



## Student Questionnaire –Grade 11

**The Human Resource Development Council (HRDC) is conducting a survey to measure your attitudes toward the subjects of Science, Technology, Engineering and Mathematics (STEM). We want your input! Your thoughts about these STEM subjects are vital. The information that you provide on this survey will help in understanding the factors impacting the uptake of STEM subjects.**

**Your responses on this survey will remain CONFIDENTIAL. NO ONE in your school (teachers, administrators, or students) will see your responses.**



Student Questionnaire –Grade 11

Section B: About Your Future Studies

\* 1. Have you decided which subject combination you will select when promoted to A Level?

Yes

No/ Not yet

Student Questionnaire –Grade 11

Section B: About Your Future Studies

\* 1. If the answer to the question above is yes, which subject combination you plan to study at A-Level/ Grade 12 and 13?

Principal Level- Subject 1

Principal Level- Subject 2

Principal Level- Subject 3

Subsidiary Level- Subject  
1

Subsidiary Level- Subject  
2

## Student Questionnaire –Grade 11

### Section B: About Your Future Studies

\* 1. What do you plan to do after your SC/ Grade 11?

\* 2. Choose a **maximum** of 5 **major** factors influencing your choice of subjects when you get promoted to Grade 12

- Parents
- Siblings
- Interest/Enjoyment of Subject
- Teachers
- You're good at it
- Extra-Curricular Activities
- Friends
- Personal Choice
- Career Fairs
- Career advisor
- based on future trend

## Student Questionnaire –Grade 11

### Section C: Your Perception on STEM

\* 1. How far do you agree with the following statements? Please tick the most appropriate answer

	Strongly Agree	Agree	Don't know/ Can't say	Disagree	Strongly Disagree
I. I think that learning STEM is important.	<input type="radio"/>				
II. STEM concepts are easy to understand.	<input type="radio"/>				
III. I think STEM is needed to help solve the problems of everyday.	<input type="radio"/>				
IV. I love STEM subjects because the content is exciting and dynamic.	<input type="radio"/>				
V. I think STEM subjects will help me get a high paying job.	<input type="radio"/>				
VI. I feel encouraged by the school to do STEM subjects.	<input type="radio"/>				
VII. I feel encouraged by my parents/family to do STEM subjects.	<input type="radio"/>				
VIII. I am more of a creative person than an academic person.	<input type="radio"/>				
IX. My school has enough resources/equipment for Science (physics lab, reagents..) classes.	<input type="radio"/>				
X. My school has enough resources/equipment for Technology (e.g. computer lab) classes.	<input type="radio"/>				

	Strongly Agree	Agree	Don't know/ Can't say	Disagree	Strongly Disagree
XI. My school has enough resources/equipment for Mathematics classes.	<input type="radio"/>				
XII. STEM subjects are mainly for boys.	<input type="radio"/>				
XIII. When STEM activities (practicals) are too difficult, I give up or only do the easy parts	<input type="radio"/>				

\* 2. Statistics show that there are fewer and fewer students opting for STEM subjects as from Grade 9 to 11 as compared to the other subjects. According to you, what could be the reason(s)?

*(Please select a maximum of 5 reasons that you consider most important)*

- STEM subjects are tougher than non-STEM (e.g. arts, economics) side.
- Too much competition (for scholarship)
- STEM subjects do not lead to high paid jobs
- Finding Work is more difficult with STEM subjects
- I do not think STEM subjects are important for my career.
- Peer pressure
- Students fail to achieve the required grade in STEM subjects
- Influence of parents
- Not encouraged by teachers
- Not encouraged by schools
- Limited combination of subjects available in schools
- No career guidance on STEM related occupations
- Previous students experience

## Student Questionnaire –Grade 11

### Section D: STEM Subjects in Your School

\* 1. What teaching methods are used in your school? (tick all that apply)

- Text books
- Online material on tablets
- Group works
- Activity-based methods
- Presentation by students
- Student-led research
- Peer-to-peer learning
- Practical in lab
- Other (please specify)

\* 2. How often does your school organise/ participate in any of the following activities per year?

I. Science day

II. Science related  
competition

III. Career- related talks

IV. Science-related field  
trips

## Student Questionnaire –Grade 11

### Section E: About Digital Transformation and Coding Skills

\* 1. To the best of your knowledge, does your school offer classes or units on coding\* or programming?

*\*Put simply, Coding is a method of communicating with a computer. It is using a language that a computer understands to give a computer instructions in order to perform specific functions. Coding allows us to create things such as computer software, websites, apps and video games.*

Yes

No

Don't know

\* 2. If you were given the opportunity to learn coding, how likely is it that you would do so?

I will certainly do

I would like to give it a try

I am not sure

I am not interested at all in coding

\* 3. How confident are you in your abilities to.....?

	Totally confident	Somewhat confident	Not confident at all	Can't say/ No idea
use digital technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
analyse and interpret data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
design solutions to problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
carry out experiment & investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
learn coding and programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Student Questionnaire –Grade 11

Section F: Perception on scientific discipline

Science

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number of smileys selected, the more "positive" is the adjective.*

**To me, Science is**

\* 1. Appealing

Unappealing

Appealing



\* 2. Exciting

Unexciting

Exciting



\* 3. Boring

Boring

Interesting



\* 4. Easy

Difficult

Easy



Student Questionnaire –Grade 11

Section F: Perception on scientific discipline

**Math**

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number of smileys selected, the more "positive" is the adjective.*

**To me, MATH is**

\* 1. Boring

Boring

Interesting



\* 2. Appealing

Unappealing

Appealing



\* 3. Exciting

Unexciting

Exciting



\* 4. Easy

Difficult

Easy



Student Questionnaire –Grade 11

Section F: Perception on scientific discipline

**Engineering**

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number of smileys selected, the more "positive" is the adjective.*

**To me, Engineering is**

\* 1. Appealing

Unappealing

Appealing



\* 2. Easy

Difficult

Easy



\* 3. Exciting

Unexciting

Exciting



\* 4. Boring

Boring

Interesting



Student Questionnaire –Grade 11

Section F: Perception on scientific discipline

**Technology**

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number of smileys selected, the more "positive" is the adjective.*

**To me, Technology is**

\* 1. Appealing

Unappealing

Appealing



\* 2. Easy

Difficult

Easy



\* 3. Boring

Boring

Interesting



\* 4. Exciting

Unexciting

Exciting



Student Questionnaire –Grade 11

Section F: Perception on scientific discipline

**Computer Science\***

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number of smileys selected, the more "positive" is the adjective.*

*\*Computer science, the study of computers and computing, including their theoretical and algorithmic foundations, hardware and software, and their uses for processing information. The discipline of computer science includes the study of algorithms and data structures, computer and network design, modeling data and information processes, and artificial intelligence.*

**To me, Computer Science is**

\* 1. Appealing

Unappealing

Appealing



\* 2. Boring

Boring

Interesting



\* 3. Easy

Difficult

Easy



\* 4. Exciting

Unexciting

Exciting



Student Questionnaire –Grade 11

Section G: Your Future Career

Career

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number of smileys selected, the more "positive" is the adjective.*

**To me, a CAREER in Science, Technology, Engineering or Mathematics is**

\* 1. Exciting

Unexciting

Exciting



\* 2. Boring

Boring

Interesting



\* 3. Appealing

Unappealing

Appealing



\* 4. Salary

Low paying job

High paying job



## Student Questionnaire –Grade 11

### Section G: Your Future Career

#### Importance of STEM

**Instructions: Choose one number between each adjective pair to indicate how you feel about the object.**

*The higher the number (from 0 to 7) , the more "positive" is the adjective.*

**To be successful in my career, I need to:**

\* 1. Learn STEM subjects

Not necessary Necessary

\* 2. Understand Science

Not important Important

\* 3. Understand Technology

Useless Useful

\* 4. Understand Engineering

Insignificant Valuable

\* 5. Understand Mathematics

Trivial Crucial

Student Questionnaire –Grade 11

Section G: About Your Future Career

\* 1. How interested are you in careers that involve using digital technologies like smartphones, tablets ,computers and online platforms?

\* 2. How interested are you in careers that involve coding or programming?

\* 3. How important do you think knowing how to program, design and develop digital technologies will be for future careers?

\* 4. If you had to pick a job today, what will it be? (It is OK if whatever you write is spelled incorrectly)