1. Do you like Chemistry?


Chemistry is:

| $\begin{aligned} & \stackrel{\grave{0}}{\varpi} \\ & \end{aligned}$ | interesting |  |  |  | difficult |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | female |  |  |  |  |  |  |
|  | students | \% |  |  |  | \% | $\begin{gathered} \text { No. of } \\ \text { students } \end{gathered}$ | \% | No. of students |
| total | 75 | 48 | $43 \quad 48$ | $36 \quad 54$ | 39 | 25 | 27 | 30 | 11 |
| 1 | 30 | 47 | $21 \quad 146$ | $9 \quad \mid 50$ | 22 | 34 | 16 | 35 | 6 |
| II | 24 | 45 | $7 \quad 147$ | 17 \|47 | 11 | 73 | 6 | 17 | 5 |
| III | 25 | 60 | $15 \quad 52$ | $10 \quad 177$ | 5 | 12 | 5 | 18 | 0 |

2. If you were allowed to drop Chemistry, what would you do?

3. Chemistry is interesting

| $\begin{aligned} & \stackrel{\grave{\sigma}}{\varpi} \\ & \underset{\sim}{2} \end{aligned}$ | strongly agree |  |  |  | agree |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | tota |  | female | male | total | fema |  | male |  |
|  | No. of students | \% |  | $\begin{array}{\|l\|} \hline \text { No. of } \\ \text { students } \end{array}$ | $\begin{aligned} & \text { No. of } \overline{\mathbf{I}} \\ & \text { students } \end{aligned}$ | $\begin{array}{\|l\|} \text { No. of } \\ \text { students } \end{array}$ | \% | No. of students | \% |
| total | 38 | 24 | 23 \|26 | 15 \|22 | 85 \|54 | 42 | 47 | 43 | 65 |
| 1 | 15 | 23 | 12 26 | 3 17 | 30 47 | 18 | 39 | 12 | 66 |
| II | 10 | 21 | $2 \quad 13$ | $8 \quad 122$ | $30 \quad 156$ | 8 | 54 | 22 | 62 |
| III | 13 | 32 | $9 \quad 132$ | $4 \quad 31$ | $25 \quad 61$ | 16 | 57 | 9 | 69 |

4. If you had the choice: I'd elect Chemistry class becausı
$\square$ Of the interest in science

| $\stackrel{\stackrel{\rightharpoonup}{\varpi}}{\stackrel{1}{\sim}}$ |  |  |  |  | $\begin{gathered} \text { male } \\ \text { No. } \\ \text { students } \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 20 | 13 | 9 | 10 | 11 | 18 |
| 1 | 3 | 5 | 3 | 3 | 0 | 0 |
| II | 11 | 22 | 4 | 27 | 7 | 19 |
| III | 6 | 15 | 2 | 7 | 4 | 31 |

$\square$ Of the dangerous chemicals. I like the risk


| total | 41 | 26 | 18 | 20 | 23 | 38 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 13 | 20 | 9 | 19 | 4 | 22 |
| II | 20 | 39 | 4 | 27 | 16 | 44 |
| III | 8 | 19 | 5 | 18 | 3 | 23 |

$\square$ Of laboratory equipment which I like

| $\begin{aligned} & \stackrel{1}{\varpi} \\ & \end{aligned}$ | total |  | $\begin{aligned} & \text { female } \\ & \text { No. of } \frac{1}{\text { students }} \% \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. of <br> students | \% |  |  |  |  |
| total | 9 | 6 | 4 | 6 | 5 | 6 |
| 1 | 5 | 8 | 2 | 4 | 3 | 17 |
| II | 2 | 4 | 2 | 13 | 0 | 0 |
| III | 2 | 5 | 1 | 3 | 1 | 8 |

[^0]| $\stackrel{亡}{\infty}$ | TNo. $\overline{\text { of }}$ students | \% | $\left\lvert\, \begin{aligned} & \text { female } \\ & \hline \text { No. of } \\ & \text { students } \\ & \hline \end{aligned}\right.$ |  | $\left\lvert\, \begin{gathered} \text { male } \\ \hline \text { No. of } \\ \text { students } \\ \text { \| } \end{gathered}\right.$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 87 | 56 | 46 | 52 | 41 | 67 |
| I | 36 | 58 | 25 | 54 | 11 | 67 |
| II | 25 | 53 | 6 | 47 | 19 | 55 |
| III | 26 | 63 | 17 | 61 | 9 | 69 |

$\square$ Of my future plans (to study chemistry, pharmacy, medici

| $\stackrel{\grave{1}}{\stackrel{\text { ® }}{\sim}}$ |  |  |  |  | $\begin{aligned} & \text { male } \\ & \hline \text { No. } \overline{\text { of }} \mathbf{T}-1 \\ & \text { students } \mathbf{I} \% \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 28 | 18 | 17 | 19 | 9 | 13 |
| 1 | 10 | 16 | 9 | 19 | 1 | 5 |
| II | 4 | 8 | 2 | 13 | 2 | 5 |
| III | 14 | 39 | 8 | 28 | 6 | 46 |

5. Chemistry is too complicated: ( 1 agree; 6 don't agree)

| $\begin{aligned} & \frac{1}{\varpi} \\ & \end{aligned}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 23 | 15 | 12 | 13 | 11 | 17 |
| 1 | 14 | 22 | 7 | 15 | 7 | 39 |
| II | 5 | 10 | 1 | 7 | 4 | 11 |
| III | 4 | 9 | 4 | 14 | 0 | 0 |



[^1]| $\begin{aligned} & \grave{\star} \\ & \end{aligned}$ | No. of students | \% | No. of students | \% | $\left\lvert\, \begin{gathered} \text { No. } \\ \text { stude } \end{gathered}\right.$ | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 25 | 16 | 14 | 16 | 11 | 17 |
| I | 9 | 14 | 6 | 15 | 3 | 10 |
| II | 12 | 23 | 4 | 33 | 8 | 19 |
| III | 4 | 9 | 4 | 14 | 0 | 0 |


| $\begin{aligned} & \text { 厄 } \\ & \end{aligned}$ |  |  |  |  | $\left\lvert\, \begin{gathered} \text { male } \\ \text { No. of } \\ \text { students } \\ \text { I } \end{gathered}\right.$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 30 | 19 | 17 | 17 | 13 | 19 |
| 1 | 9 | 14 | 6 | 12 | 3 | 22 |
| II | 9 | 18 | 6 | 33 | 3 | 11 |
| III | 12 | 28 | 5 | 14 | 7 | 53 |


| $\begin{aligned} & \stackrel{\rightharpoonup}{\varpi} \\ & \end{aligned}$ | No. of <br> total <br> students <br> I $\%$ female <br> No. of T <br> students I$\%$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 36 | 23 | 20 | 22 | 16 | 24 |
| 1 | 14 | 22 | 13 | 28 | 1 | 6 |
| II | 12 | 23 | 1 | 7 | 11 | 30 |
| III | 10 | 24 | 7 | 25 | 3 | 20 |



If you choose $\mathbf{1 , 2 , 3}$ : why is Chemistry too complicated?
Because I don't understand the formula

| $\begin{aligned} & \bar{\varpi} \\ & \end{aligned}$ |  |  |  |  | $\begin{gathered} \text { male } \\ \begin{array}{c} \text { No. of } \\ \text { students } \end{array} . \\ \hline \% \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 27 | 34 | 17 | 30 | 10 | 43 |
| 1 | 17 | 46 | 11 | 41 | 6 | 60 |
| II | 5 | 20 | 3 | 43 | 2 | 11 |
| III | 5 | 28 | 3 | 25 | 2 | 33 |Because I can't imagine how atoms could exist or work (because we can't see or watch them)


| $\begin{aligned} & \stackrel{\grave{0}}{\text { ® }} \\ & \end{aligned}$ |  |  |  |  | $\begin{gathered} \text { male } \\ \hline \text { No. of } \mathbf{T}=-1 \\ \text { students } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 22 | 28 | 13 | 23 | 9 | 39 |
| 1 | 8 | 22 | 5 | 18 | 3 | 30 |
| II | 7 | 28 | 4 | 57 | 3 | 17 |
| III | 7 | 33 | 4 | 33 | 3 | 50 |Because I can't remember so much information


| $\begin{aligned} & \frac{1}{む} \\ & \underset{\sim}{2} \end{aligned}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 47 | 59 | 28 | 49 | 19 | 83 |
| I | 22 | 59 | 16 | 59 | 6 | 60 |
| II | 15 | 60 | 4 | 57 | 11 | 61 |
| III | 10 | 56 | 7 | 58 | 3 | 50 |

Because I cannot distinguish different chemicals

| $\stackrel{\stackrel{i}{\varpi}}{\underset{\sim}{\sim}}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 21 | 26 | 12 | 21 | 9 | 39 |
| 1 | 7 | 19 | 3 | 11 | 4 | 40 |
| II | 6 | 24 | 2 | 28 | 4 | 22 |
| III | 3 | 17 | 1 | 8 | 2 | 33 |

Other


1. The teacher doesn't explain clearly enough.
2. There is too much to learn.
3. The calculations are too difficult.
4. The teacher was absent and now there is too much material to learn.

If you choose 4, $\mathbf{5 , 6}$ : why isn't Chemistry complicated?
Because there is a relation (is linked) to everyday life

| $\begin{aligned} & \stackrel{1}{\varpi ँ} \\ & \stackrel{y}{\sim} \\ & \hline \end{aligned}$ | students | \% | $\begin{array}{r} \text { female } \\ \text { No. of } 1 \\ \text { students } \end{array}$ | \% |  | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 16 | 21 | 7 | 16 | 9 | 27 |
| I | 4 | 15 | 2 | 14 | 2 | 15 |
| II | 6 | 23 | 2 | 14 | 4 | 36 |
| III | 6 | 26 | 4 | 31 | 2 | 17 |Because there are only similarities to other subjects


| $\begin{aligned} & \stackrel{1}{\varpi} \\ & \end{aligned}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 10 | 14 | 4 | 9 | 6 | 18 |
| 1 | 3 | 11 | 1 | 7 | 2 | 15 |
| II | 3 | 12 | 1 | 7 | 2 | 15 |
| III | 4 | 17 | 2 | 15 | 2 | 17 |Because it is important for my future


| $\begin{aligned} & \stackrel{\grave{N}}{\varpi} \\ & \end{aligned}$ |  |  |  |  | $\begin{gathered} \text { male } \\ \hline \text { No. of } \mathbf{T}^{-1} \\ \text { students } \% \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| total | 15 | 20 | 9 | 21 | 6 | 18 |
| I | 6 | 22 | 4 | 28 | 2 | 15 |
| II | 3 | 12 | 2 | 14 | 2 | 18 |
| III | 6 | 22 | 4 | 31 | 2 | 17 |

Because I simply like it


## Other

|  | total <br> No. of <br> students |  |
| :---: | :---: | :---: |
| total | 4 | 5 |

1. I find it easy to learn.
2. It is interesting and requires attention.
3. It is attractive.
4. It's logical.
5. Chemistry is interesting because the lessons aren't as boring as other subjects due to the relation to everyday life shown in experiments

| $\begin{aligned} & \bar{\star} \\ & \\ & \hline \end{aligned}$ | strongly agree |  |  |  | agree |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | - tota |  | female | male | total |  |  | ma |  |
|  | TNo. $\overline{\text { of }}$ students | \% | $\begin{aligned} & \mathrm{N} \text { No. of } \\ & \text { students } \end{aligned}$ | $\left\lvert\, \begin{aligned} & \text { No. of } \\ & \text { students } \end{aligned}\right.$ |  | $\left\lvert\, \begin{gathered} \text { No. of } \\ \text { students } \end{gathered}\right.$ | \% | $\begin{aligned} & \text { No. of } \\ & \text { students } \end{aligned}$ | \% |
| total | 15 | 10 | 8 \| 9 | $7 \quad 10$ | 88 [56 | 50 | 56 | 38 | 57 |
| 1 | 6 | 9 | 5 11 | $1{ }^{1} 6$ | 36 57 | 25 | 55 | 11 | 61 |
| II | 5 | 10 | 0 0 | 5114 | $32 \quad 63$ | 10 | 67 | 22 | 61 |
| III | 4 | 10 | $3 \quad 10$ | 1 18 | $20 \quad 49$ | 15 | 54 | 5 | 38 |

7. Do you think Chemistry will be very useful for your future?

8. I don't think I will be successful in Chemistry:

| $\begin{aligned} & \stackrel{\rightharpoonup}{\varpi} \\ & \\ & \hline \end{aligned}$ | strongly agree |  |  |  | agree |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | female | male | total | fer |  | m |  |
|  | No. of students | \% | students $\%$ | students $\%$ | $\left\lvert\, \begin{aligned} & \text { TNo. of TIT } \\ & \text { studentsII } \end{aligned}\right.$ | To. of T <br> students | \% | No. of 7 students | \% |
| total | 33 | 21 | $19 \quad 21$ | 14 21 | 68 44 | 36 | 40 | 32 | 48 |
| I | 13 | 20 | $8 \quad 17$ | 5 28 | 28 - 44 | 18 | 39 | 10 | 56 |
| II | 6 | 12 | 3 20 | 3 l | 26 [51 | 8 | 53 | 18 | 50 |
| III | 14 | 34 | $8 \quad 28$ | $6 \quad 46$ | $14 \quad 34$ | 10 | 36 | 4 \| | 31 |

9. I would be more interested in Science subjects if there were more experiments.

10. My expectations have been fulfilled in my Chemistry lessons. (।

| $\begin{aligned} & \frac{1}{\varpi} \\ & \stackrel{y}{\sim} \end{aligned}$ | strongly agree |  |  |  | agree |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | - - - ${ }_{\text {tota }}$ |  | female |  | $\begin{array}{\|c\|c\|} \substack{\text { total } \\ \hline \text { No. } \\ \text { students } \\ \hline} \\ \hline \end{array}$ | No. femalestudents\% |  |  |  |
|  | No. of students | \% | $\begin{aligned} & \text { No. of } \\ & \text { students } \end{aligned}$ |  |  |  |  |  |  |
| total | 10 | 6 | 3 \| 3 | $7 \quad 10$ | 64 \|41 | 39 | 44 | 25 | 37 |
| I | 3 | 5 | 1 \| 2 | 2 11 | 23 \|36 | 18 | 39 | 5 | 28 |
| II | 5 | 10 | 177 | 411 | $20 \quad 39$ | 5 | 33 | 15 | 42 |
| III | 2 | 5 | 1 1 4 | 8 | $21 \quad 52$ | 16 | 57 | 5 | 38 |

11. I choose Chemistry because of my teacher (High clas:


| ale |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \% |  | $\left\lvert\, \begin{gathered} \text { No. Of } \\ \text { cturnntc } \end{gathered}\right.$ students | \% |  | \% |
| 16 | 23 - 15 | 19 | 21 | 5 | 7 |
| 33 | 22 - 348 | 18 | 39 | 4 | 22 |
| 14 | 0 \| 0 | 0 | 0 | 0 | 0 |
| 0 | 2 5 | 1 | 4 | 1 | 8 |



| total disagree <br> female male total female |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\square$ No. $\overline{\text { of }}$ <br> student | \% | -No. of students | \% | No. of students | \% | No. of students | \% | No. of students | \% |
| 51 | 33 | 29 | 33 | 22 | 33 | 2 | 1 | 2 | 2 |
| 20 | 31 | 14 | 30 | 6 | 33 | 2 |  | 2 | 4 |
| 14 | 27 | 5 | 33 | 9 | 25 | 0 | 0 | 0 | 0 |
| 17 | 41 | 10 | 36 | 7 | 54 | 0 | 0 | 0 | 0 |


| tot |  | disag fem |  | mal |  |  |  | str | agre |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of students | \% | Fo. of <br> students | \% | $\begin{aligned} & \text { No. of } \\ & \text { students! } \end{aligned}$ | \% | No. of students | \% | No. of students | \% |
| 45 | 29 | 31 | 35 | 14 | 21 | 10 | 6 | 3 | 4 |
| 20 | 31 | 17 | 37 | 3 | 16 | 3 | 5 | 3 | 7 |
| 13 | 25 | 4 | 27 | 9 | 25 | 6 | 12 | 0 | 0 |
| 12 | 30 | 10 | 36 | 2 | 15 | 1 | 2 | 0 | 0 |


| total | disagree female | male | total | strong <br> fe |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | No. $\overline{\text { N }}$ students | $\%$ |
| $23-15$ | 11 - 12 | 12 - 18 | 8 - 4 | 4 | 5 |
| $12 \times 19$ | 8 \| 17 | 4 23 | 4 5 | 3 | 6 |
| 8 \| 16 | 3 \| 20 | 5 \| 14 | 4 8 | 1 | 7 |
| 3 7 | 0 \| 0 | 3 \| 23 | 0 \| 0 | 0 | 0 |


| tot |  |  |  |  |  |  |  | stro | gree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { No. of } \\ & \text { students } \end{aligned}$ | \% | $\begin{array}{\|l\|} \hline \text { No. of } \\ \text { students } \end{array}$ | \% | - No. of students | \% | $\begin{gathered} \text { No. of } \\ \text { students } \end{gathered}$ | \% | No. of students | \% |
| 66 | 42 | 42 | 48 | 24 | 35 | 16 | 10 | 4 | 4 |
| 31 | 48 | 23 | 50 | 8 | 44 | 7 | 11 | 4 | 9 |
| 22 | 43 | 8 | 53 | 14 | 39 | 4 | 8 | 1 | 7 |
| 13 | 31 | 11 | 39 | 2 | 16 | 5 | 12 | 0 | 0 |


| total $\quad$disagree <br> female$\frac{1}{}$ male $\quad$strongly disagree <br> female |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of <br> students | \% | -No.of <br> students | \% | - No. of students | \% | No. of <br> students | \% | No. $\overline{\text { N }}$ students |  |
| 44 | 28 | 27 | 30 | 17 | 25 | 22 | 14 | 6 | 7 |
| 16 | 25 | 13 | 28 | 3 | 17 | 14 | 22 | 6 | 13 |
| 14 | 27 | 5 | 33 | 9 | 25 | 4 | 8 | 0 | 0 |
| 14 | 34 | 9 | 39 | 5 | 39 | 4 | 10 | 0 | 0 |



| male <br> No. of <br> students |  |  | $\%$ |
| :---: | :---: | :---: | :---: |
| 7 | 10 |  |  |
| 0 | 0 |  |  |
| 6 | 17 |  |  |
| 1 | 8 |  |  |




[^0]:    $\square$ Of the research. It is interesting

[^1]:    

