

A "Grey" Area: Using DNA to Identify a Species

Directions: Treat the following DNA segment as one continuous strand.

Search the following DNA segment for restriction site '**CCTA**' and underline all 4 letters when you find them. Once you have found all of these restriction sites, "cut" the DNA between the T and the A on that specific sequence by placing a slash mark (**CCT/A**).

Count up every letter in each new fragment and shade that accordingly in the gel at the right. For example, if one of the fragments contained 11 letters, you would shade the box next to the number 11.

AATGCTTAGACCTAGCGGATCCTACGG
 CGCTATTCGCCCTACGCCTAGGGCGCT
 ATTCCTAGATTCCCTACTCCTAGCGAC
 CTAGACCTAGCTA

Which one are you?



FORM A

Number of bases in fragment	Fragment length
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

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AATGCTTAGACCTAGCGGATCCTACGG
 CGCTATTCGGCCCTACGCCTAGGGCGC
 TATCCTAGATTCCCTACTCCTAGCGAC
 CTAGACCTAGCTAA

Which one are you?



Number of bases in fragment	Fragment length
25	
24	
23	
22	
21	
20	
19	
18	
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16	
15	
14	
13	
12	
11	
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8	
7	
6	
5	
4	
3	
2	
1	

FORM B

A “Grey” Area Solutions

Form A	Congo
Number of bases in fragment	Fragment length
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

Form B	Timneh
Number of bases in fragment	Fragment length
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	