# Canopy Nest Build

## HOST ONLY - preparation and story

**Includes answers. Keep these pages and all hint pages with the adult host.**

Welcome to the fictional canopy survey. The nest must match a linked food web and provide five different parts without cutting any paper. Your team has the original records on the table. First recover five pieces of information, then use the final plan to assemble the canopy nest model. Keep every result beside its badge so another teammate can check your reasoning.

1. Print the six player sheets and two record sheets for each team. Keep answers and hints with the host.

2. Lay out Canopy food web, Nest cards, the remaining clue sheets and the final plan. All task records are printed inside the sheets; no extra prop is needed.

3. After each clue, pass roles one seat clockwise. With two players, combine Reader with Recorder and Checker with Builder. With five or six, add a second checker and a source finder; everyone explains one decision.

4 players; 1 team. Give each team 6 player sheets and 2 record sheets. Share one host guide and one set of three hint levels.

Paper and pencils are enough. Keep whole sheets at one table; nothing needs cutting, folding or hiding.

Optional: 4 invitations or certificates, only if selected.

# Canopy Nest Build

## HOST ONLY - solution guide

### 1. Food: PEEP

Start with LEAF+NECTAR. Newly supported in order: NIB+FLIT > GLIM > PEEP. PEEP needs GLIM OR SEED; that rule is met. Other listed targets remain unsupported.

### 2. Record: EAST

Check source status first, then join the matching tag. The useful information comes from separate records, not their printed row order. Result: EAST.

### 3. Habitat: CUP

Compare all printed features with every positive and negative requirement. Reject each near match using the particular requirement it fails. Result: CUP.

### 4. Path: S-A-B-F

Visit B without using a closed edge. Eligible journeys within 8 units: S-A-B-F costs 5; S-C-B-F costs 7. The least-cost result is S-A-B-F.

### 5. Order: D

The before relationships connect all four events. Place linked cards, check any immediate handoff and then read the specified position. Result: D.

### 6. Final: R1-F2-W1-D2-E1

Each recovered field result sets one separate habitat requirement. Match all five layers; a complete plan must include suitable cover, ground, water, food and access. Checked result: R1-F2-W1-D2-E1.

# Canopy Nest Build

## HOST ONLY - timeline, story and ending

3 minutes: Read the opening. Show the evidence record and choose starting roles.

5 minutes: Solve Food. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Record. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Habitat. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Path. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Order. Offer one hint at a time and rotate roles after checking.

7 minutes: Build the five-part habitat design using all five results.

3 minutes: Read the ending. Ask each teammate to explain one rejected alternative.

After Record: A suitable roof does not guarantee suitable food or water. Keep each habitat need beside its field evidence. Pass the record sheet to a new checker before opening the next clue.

After Path: Four results are recorded. Each teammate points to a source supporting one result. Complete the fifth check before building the five-part habitat design.

Check every result using the solution guide. Offer the next hint only when requested; save the answer reveal until the group is ready.

**The paper model uses parts R1-F2-W1-D2-E1, with every habitat layer matched to its evidence. Thank each teammate for a different piece of reasoning.**

Explain one tempting wrong choice and the evidence that ruled it out. Show how each of the five results affected the five-part habitat design. If a clue is missing, say what remains uncertain before reopening that sheet.

Duration and ages are estimates. Adjust the pace and offer help for your group.

# Canopy Nest Build

## Player clue 1: Food | Team 1

The nest must match a linked food web and provide five different parts without cutting any paper. We will use the records on the table to assemble the canopy nest model. Share the reading, explain each choice and keep the five results for the final plan.

Use only the fictional food-web rules printed here. Start with the food available now. A creature becomes available when its food rule is met. Find which named visitor can live here; a loop cannot create its own first food.

**Canopy food web**

NIB needs LEAF

FLIT needs NECTAR

GLIM needs NIB AND FLIT

PEEP needs GLIM OR SEED

DART needs GLIM AND SEED

**Starting conditions**

Available now: LEAF, NECTAR.

A result becomes available when its needs are met.

Which of PEEP, DART becomes available?

Food result: _____

# Canopy Nest Build

## Player clue 2: Record | Team 1

A branch tag was reused when the nest model moved. Keep the checked record and the current branch profile. Follow the matching tag only after rejecting the old profile.

**Nest cards**

item: Bark | tag: PINE | status: checked

item: Moss | tag: WAVE | status: cancelled

item: Vine | tag: STAR | status: draft

**Branch log**

tag: STAR | bay: NORTH | profile: current

tag: PINE | bay: EAST | profile: current

tag: WAVE | bay: WEST | profile: current

tag: PINE | bay: NORTH | profile: old

**Cross-check**

Match A.tag to B.tag.

A.status is checked.

B.profile is not old.

Report B.bay.

Record result: _____

# Canopy Nest Build

## Player clue 3: Habitat | Team 1

Compare the canopy model profiles with the roof, floor and entry observations. Every observation matters: identify the profile matching all three.

**Canopy nest profiles**

CUP: roof=leaf; floor=moss; entry=side

DOME: roof=bark; floor=moss; entry=side

LEDGE: roof=leaf; floor=twig; entry=side

BOWL: roof=leaf; floor=moss; entry=top

**Required features**

roof must be leaf.

floor must be moss.

entry must not be top.

Report the one matching card ID.

Habitat result: _____

# Canopy Nest Build

## Player clue 4: Path | Team 1

Trace a legal supply journey from S to F. The map's arrows are one-way roads. Visit every required stop, stay inside the travel budget and use the cheapest complete journey. Report all stop letters.

**Travel map (one way)**

S=Survey desk; A=Low branch; B=Nest marker; C=High branch; F=Model table

S > A: 2 units

S > C: 1 units

A > B: 1 units

C > B: 4 units

B > F: 2 units

C > F: 2 units

**Journey rules**

Start S; finish F; limit 8 units.

Visit B. Use the least total cost.

Write every stop in order, with hyphens.

Path result: _____

# Canopy Nest Build

## Player clue 5: Order | Team 1

Arrange the four event cards using every witness note. "Immediately before" means there is no event between them. Report the requested position after the whole order has been checked.

**Event cards**

A: Trace food

B: Mark branch

C: Choose parts

D: Read nest

**Witness notes**

A is immediately before C.

D is before A.

B is immediately before D.

Report the event ID in position 2.

Order result: _____

# Canopy Nest Build

## Player clue 6: Final | Team 1

Recover one requirement for each habitat layer from its named result. Choose a matching roof, floor, water source, food and entry. Write the five part IDs in the printed layer order, then point to the evidence supporting each choice.

Use your results from: Food, Record, Habitat, Path, Order.

**Habitat construction key**
Roof (Food): PEEP=shade; DART=sun
Floor (Record): NORTH=dry; EAST=damp
Water (Habitat): CUP=still; DOME=flow
Food (Path): S-C-B-F=leaf; S-A-B-F=seed
Entry (Order): D=wide; A=narrow
**Parts (one per layer, top to bottom)**
Roof: R1=shade; R2=sun
Floor: F2=damp; F1=dry
Water: W1=still; W2=flow
Food: D2=seed; D1=leaf
Entry: E1=wide; E2=narrow
**Build rule**
Choose each part meeting its recovered requirement.
Report five part IDs top to bottom, with hyphens.

Final result: _____

Ask your host to check your final result and read the ending.

# Canopy Nest Build

## Hint level 1 - HOST ONLY

### 1. Food

Start at the available-now line in Canopy food web.

### 2. Record

Start with the status field in Nest cards.

### 3. Habitat

Read the canopy nest profiles and the requirements.

### 4. Path

Find S, F, required stops B and any CLOSED edge.

### 5. Order

Read the event letters and all three witness notes.

### 6. Final

Keep the five named results beside the final plan and find the key for each badge.

# Canopy Nest Build

## Hint level 2 - HOST ONLY

### 1. Food

AND needs every input; OR needs one. A circular pair cannot create its first input.

### 2. Record

The tag links an item to a bay; rows in separate records need not line up.

### 3. Habitat

Compare the same named feature across cards; check negative requirements as carefully as positive ones.

### 4. Path

First remove paths using closed roads or missing a required stop. More than one complete journey may remain.

### 5. Order

Join immediately-before pairs as a block; other before notes set the direction between blocks.

### 6. Final

Each badge controls a different fact, road leg, order note, pulse or habitat layer. Use the matching key exactly once.

# Canopy Nest Build

## Hint level 3 - HOST ONLY

### 1. Food

Mark newly supported results in rounds. Repeat until no further result can be marked, then compare only the listed targets.

### 2. Record

Keep only entries meeting every status test. Follow each printed join to the report field; do not guess from row position.

### 3. Habitat

Keep a card only if it passes every requirement. Point to the failing feature before crossing out each alternative.

### 4. Path

Add the cost of every edge in each remaining journey. Compare the totals with the budget, then choose the cheapest eligible journey.

### 5. Order

Try the remaining positions, then check every note against your full order before reading the requested position.

### 6. Final

Check the completed product against all five recovered facts. If two answers remain, locate the fact that distinguishes them rather than guessing.

# Canopy Nest Build

## Team 1 result record

Write the complete result from each clue. Results can be words, routes, orders, settings or numbers.

Food: _____

Record: _____

Habitat: _____

Path: _____

Order: _____

Keep this record beside the final clue. Copy results exactly, including any leading zero.

Reader / Recorder / Evidence checker / Route or model builder

After each clue, pass roles one seat clockwise. With two players, combine Reader with Recorder and Checker with Builder. With five or six, add a second checker and a source finder; everyone explains one decision.

# Canopy Nest Build

## Team 1 final result and celebration

## Our final challenge: Final

We combined our earlier clues to decide:

_____

_____

We know it works because:

_____

_____

Host: compare the result with your solution guide. Read the ending when it matches, then let the team explain one discovery.

No physical lock or prize is required. Draw a celebration star here if you like.

# Canopy Nest Build

**You're invited to a mystery!**

## Join Birthday Explorer for Canopy Nest Build.

The nest must match a linked food web and provide five different parts without cutting any paper. Work together to assemble the canopy nest model.

Date: _____

Time: _____

Place: _____

Bring your curiosity. Paper and pencils are provided. Share ideas and solve six clues together.

Designed for ages 8-10. Estimated 35-50 minutes.

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## Canopy Nest Build

### Mystery Explorer

# Presented to Birthday Explorer

Team member: _____

For completing Canopy Nest Build with curiosity, teamwork and kindness.

The paper model uses parts R1-F2-W1-D2-E1, with every habitat layer matched to its evidence. Thank each teammate for a different piece of reasoning.

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Host signature: _____

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