Design Information Transfer

Grade 4 Science Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

1. A sender flashes so fast that the receiver sees one long glow instead of separate flashes. What should the team change?

   flash even faster so messages are shorter

   use a dimmer light so it does not glow

   remove the code key

   slow the flashes and add gaps between them

2. Code: 1 flash = 1, 2 flashes = 2, long flash = 5. What number is long, flash, flash?

   7 52 5 3

3. How should a team test whether their light code works?

   tell the partner each message before sending it

   send messages and see if a partner decodes them without help

   send only one message once

   check that the flashlight is bright enough

4. Why is a smoke alarm a beeping sound instead of a light?

   beeps are quieter than lights

   lights cannot be made in a ceiling

   sound travels through walls slower than light

   a sleeping person can hear it with eyes closed

5. A code uses 1 flash for A, 2 flashes for B and 3 flashes for C. The receiver keeps mixing up B and C. What is the best fix?

   add a long pause after each letter

   remove the code key

   use one flash for every letter

   flash faster so it takes less time

Scan to get this marked free. No screen time for your child.
Print it · do it in pencil · scan it · PencilGo picks the next sheet.

Design Information Transfer

Answer Key - Grade 4 Science Worksheet - Challenge Me

Circle the answer.

1. A sender flashes so fast that the receiver sees one long glow instead of separate flashes. What should the team change?

   flash even faster so messages are shorter

   use a dimmer light so it does not glow

   remove the code key

   slow the flashes and add gaps between them

2. Code: 1 flash = 1, 2 flashes = 2, long flash = 5. What number is long, flash, flash?

   7 52 5 3

3. How should a team test whether their light code works?

   tell the partner each message before sending it

   send messages and see if a partner decodes them without help

   send only one message once

   check that the flashlight is bright enough

4. Why is a smoke alarm a beeping sound instead of a light?

   beeps are quieter than lights

   lights cannot be made in a ceiling

   sound travels through walls slower than light

   a sleeping person can hear it with eyes closed

5. A code uses 1 flash for A, 2 flashes for B and 3 flashes for C. The receiver keeps mixing up B and C. What is the best fix?

   add a long pause after each letter

   remove the code key

   use one flash for every letter

   flash faster so it takes less time