## Activity sheet 08
### (Solution)

'low' has a frequency of 4
'power' " " " / . / 3

Base Vocab → $\{e, l, o, p, r, w\}$

Pair merging:

| word | frequency | token | freq |
|------|-----------|-------|------|
| | | lo | 4 |
| l, o, w | 4 | ow | 7 |
| p, o, w, e, r | 3̶ 3 | po | 3 |
| | | we | 3 |
| | | er | 3 |

Based on frequency, we merge:
$o, w \to ow$

Next merge:

| token | freq |
|-------|------|
| low | 4 |
| pow | 3 |
| owe | 3 |
| er | 3 |

merge $l, ow \to low$

New vocablary → $\{e, l, o, p, r, w, ow, low\}$

lowest → l, o, w, e, s, t
⤷ merge

l, ow, e, s, t
⤷ merge

lowest → (low, e, s, t)