

## (D) Made You Look! (1/3) [Solution]

D1.		Hypothesis 1	Hypothesis 2	Hypothesis 3	Hypothesis 4	Hypothesis 5
	Mary had a little <b>*lamp*</b>	?,E	U	?,U,E	?,U,T,E	<b>(a)</b> U,E
	I locked the door with a <b>*steering wheel*</b>	?,W	<b>(b)</b> O	?,W	?,M,B,W	O,W
	In the desert sky I could see the <b>*Milky Way*</b>	?,D	D	?,P,K,D	<b>(c)</b> ?,P,K,O,D	D
	This fish is a <b>*clamp*</b>	<b>(d)</b> ?,Q	<b>(e)</b> C	<b>(f)</b> ?,X,Q	<b>(g)</b> ?,U,X,T,E,Q	C,X,Q
	The floor needs a <b>*carpet*</b>	<b>(h)</b> ?,V	<b>(i)</b> V	<b>(j)</b> ?,L,C,V	<b>(k)</b> ?,L,C,V	<b>(l)</b> V

Here is what the 5 hypotheses are:

Hypothesis 1: Wait until the entire utterance has been completed, then look at the image for word that was uttered. This means that the participant will always start out looking at no image in particular while they wait for the utterance to finish, and then they will look at the image for word that was uttered.

Hypothesis 2: Without listening to the word at all, immediately look at the image for the most likely next word, and never look at anything else. For example, for *I locked the door with a \_\_\_\_\_*, the most likely word to go in the blank is *key*, so a participant obeying Hypothesis 2 would only look at the key.

Hypothesis 3: Whenever the part of the word that has been uttered so far forms a word, look at the image for that word. For instance, for *In the desert sky I could see the \*Milky Way\**, the participant first has not heard any complete word at the start, so they don't look at any image in particular; and then they hear the word *mill*, so they look at the mill; then they hear *milk*, so they look at the milk; and finally they hear *Milky Way* and look at the Milky Way.

Hypothesis 4: Whenever you hear the end of a complete word, look at the image for that word. If multiple words are completed at once, start with the shortest one then work to the longest one. For example, for *This fish is a \*clamp\**, the participant has not heard a complete word at the start, so they start off looking at no complete image. Then, after the *clam-* part of the word has been uttered, that finishes the word *clam* and the word *lamb*, so the participant first looks at *lamb* (the word with fewer sounds) followed by *clam*. Then, when the full *clamp* has been uttered, that completes *amp*, *lamp*, and *clamp*, so the participant looks at those three items. The difference between Hypothesis 3 and Hypothesis 4 is that Hypothesis 3 only considers partial words that start at the beginning of the word being uttered, while Hypothesis 4 also allows partial words that start partway through the word being uttered.

Hypothesis 5: At every point, look at the most likely next word that is consistent with everything you have heard so far. For instance, for *This fish is a \*clamp\**: Before *clamp* has been started, the most likely word to go in that position is *carp*, so the participant looks at that image first. Then, once the *cl-* has been uttered, this word can no longer be *carp*; the most likely next word that starts with *cl-* is *clam* (as a clam is somewhat fish-like), so the participant looks at the clam. Finally, once the full *clamp* has been uttered, it rules out *clam*, so the participant switches to looking at the clamp.



## (D) Made You Look! (2/3) [Solution]

**D2.** What trajectory will the participant's eyes follow if they view Image HH as a duck? Answer: BB,HH,II

The most likely next word, after hearing *My cousin has a pet \_\_\_\_*, is *cat*, so that participant starts out looking at that. Then, after the *d-* of *dolphin* has been uttered, the participant switches to the duck, since that is a more likely pet than a dolphin. And then they finally switch to the dolphin.

What trajectory will the participant's eyes follow if they view Image HH as a rabbit? Answer: B,II

Since *rabbit* does not start with *d-*, it cannot be an intermediate step between *cat* and *dolphin*. (The same holds true even if you call it a bunny or a hare.)

**D3.** The participant's word for a carbonated beverage: Answer: soda

The participant's trajectory went *water* -> (*carbonated beverage*) -> (*missing*) -> *sushi*. Since the carbonated beverage was an intermediate step between *water* and *sushi*, the participant must be using some word for carbonated beverage that shares its start with *sushi*. The only option that fits this description is *soda*.

**D4.** What should Image FF be? Answer: soup

The participant's trajectory went *water* -> *soda* -> (*missing*) -> *sushi*. The missing item must start with the sounds *soo*, in order to work as an intermediate step between *soda* and *sushi*. In addition, it has to be something that is a more likely continuation than *sushi* for *Alice was thirsty after her run, so she ordered some \_\_\_\_*. The most plausible thing that starts with *soo* and that can fit in that slot is *soup*.

**D5.** Fill in the table:

	Sentence	Trajectory
i	I bought my friend a birthday <b>*campfire*</b>	<b>(a)</b> F22,F17,F13,F08,F04
ii	<b>(b)</b> I went on a walk with my pet <b>*camera*</b>	<b>(c)</b> F26,F09,F18,F08
iii	<b>(d)</b> The queen lives in a magnificent <b>*tennis ball*</b>	F27,F23,F19,F14,F10
iv	My neighbor rides to work every morning in my <b>*bow tie*</b>	<b>(e)</b> F03,F06,F12,F15
v	He signed his name in ink with a dark blue <b>*pencil*</b>	<b>(f)</b> F24,F05
vi	My neighbor rides to work every morning in my <b>*traffic cone*</b>	<b>(g)</b> F03,F01,F02,F21
vii	At the construction site there was a pile of <b>*strawberries*</b>	<b>(h)</b> F07,F11,F16,F20,F25

Multiple options are possible for the sentences.

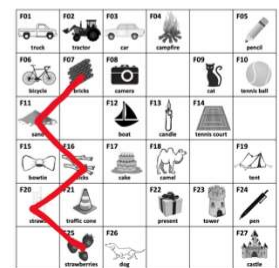
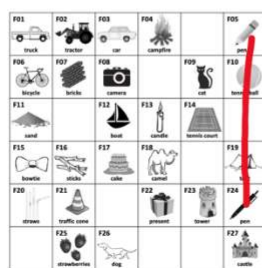
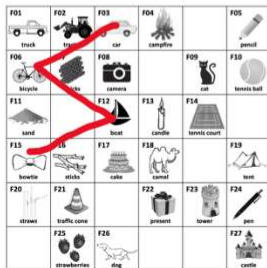
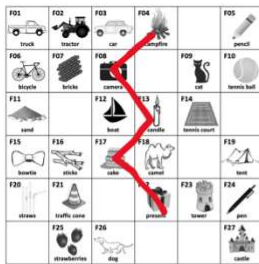
See **D6** for an explanation of the secret message, which must be used to figure out the trajectory that is needed for (ii). The trajectory F26,F09,F18,F04 is also acceptable, though for a slightly lower score, since it does not make as nice of a Y shape.



## (D) Made You Look! (3/3) [Solution]

**D6.** What is the secret message? Answer: EYE SITE

If you trace each trajectory from Q5 on the grid, you will see that it forms a letter (see below). Taking these letters in order forms EYE SITE – an appropriate title for a problem about eye positions.



n → a → c → l → o