

## Questionnaire for High School Students' Learning of Chemistry

1. Your gender: Male  Female
2. Your grade: Freshman  Sophomore  Junior Senior
3. Your age:
4. Your location:
5. Your school
6. Adaptation scale

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### Parents support

1. Parents often give me financial support for my learning, such as buying reference books and learning stationery, etc.
2. From my parents' behaviour I can feel they really love me.
3. When I succeed, my parents are sincerely proud of me.
4. My parents often communicate with me about my psychological problems by phone and video.

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### Teacher support

1. My chemistry teacher listens to my thoughts and feelings.
2. My chemistry teacher will take the initiative to care about my study and give guidance.
3. My chemistry teacher will take the initiative to care about my mood and study status.
4. When I encounter difficulties or setbacks, my chemistry teacher will encourage me.
5. My chemistry teacher will praise me when I do well.

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### Peer support

1. Peers make me feel important.
2. When I encounter difficulties, my peers will encourage me to try to solve them.
3. Peers provide me with relevant knowledge or useful information.
4. When encountering difficulties, my peers will discuss and analyze with me the reasons why things happen.
5. When I do something wrong, my peers will tell me the right thing to do.
6. When making decisions, peers will put themselves in my shoes to provide advice.

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### Continuing motivation in chemistry

1. Outside of chemistry class, I will read articles about chemistry.
  2. Outside of chemistry class, I will listen to chemistry lectures.
  3. Outside of chemistry class, I will watch chemistry programs in the media.
  4. Outside of chemistry class, I will read books related to words or chemists.
  5. Outside of chemistry class, I talked about chemistry topics with my friends.
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Interest in chemistry

1. I've always been fascinated by chemistry.
  2. I think chemistry is a very important subject.
  3. I think what we will study in chemistry will be important for me to know.
  4. I know how to apply what I have learned in chemistry to real life.
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Chemistry self-efficacy

1. I can choose an appropriate formula to solve a chemistry problem.
  2. I can use chemical instruments proficiently.
  3. I can describe the structure of an atom very well.
  4. I can understand the nature of experimental phenomena through experimental data or graphs.
  5. I can use the periodic table to describe the properties of elements (metallic or non-metallic and metallic strength).
  6. I can describe the meaning of chemical equations (including macroscopic and microscopic meanings).
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