蝴蝶 · 帝王蝶

观察卡

选1–3项试试；可指、说、画，书写可选。

1 · 看一看

指出黑色翅脉和白色斑点。左右翅膀有什么相似之处？



帝王蝶成虫教学插画，非现场鉴定。

2 · 选一选

从卵开始说顺序。幼虫之后先是蛹，还是直接成虫？



卵、幼虫、蛹、成虫；放大比例不同。

先成蛹　直接成虫

3 · 选一选

幼虫吃乳草，成虫吸花蜜。它们需要的食物一样吗？

完全一样　不一样

4 · 写一写

在知识卡找到“幼虫”。读一读，再选着写。

幼虫

5 · 画一画

挑两个阶段画下来。用箭头连接，标出一个变化。

6 · 记一记

我发现的变化：_____

两个阶段的食物：_____

还想知道：_____（可画或口述）

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知识卡

帝王蝶的一生

帝王蝶是一种蝴蝶，学名Danaus plexippus。幼虫和成虫形态不同。

认一认成虫



个体有差异 · 插画不是测量图

- 橙色翅面；黑色翅脉与边缘；白色斑点
- **相似物种：**不能只凭颜色鉴定
- **翅展：**展开双翼的两端距离；个体有差异
- **翅展范围：**8.5到12厘米

繁殖 · 下一代怎样开始?

成熟后交配 → 雌蝶产卵 → 幼虫孵化

- **产卵处：**乳草，常在叶背
- 成虫 ≠ 马上繁殖；部分迁徙世代会推迟
- **图示范围:** 无统一天数；受精卵开始下一代

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知识卡

生活条件

- **草地、花园：**寄主植物 + 蜜源
- **本地是否存在：**需核对

两种食物

- 幼虫 ← 乳草类植物
- 成虫 ← 多种花的花蜜
- **其他蝴蝶幼虫：**食物不同

前半程





卵 → **幼虫**

- 孵化 → 取食乳草 → 长大 → 化蛹
- **图示范围:** 连续四阶段；大小与时间非比例

完全变态 · 后半程





蛹 → **成虫**

- 蛹内身体改变 → 羽化 → 成虫吸花蜜
- **部分已知:** 两种取食联系

- 各阶段放大不同；没有固定天数
- 仅示取食联系，非完整食物网
- 成人陪同远看；不捕捉、不碰卵蛹、不尝植物

资料：Florida Museum · USFWS · MJV

Monarch butterfly

Observe

Choose 1–3 tasks. Point, say or draw; writing is optional.

1 · Look

Point to black veins and white spots. What looks similar on the two sides?



An adult monarch illustration, not a field identification.

2 · Choose

Name the stages from the egg. After the caterpillar, is there a pupa or an adult?



Egg, caterpillar, pupa, adult; different scales.

Pupa first | Adult next

3 · Choose

Caterpillars eat milkweed; adults drink nectar. Do they need the same food?

The same | Different

4 · Write

Find “Caterpillar” on the knowledge card. Say it; write it if you wish.

Caterpillar

5 · Draw

Draw two stages. Link them with an arrow and label one change.

6 · Record

A change I notice: ____
Food at two stages: ____
I wonder: ____ (or draw/say)

Monarch butterfly

Discover

A monarch’ s life

The monarch butterfly is Danaus plexippus. Its larva and adult have different forms.

Recognize the adult



Individuals vary · Illustration is not a measurement

- Orange wings; black veins and borders; white spots
- **Similar species:** color alone cannot identify one
- **Wingspan:** spread tip to tip; individuals vary
- **Wingspan range:** 8.5 to 12 cm

Reproduction · the next generation

Mature adults mate → Female lays eggs → Caterpillars hatch

- **Egg site:** milkweed, often underneath leaves
- Adult ≠ ready to breed; some migratory generations delay
- **Diagram scope:** No fixed timetable; fertilised eggs begin the next generation

Monarch butterfly

Discover

Living conditions

- **Meadows, gardens:** host plants + nectar
- **Local occurrence:** check first

Two foods

- Caterpillar ← milkweed
- Adult ← nectar from many flowers
- **Other butterfly larvae:** different foods

First half





Egg → **Caterpillar**

- Hatch → eat milkweed → grow → pupate

- **Diagram scope:** Four stages; sizes and times not to scale

Complete metamorphosis





Pupa → **Adult**

- Body changes inside pupa → emergence → nectar feeding

- **Partly known:** Two feeding links

- Different image scales; no fixed timetable
- Feeding links only, not a complete food web
- Watch with an adult; no catching, touching eggs/pupae or tasting plants

Sources: Florida Museum • USFWS • MJV