THE STANDARD

Plant & Animal Reproduction

Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

DCI
DISCIPLINARY CORE IDEA

LS1.B · Growth and Development of Organisms

> *Animals engage in characteristic behaviors that increase the odds of reproduction. Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction.*

Reproduction isn't automatic. Animals do specific things (build nests, sing, display, defend young, herd) that raise the odds their offspring survive long enough to reproduce themselves. Plants can't move, so they grew structures (bright flowers, nectar, scent, hooked seeds, fruit, nut shells) that get animals to do the moving for them. **Both sides are running the same play: increase the probability that the next generation actually shows up.**

SEP
SCIENCE & ENGINEERING PRACTICE

Engaging in Argument from Evidence

> *Use an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem.*

Students aren't writing a definition of reproduction. They're making an argument. They pick a behavior or a plant structure, then use evidence (what they observed, what they read, what the data shows) and scientific reasoning to defend a claim about how that trait boosts reproductive success. Counter-evidence is fair game. **The argument has to hold up.**

CCC
CROSSCUTTING CONCEPT

Cause and Effect

> *Phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability.*

Nothing here is a guarantee. A peacock with a bigger tail doesn't always win the mate. A dandelion seed doesn't always land somewhere it can grow. These are cause-and-effect relationships expressed as probability: this trait makes successful reproduction more likely, not certain. **Students need to reason in odds, not absolutes.**