

Cupcake Constellation

HOST ONLY - preparation and story

Includes answers. Keep these pages with an adult.

The birthday team has arrived, but one important part of the celebration is missing. Arrange paper cupcake stars to finish the birthday constellation. Collect five named badge digits, then use the final sheet to finish your mission. All the clues you need are printed here. Work together and ask for a hint whenever you want.

1. Print one player pack and two prop sheets per team. Keep all host and hint pages with an adult.
2. Put clue pages 1-5 at the table. Place the final sheet face down until the five badges are collected.
3. Share pencils and choose a reader, recorder and path finder. Swap jobs after each clue.

Players: 4; teams: 1. Print one player and prop set per team. Invitations and certificates: 4 each.

No locks, purchases or cutting required. Keep all clues at a low table. Scissors are optional and for adults only.

Cupcake Constellation

HOST ONLY - solution guide

1. Stars: 4

Count each triangle once; ignore the other shapes.

2. Orbit: 7

Add 2 to the final printed number. The allowed rule is stated on the sheet.

3. Ribbon: 7

The matching card has both circle and plain; matching just one property is insufficient.

4. Steps: 5

The rules form one chain: Draw a plan > Gather paper > Build the model > Show the model. Read card 4.

5. Tray: 1

Subtract 0 from 2, then divide by 2. Check the result in the balance rule.

6. Final: 71745

grid-placement: Orbit > Tray > Ribbon > Stars > Steps. Keep leading zeroes.

Cupcake Constellation

HOST ONLY - timeline and paper check

3 minutes: Read the opening story and explain the badges.

5 minutes: Solve Stars; offer one hint at a time.

5 minutes: Solve Orbit; offer one hint at a time.

5 minutes: Solve Ribbon; offer one hint at a time.

5 minutes: Solve Steps; offer one hint at a time.

5 minutes: Solve Tray; offer one hint at a time.

5 minutes: Combine the badges on the final sheet.

2 minutes: Read the ending and award certificates.

Paper completion: check each badge against the solution guide, then check the final code. No device is required.

Mission complete! Cupcake Constellation is ready for its birthday celebration. Thank your team for sharing ideas and helping one another.

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