Notes and next actions

KNOWLEDGE CHECK

Check your understanding

Try each question before reading the answer below it.

01 Does clear water prove a tank is cycled?

Answer: No. Confirm biological capacity with a measured fishless protocol and ammonia/nitrite tests.

02 Which part of Anubias should stay exposed?

Answer: The rhizome: its thick horizontal growing stem.

03 What is more useful than a fish-per-litre rule?

Answer: Adult size, swimming space, behaviour, compatibility and filtration capacity.

04 What should come first: a carpet or a system plan?

Answer: The system plan. Plant choices must fit the light, carbon supply and maintenance you can provide.

Apply it to your aquarium

Write one decision you will change or confirm after reading this guide. Record what evidence you need and when you will review the result.

REFERENCES AND USE

Reference shelf and use notes

Care references

The letter codes identify selected care recommendations. The original lesson structure, design exercises, examples and worksheets are educational synthesis. Sources checked on 12 October 2026; product and species guidance can change.

[O] OATA - How to set up and maintain a planted aquarium (September 2022)

<https://ornamentalfish.org/wp-content/uploads/How-to-set-up-and-maintain-a-planted-aquarium-Sept-2022.pdf>

[G] Tropica Aquarium Plants - Growing-in

<https://tropica.com/en/guide/get-the-right-start/growing-in/>

[P] Tropica Aquarium Plants - Planting

<https://tropica.com/en/guide/get-the-right-start/planting/>

[C] Tropica Aquarium Plants - Fertiliser and CO2

<https://tropica.com/en/guide/make-your-aquarium-a-success/fertiliser-and-co2/>

[H] Tropica Aquarium Plants - Hardscape and substrate

<https://tropica.com/en/guide/get-the-right-start/hardscape-and-substrate/>

[M] Tropica Aquarium Plants - Care

<https://tropica.com/en/guide/care/>

[R] RSPCA - Choosing an aquarium for pet fish

<https://www.rspca.org.uk/adviceandwelfare/pets/fish/environment>

[A] Tropica Aquarium Plants - Plant catalogue and species details

<https://tropica.com/en/plants/>

Scope and animal welfare

For freshwater planted aquariums. This guide is not a marine manual, professional qualification or veterinary diagnosis. Check exact species requirements before stocking. Never release aquarium plants or animals into the wild. Obtain individual advice for unexplained illness, unsafe water readings or persistent problems.

Digital edition

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