Sustainable Design with Biomimicry

CLASSROOM REFERENCE

Curriculum

Design Principles for Sustainable and Green Chemistry and Engineering
https://www.acs.org/content/acs/en/greenchemistry/principles.html

Beyond Benign

• Introductory Matching Game
  https://www.beyondbenign.org/lessons/intro-biomimicry-matching-game
• Advanced biomimicry matching game
  https://www.beyondbenign.org/lessons/advanced-biomimicry-matching-game
• Sustainable STEM: Surefire Sharklet Lab (Grades 6-9)
  https://www.beyondbenign.org/curriculum_topic/ms-sustainable-stem
• Secrets of Sharks' Skin (Grades K-5)
  https://www.beyondbenign.org/curriculum_topic/es-4th-grade

Ask Nature
https://asknature.org/

• Mussels inspire wood glue
  https://asknature.org/idea/purebond-technology
• Gecko-inspired bandage
  https://asknature.org/idea/gecko-inspired-bandage
• Sharklet surface texture
  https://asknature.org/idea/sharklet-surface-texture

Biomimicry Institute
https://biomimicry.org

Green Chemistry at Ecology
https://ecology.wa.gov/GreenChem

Green Chemistry Challenge Winners
https://www.epa.gov/greenchemistry/green-chemistry-challenge-winners

Videos

• Velcro (Grades 1-4)
• How Do Geckos Climb? (Grades 1-5)
• Gecko feet (English and Spanish) (Grades 4-6)
• Biomimicry

References

1 Deynat, Pascal. “Dermal denticles of a lemon shark viewed through a scanning electron microscope.” Creative Commons Attribution-Share Alike 3.0 Unported (creativecommons.org/licenses/by-sa/3.0/deed.en). Image modified, cropped to circle.