

Wild Alberta Sketching

Sustainable Calgary and The University of Calgary

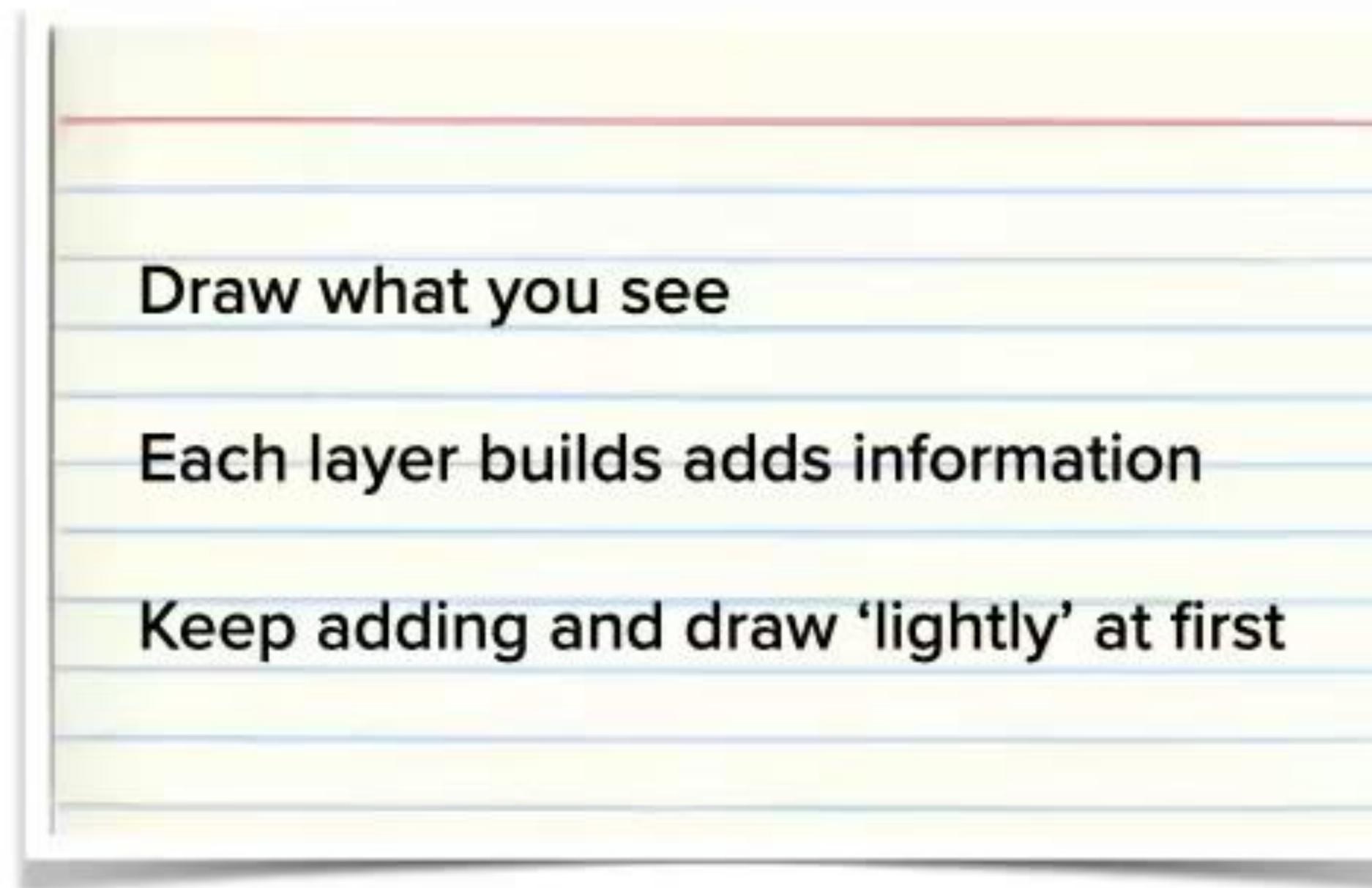
In this presentation

Slides 3, 5, and 7 are short movies (3 to 5 minutes) that you can draw along to.

Slides 4, 6, and 8 have information unique to each species.

Slides 10 through 13 show famous examples of design inspired by nature.

Sketch 1



GREAT POND SNAIL

Lymnaea stagnalis



Snail mucus Gliding and staying in place

- Snails move around using a large foot
- They produce mucus that their foot moves through
- The mucus helps the foot glide when the snail is traveling
- The mucus also helps the snail stay in one place
- This allows snails to hang sideways and upside down

Sketch 2

Draw what you see

Each layer builds on the next

Keep adding and draw 'lightly' at first



Oncorhynchus mykiss

RAINBOW TROUT

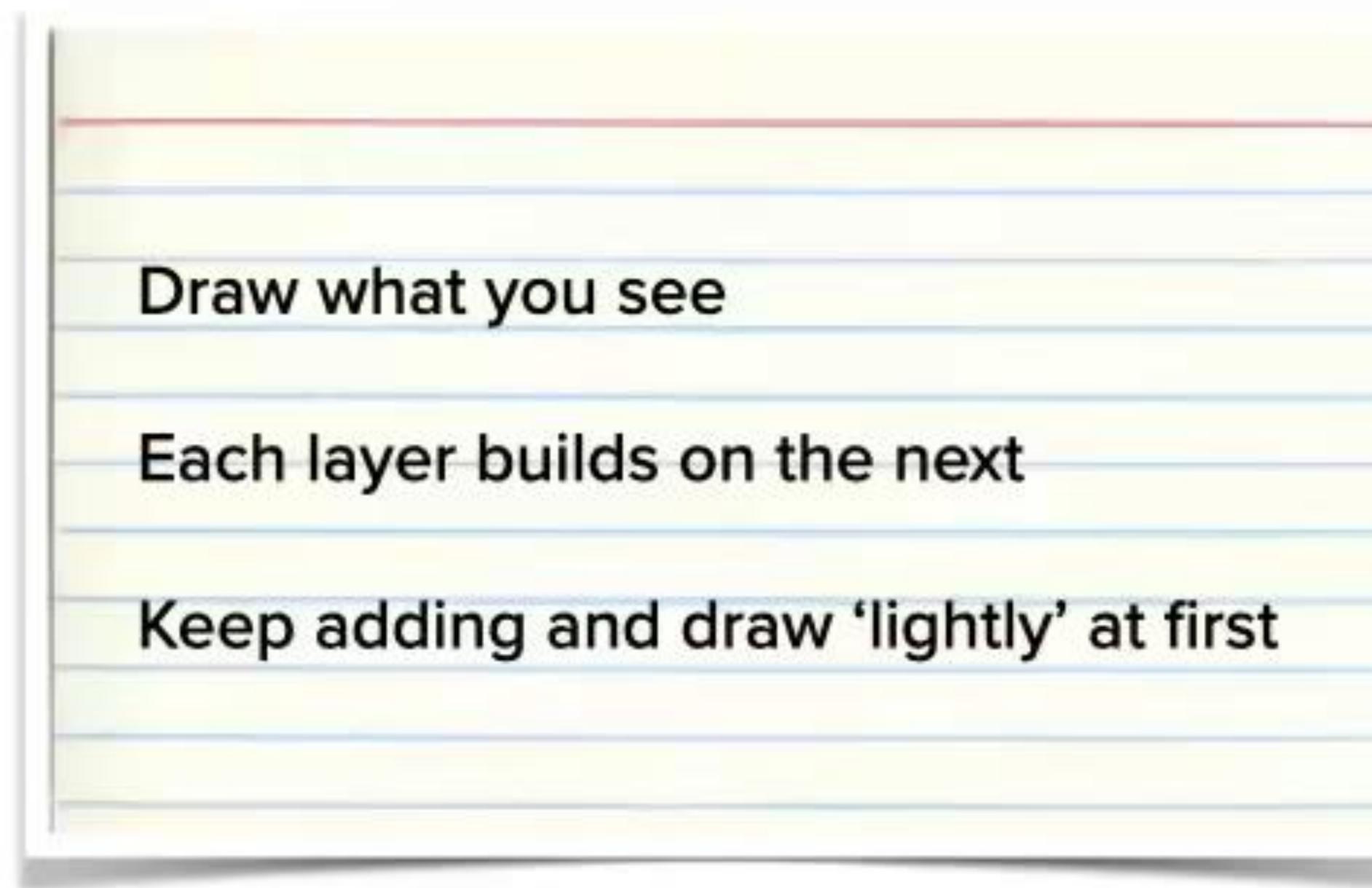


Rainbow Trout

Oncorhynchus mykiss

- Trout swim upstream. They swim into water vortices, where water flows in circles. By swimming into the upstream flow, they likely save energy.
- Trout can sense magnetic fields. This helps them navigate in water.

Sketch



BLACK-CAPPED CHICKADEE



(Poecile atricapillus)

Chickadees conserve Energy to survive cold winters

- To do so, they lower their body temperature
- They also slow their heart rate
- They get their name from the sounds they make

How can nature inspire us?





*How studying
BIRD WING
inspired ...*





*How
BUR SEEDS
inspired ...*

*George de Mestral
to invent*

VELCRO



credit: Velcro IP Holdings LLC

How the... **MOSQUITO PROBOSCIS** *inspired ...*

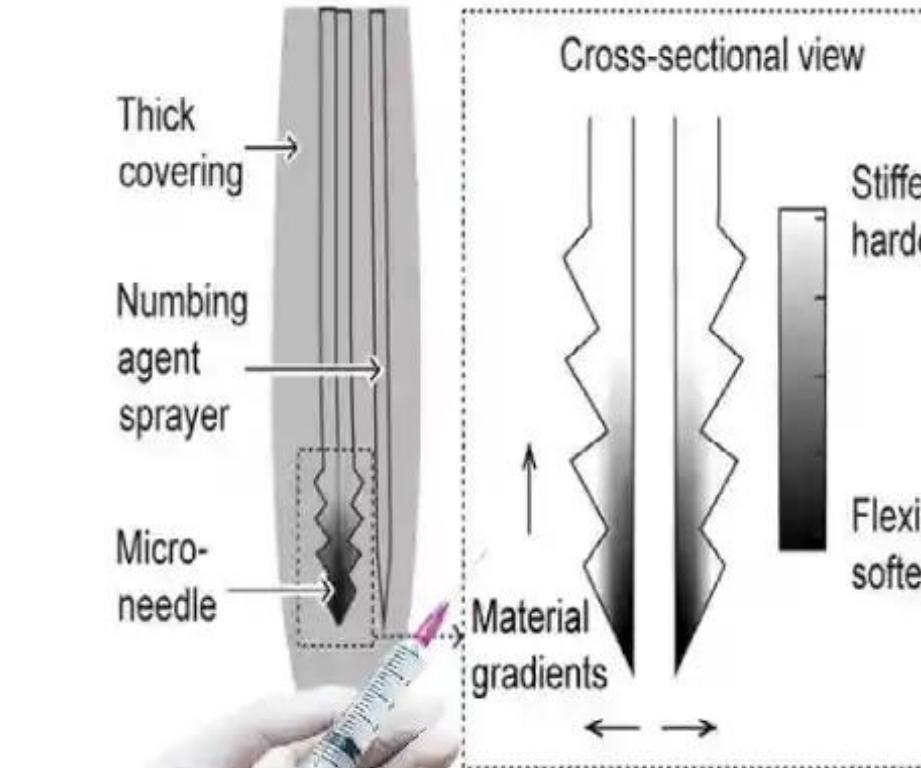


a less painful **NEEDLE**

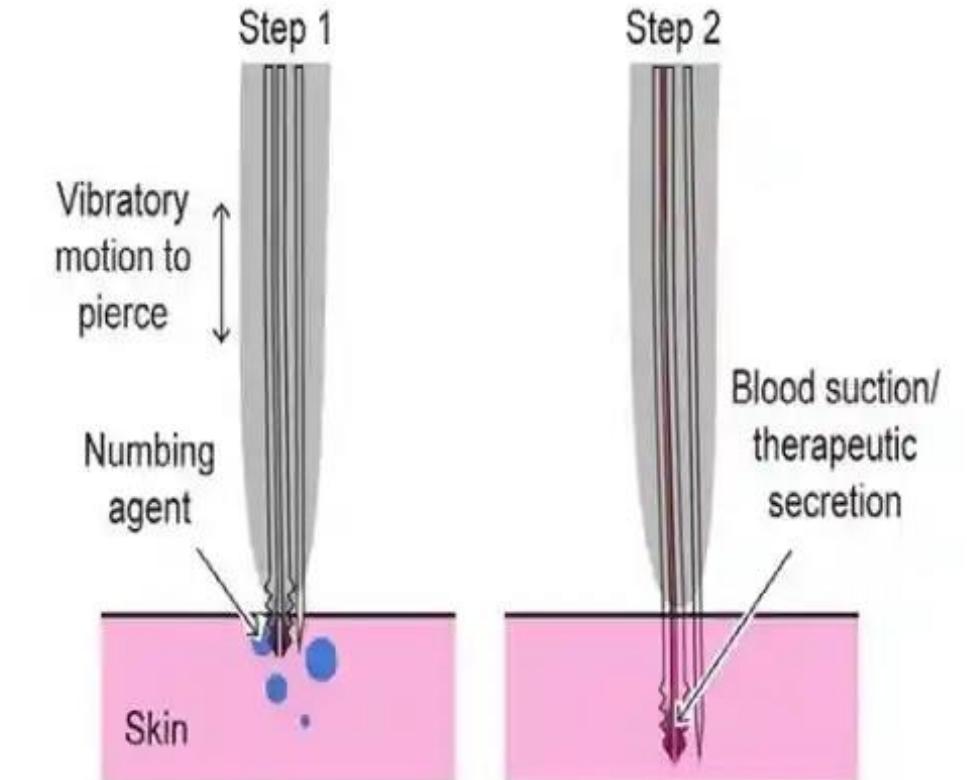
by M K Ramasubramanian, O M Barham and V Swaminathan

Mosquito-inspired microneedle

Design and material



Working mechanism

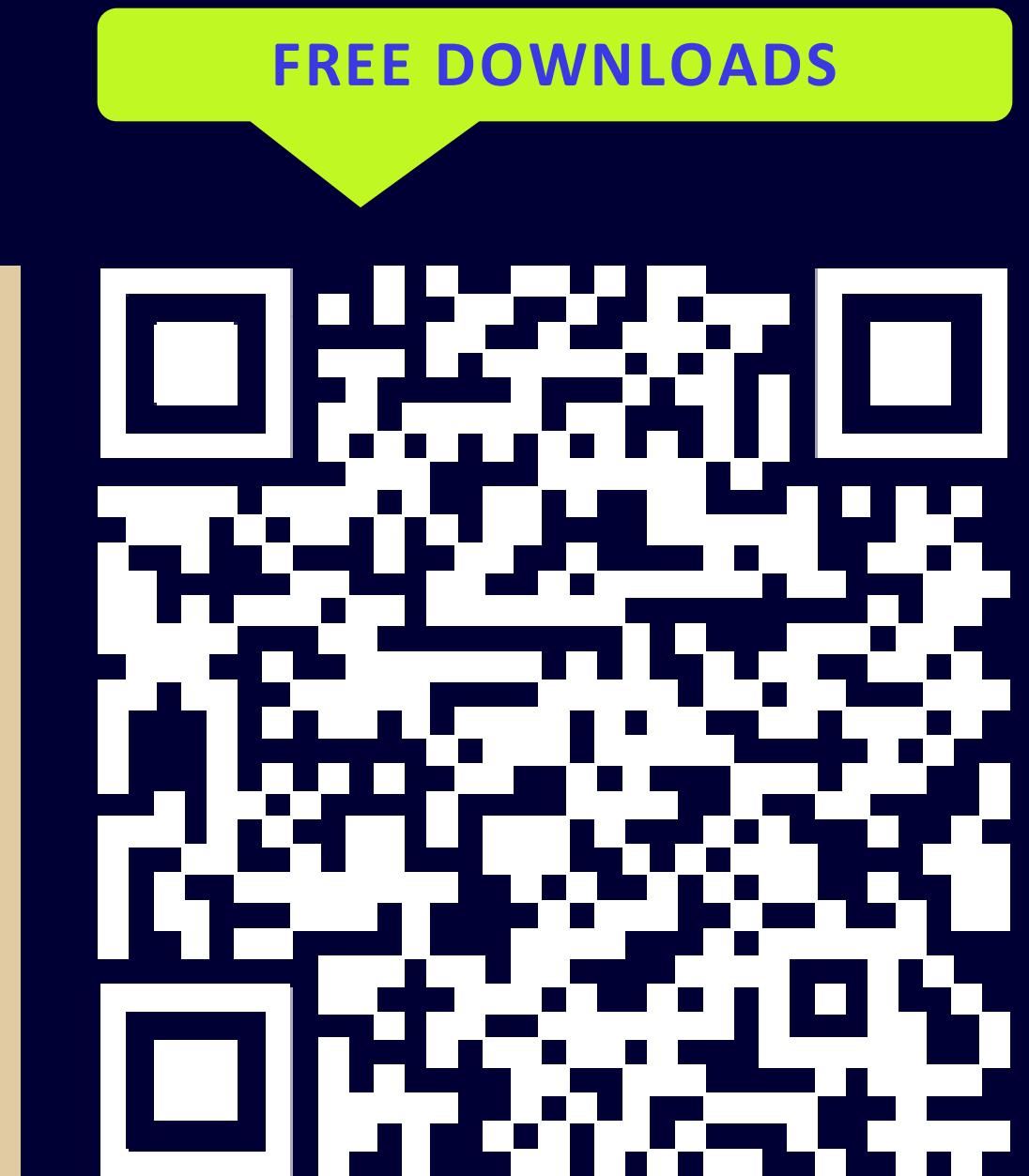
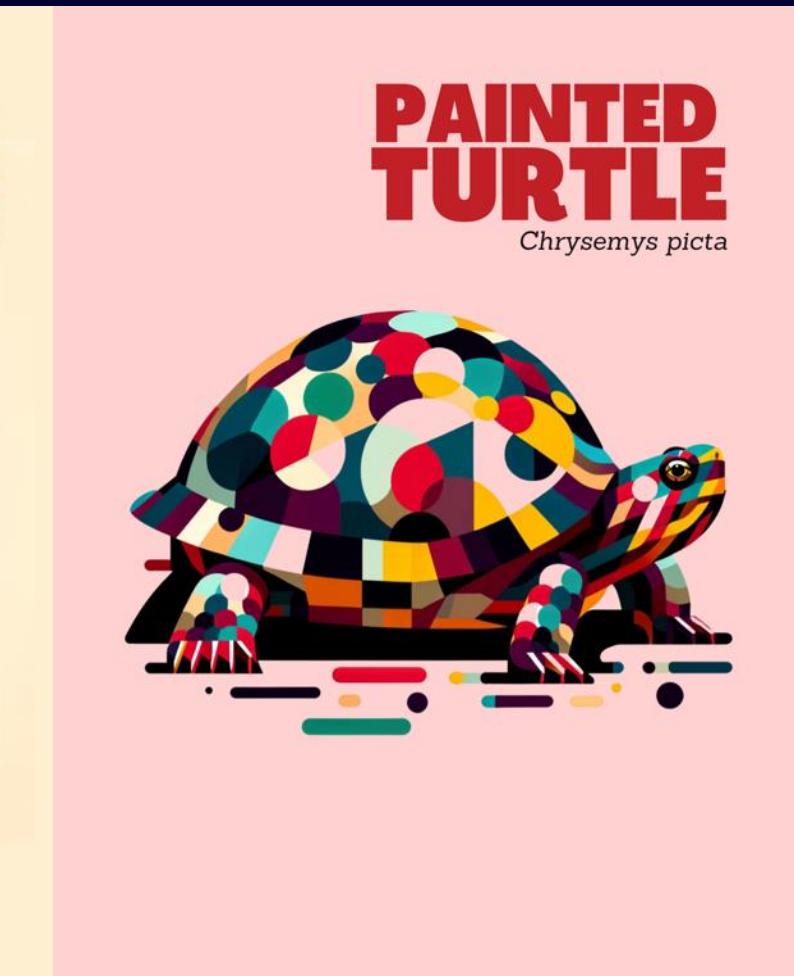
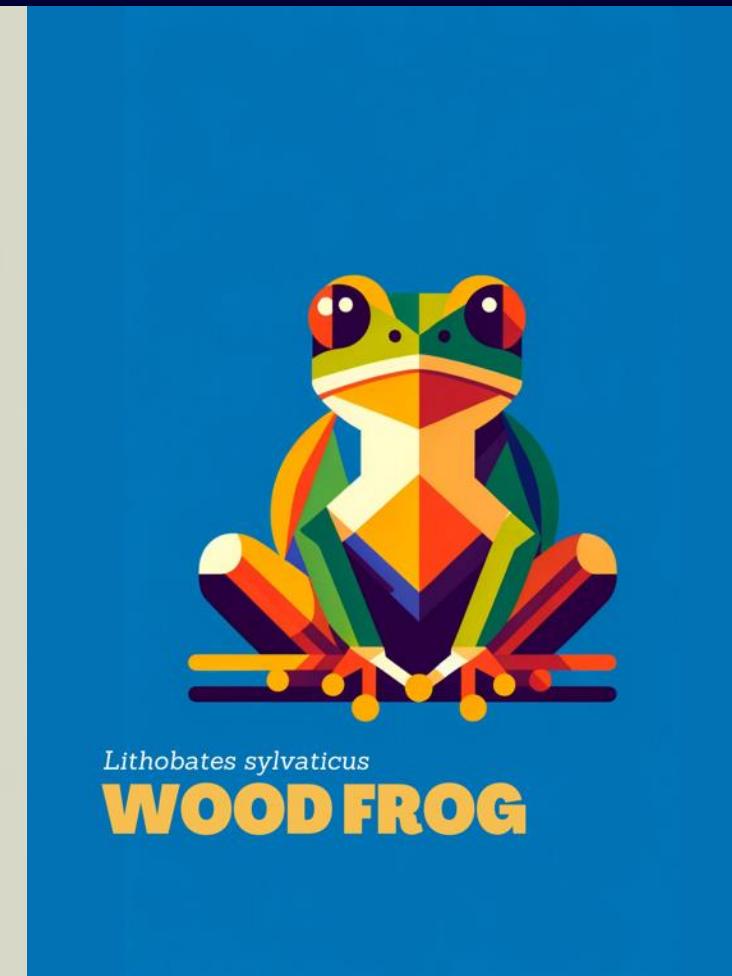


How the...
Slime Slug
inspired ...



sticky
Surgical Glue





Keep sketching, keep learning from nature ☺