PACKAGING How can nature help us design more sustainable packaging

STUDENT WORKSHEETS

W3.1 SUPERIOR MODELS Examples

VENUS FLY TRAP

The 'Venus Fly Trap' is a carnivorous plant that catches prey within its folded leaves. The plant does this when the hairs on the outside of the trap are touched by prey, signalling to the leaves to close around its prey. It is important how many hairs are touched, but also how much time there is between the moments of contact.

S Function: open and close when necessary



COCONUTS

The coconut palm spreads its seeds in a hard shell that contains everything needed for a long journey. Inside there is a stock of food, the so-called meat, and a half gallon of water. On the outside it provides a fibre raft that lets the seeds float on water.

S Function: keep the item you package fresh



CHESTNUTS

Chestnut nuts are wrapped in an envelope which protects the nuts from other organisms. Because of the fuzzy spikes on the outside of the fruit, they are less attractive for animals that would otherwise eat the chestnuts before they are ripe.

Function: protection



There are different types of berries, each with different colours. With these colours they send signals to other organisms. The colours say something about the taste, toxicity and maturation of the berries.

S Function: communication



CEREBRAL FLUID

Around the human brain you find a layer of liquid. This liquid prevents the brain from becoming damaged if, for example, we bump our head. The liquid has an absorbing effect.

S Function: protection

TURTLE

The turtle protects its body by carrying a large shell. The shell places important organs in the abdominal cavity of the turtle, safely protected from outside influences.

Function: protection