

# Shade Builder Test

Plan, build, and test a cover that makes a sunny spot cooler.

**K-PS3-2** "Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. Clarification Statement: Examples of structures could include umbrellas, canopies..."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

Teacher: this page is run aloud. The script and answers are on the guide page.

## 1 TEST IT \_\_\_\_\_

|   |      |      |       |
|---|------|------|-------|
| a | same | big  | small |
| b | warm | cool | same  |

## 2 BUILD PLAN \_\_\_\_\_

|          |   |   |         |
|----------|---|---|---------|
| paper    | • | • | support |
| tape     | • | • | roof    |
| book     | • | • | cut     |
| scissors | • | • | join    |

**HOW TO RUN THIS PAGE**

Set two equal paper squares in direct sunlight, and give each group paper, tape, a book, and child-safe scissors. Students plan a fair comparison, match supplies to jobs, build a structure above one square, and compare the warmth of the shaded and unshaded squares after five minutes.

Students never read directions on this sheet. Read each part's script aloud, then each prompt, giving think time before students mark.

**PART 1 • TEST IT**

**SAY** “Do the first row before you build. Save the second row until after your group has built its structure and waited in the sunlight. I will read the choices in each row.”

| ROW | SAY                                                                                                                                                                                                            | STUDENTS CIRCLE |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| a   | For a fair test, should our two paper squares be the same size, big, or small? Circle your choice.                                                                                                             | <b>same</b>     |
| b   | Touch the shaded paper square and the sunny paper square only after I say they are safe. Which word tells how the shaded square feels compared with the sunny square: warm, cool, or same? Circle your choice. | <b>cool</b>     |

**PART 2 • BUILD PLAN**

**SAY** “You will use paper, tape, a book, and scissors to make a safe structure above one paper square. Draw a line from each item on the left to the job it can do on the right, then use the supplies and your matches to build your structure. Ask me for help with the scissors.”

- **paper** matches **roof**
- **tape** matches **join**
- **book** matches **support**
- **scissors** matches **cut**

**WHAT TO ACCEPT**

Circle same in the first row and cool in the second row. Match paper to roof, tape to join, book to support, and scissors to cut; accept a safely built structure that shades one paper square while the other stays uncovered.