

Garden Plans, Many Models

See how different model types help people make decisions.

SC.4.N.3.1 “Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each phrase that names a specific model example. Above each one, write 3D, 2D, M, or C to show its kind.

Planning a Butterfly Garden

- ① When the Green Team planned a butterfly garden, they needed ways to think about a space that did not exist yet. A model is a useful representation of an object, place, event, or idea. It can show important parts without including every detail. The team used several kinds of models to ask questions, share ideas, and make choices before planting.
- ② First, Maya built a small three-dimensional model from clay, cardboard, and toothpicks. The clay, cardboard, and toothpicks formed raised mounds, paths, and a tiny bench, so the team could view the garden idea from different sides. Next, Luis drew a two-dimensional model on paper. His flat garden plan used shapes and labels to show where flowers, a water dish, and a path could go.
- ③ Before choosing a sunny spot, Jordan made an explanation in her mind. She pictured how tall plants might shade shorter ones and decided to place them apart. The team also used a computer model that changed the amount of sunlight and rainfall. It helped them compare possible plant locations and choose a plan, but it was still a model, not the real garden.

2

ANSWER WITH EVIDENCE

Use the passage

1

What made Maya's model three-dimensional?

2

How did Luis's two-dimensional model show the garden plan?

3

What did Jordan picture in her mind, and what decision did it help her make?

4

What did the computer model change, and how did it help the team?

3

YOUR TURN

Your own words

Imagine that your class is planning a new playground. Complete the table with one model of each type and tell what it could help people decide.

MODEL TYPE	MY MODEL EXAMPLE	IT COULD HELP DECIDE

PART 1 • READ AND MARK

Underline each phrase that names a specific model example. Above each one, write 3D, 2D, M, or C to show its kind. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What made Maya's model three-dimensional?	It was built from clay, cardboard, and toothpicks, with raised mounds, paths, and a tiny bench that could be viewed from different sides.
2	How did Luis's two-dimensional model show the garden plan?	It was a flat paper plan that used shapes and labels to show possible places for flowers, a water dish, and a path.
3	What did Jordan picture in her mind, and what decision did it help her make?	She pictured tall plants shading shorter plants. It helped her decide to place them apart.
4	What did the computer model change, and how did it help the team?	It changed the amounts of sunlight and rainfall. It helped the team compare plant locations and choose a plan.

PART 3 • YOUR TURN (SAMPLE ANSWER)

MODEL TYPE	MY MODEL EXAMPLE	IT COULD HELP DECIDE
Three-dimensional	A small cardboard playground with a slide and swings	Where the equipment will fit
Two-dimensional	A flat paper plan with labeled equipment	Where to place the slide and swings
Explanation in my mind	I picture the swings far from the climbing wall	How to keep play areas apart
Computer model	A program that changes the number of children using each area	How much space each play area needs