

DNA of Dandelions

Kobe High School Science Course Grade1

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PURPOSE

★Research the DNA of dandelions to know the DNA of the parent dandelions.

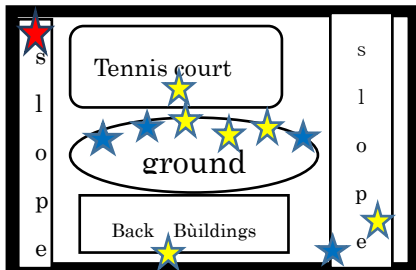
★Learn Polymerase Chain Reaction and use it to increase the DNA.

METHODS






- ①Pick up eleven dandelions.
- ②Observe the dandelions.
- ③Extract the DNA of dandelions.
- ④Mix the **primer**(liquid that stretches DNA) with the DNA and do PCR.
- ⑤Do **electrophoresis**(Measure the length of DNA).

RESULT

Location of dandelions



★ Couldn't judge the number.

1	2	3	4 ★	5 ★
				
82%	80%	78%	60%	50%

Refer to 「タンポポ調査・近畿 2005 実行委員会[近畿地方のタンポポとその分布]」(一部改変)

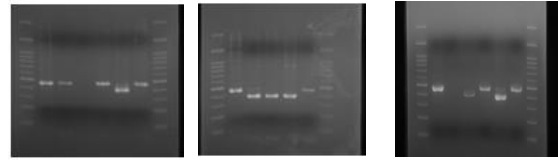
Electrophoresis results

<Chloroplasts DNA electrophoresis>

These primers were used ↓

TabE(5' GGT TCA AGT CCC TCT ATC CC3')

TabF(5' ATT TGA ACT GGT GAC ACG AG3')



1,2,4,6,7,11(480bp)→Kansai dandelion

3,5,8,9,10(400bp)→Seiyo dandelion

<Nucleus DNA **electrophoresis**>

These primers were used ↓

ITS1(5' TCC GTA GGT GAA CCT GCG G3')

ITS4(5' TCC TCC GCT TAT TGA TAT GC3')



1:Kansai+Seiyo 9:Seiyo 11:Kansai+Seiyo

Refer to 「伊川のタンポポの DNA 解析調査について」

Number	Mother	Father
1	Kansai	Seiyo
9	Seiyo	Seiyo
11	Kansai	Seiyo

CONSIDERATIONS FEELINGS

The quantity of samples of dandelions were too little to find clear results. Though we were happy to have done of PCR.